

DISCUSSION PAPER SERIES

IZA DP No. 16210

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## ABSTRACT

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### Roots of Inequality

Why does inequality vary across societies? We advance the hypothesis that in a market economy, where earning differentials reflect variations in productive traits among individuals, a significant component of the differences in inequality across societies can be attributed to variation in societal interpersonal diversity, shaped by the prehistorical out-of-Africa migration. Exploring the roots of inequality within the US population, we find supporting evidence for our hypothesis: variation in the inequality across groups of individuals originating from different ancestral backgrounds can be traced to the degree of diversity of their ancestral populations. This effect is sizable: a move from the lowest to the highest level of diversity in the sample is associated with an increase in the Gini index from the median to the 75th percentile of the inequality distribution.

**JEL Classification:** D60, O10, Z10

**Keywords:** inequality, diversity, culture, out-of-Africa migration

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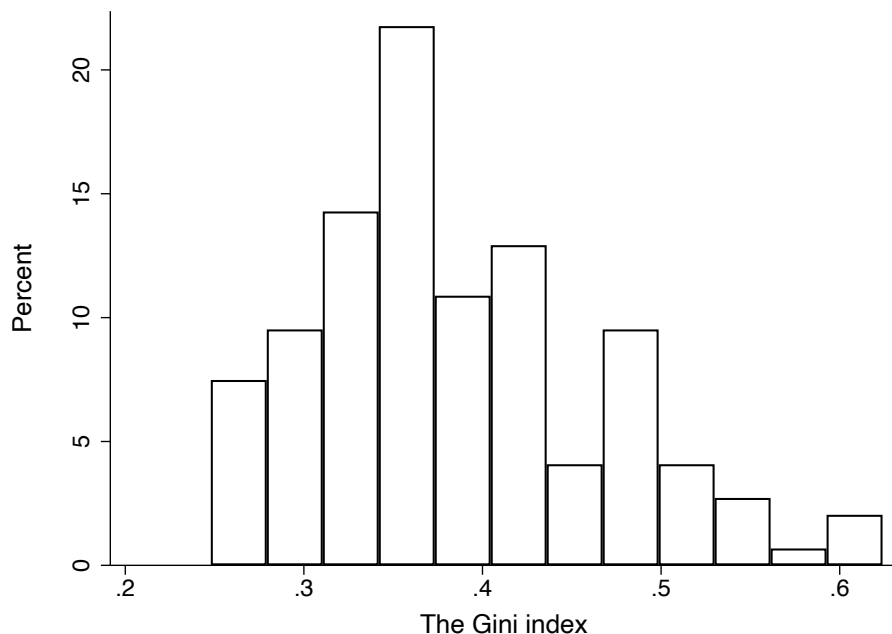
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# 1 Introduction

Inequality has widened significantly in recent decades and the share of income held by the top 10% of the world population has reached an astounding 52%.<sup>1</sup> This staggering disparity overshadowed an equally important pattern – a profound variation in the level of inequality among societies (Figure 1).<sup>2</sup> Why does inequality differ across countries and regions? Why are some societies remarkably more unequal than others?



**Figure 1. Differences in Income Inequality Across Countries.**

*Notes:* This figure depicts the histogram of the distribution of the Gini measure of income inequality across countries during the time period 2000-2020 (Data source: World Bank Development Indicators).

Conventional wisdom suggests that differences in the degree of income inequality across countries reflect the prevalence of cultural predisposition towards an egalitarian society as well as the pervasiveness of inequality-mitigating institutions.<sup>3</sup> Moreover, in view of the role of technological change and globalization in the evolution of inequality, the intensity of these forces across nations have further contributed to the uneven global distribution of inequality.<sup>4</sup> Yet, inequality appears to vary considerably among countries with comparable political and

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<sup>1</sup>Chancel, Piketty, Saez, Zucman, et al. 2022.

<sup>2</sup>Similar patterns are observed in inequality across ethnic groups within nations (Alesina, Michalopoulos and Papaioannou 2016) and share of income held by the top 10% (Figure B.1).

<sup>3</sup>Alesina and Giuliano 2011 and Piketty 2017.

<sup>4</sup>Rosen 1981, Galor and Moav 2000, Acemoglu and Autor 2011, and Acemoglu and Restrepo 2022.

economic institutions, cultural traits, and exposure to the forces of technological change and globalization.

This paper advances the hypothesis and establishes empirically that in a market economy, where earning differentials express variations in productive traits across individuals, a significant component of the intensity of income inequality across societies reflects the wide disparity in societal interpersonal diversity in productive traits as had been shaped during the prehistoric *out-of-Africa migration*.

The prehistoric migration of *Homo sapiens* out of Africa is one of the most important chapters of human history, forming the initial conditions for the evolution of human settlements across the world. Due to the serial nature of this human dispersal, this migratory patterns was inherently associated with a reduction in the diversity among indigenous populations that settled at greater migratory distances from Africa (*The Serial Founder Effect*). As humans migrated further from Africa, the cultural, linguistic, behavioral, and physical diversity in the societies that their descendants ultimately formed decreased.<sup>5</sup>

We hypothesize therefore that among populations that operate in similar economic and institutional environments, and are characterized by a comparable average level of labor productivity, differences in migratory distances of their ancestral populations from Africa, would generate variation in the degree of heterogeneity in productive traits, and would result in differences in their intensity of income inequality. In particular, if market institutions reward individuals according to their cognitive and non-cognitive skills, as well as their phenotypic and behavioral traits,<sup>6</sup> then income inequality will be larger in societies with greater dispersion in productive traits; societies whose ancestral population resided closer to the cradle of humanity in Africa.

Considering the impact of the prehistoric *out-of-Africa migration* on institutional and cultural characteristics,<sup>7</sup> a conclusive empirical examination of the proposed hypothesis would not be feasible within a cross-country setting. Instead, the desirable empirical framework would require the exploration of the origins of variation in inequality within groups of individuals who reside in the same country, and are therefore exposed to the same economic forces and political institutions, but are originated from different ancestral homelands. In such a single-country context, the proposed hypothesis would imply that greater income inequality would be prevalent among groups of individuals, within the society, whose ancestral

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<sup>5</sup>See Ramachandran et al. (2005), Manica et al. (2007), von Cramon-Taubadel and Lycett (2008), Hanihara (2008) Betti et al. (2009, 2013), Atkinson (2011), Betti and Manica (2018), Ashraf, Galor, and Klemp (2021), Galor, Klemp, and Wainstock (2023).

<sup>6</sup>Cawley, Heckman, and Vytlačil 2001, Heckman, Stixrud, and Urzua 2006, Case and Paxson 2008, Butler, Giuliano and Guiso 2016, Sunde et al. 2022)

<sup>7</sup>Arbatli, Ashraf, Galor and Klemp 2020, Ashraf and Galor 2013a, and Galor and Klemp 2017

populations resided closer to the cradle of humanity in Africa and who are therefore more diverse.

The US appears to be especially suitable for the examination of the hypothesis. First, it is a market economy where earning differentials are likely to reflect variations in productive traits. Second, the US population displays substantial variation in their ancestral origin. Third, high-quality individual-level data on earned income and self-reported ancestry is available for millions of US inhabitants.

The empirical investigation of the proposed hypothesis focuses on inequality among prime working age individuals in the US who are employed in the private sector and whose earning differentials are therefore more likely to reflect variations in productive traits. The impact of ancestral diversity on current inequality is established by leveraging systematic variations in inequality across US demographic bins composed of workers from the same ancestral origins. The baseline bins are clusters of individuals from identical ancestral origins who are of the same sex and age group and who were surveyed in the same year. These clusters have the advantage of being unaffected by the current inequality in the US, permitting the examination of the impact of the out-of-Africa migration and its associated level of societal interpersonal diversity on inequality, accounting for sex, age group, and year of survey; factors which may affect observed income inequality.<sup>8</sup>

The empirical analysis establishes that demographic bins of US inhabitants whose ancestors resided closer to the cradle of humanity in Africa, and are therefore more diverse, have indeed higher levels of inequality as measured by the Gini index of earned income as well as by the share of income held by the top 1%, top 5%, and top 10% of the income distribution. This result is highly significant, both statistically and economically and it holds across various samples. Moreover, it is robust to the inclusion of potentially confounding geographical characteristics, which could be correlated with migratory distance from Africa, and the potentially confounding impact of ancestral ethnolinguistic fragmentation, inequality, and cultural traits, forces that could be associated with ancestral diversity.

The impact of interpersonal diversity on inequality is sizable: in the baseline specification, a move from the lowest to the highest level of diversity of the ancestral populations in the sample is associated with a 5 percentage-points increase in the Gini index (i.e., a 13% increase in the index relative to its mean). This would represent an increase in the Gini index from the median to the 75th percentile of the inequality distribution. Moreover, the association between diversity and inequality remains qualitatively similar even within demographic bins that are further subdivided by broad categories of educational attainment or occupation.<sup>9</sup>

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<sup>8</sup>The qualitative results are unaffected if the demographic bins are based only on ancestral origins.

<sup>9</sup>These educational and occupational categories are arguably endogenous to the level of inequality and

As implied by our proposed hypothesis, the impact of interpersonal diversity on inequality is indeed mediated through its impact on the diversity in productive traits.<sup>10</sup> In particular, the analysis establishes that demographic bins of US inhabitants whose ancestors resided closer to cradle of humanity in Africa, and are therefore more diverse, have: (i) greater educational diversity within the top education category, (ii) larger geographical dispersion within the US territory; a possible manifestation of greater range of abilities and tastes, and (iii) greater heterogeneity in the number of hours worked, reflecting plausibly a wider range of predisposition towards labor and leisure. Importantly, this dispersion in education, location, and work effort, is indeed associated with greater income inequality, mediating the effect of migratory distance from cradle of humanity in Africa on inequality.

Moreover, cultural traits that are conducive for heterogeneous behavior appear to mediate part of the effect of migratory distance from the cradle of humanity in Africa on inequality. In particular, the analysis establishes US inhabitants whose ancestors resided closer to cradle of humanity in Africa, and are therefore more diverse, have ancestors that are more individualistic and are themselves more entrepreneurial. Furthermore, these traits – *Individualism* and *Entrepreneurial Spirit* – are indeed positively associated with inequality and appear to be additional mediating forces in the impact of migratory distance from the cradle of humanity in Africa on income inequality.

## 2 Data and Empirical Strategy

The proposed hypothesis imply that greater income inequality would be prevalent among groups of individuals, within the US society, whose ancestral populations resided closer to the cradle of humanity in Africa and who are therefore more diverse.

The empirical analysis therefore leverages variations in income inequality among groups of individuals from various ancestral origins to test the proposed hypothesis, on millions of individuals from more than hundred ancestries, using data on income, ancestry and demographic characteristics from the American Community Survey (ACS) conducted during the time period 2000-2021, as well as the Censuses conducted in 1980, 1990, and 2000.<sup>11</sup>

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are therefore not included in the baseline analysis.

<sup>10</sup>While the employed data does not provide direct measures of dispersion in cognitive and non-cognitive skills across individuals, it does enable us to explore closely related mediating channels.

<sup>11</sup>The first nationally-representative version of the ACS was conducted in 2000, and the full implementation stage started in 2005.

## 2.1 Demographic Bins

The baseline demographic bins consist of clusters of individuals from an identical ancestral origin, who are of the same sex and age group, and who were interviewed in the same year. These clusters have the advantage of being unaffected by the current inequality in the US, permitting the examination of the impact of the out-of-Africa migration and its associated level of societal interpersonal diversity on inequality, accounting for sex, age group, and year of survey; factors which may affect observed income inequality. Yet, the qualitative results are independent of this subdivision and hold even if sex, age, and year of survey are excluded from the demographic bins. In particular, as shown in Table C.1., the grouping of individuals in the US only based on their ancestral origin level generates a more sizable effect that remains highly significant statistically.<sup>12</sup>

## 2.2 Dependent Variable – Income Inequality

The dependent variable is inequality in each demographic bin consisting of prime working age individuals who are employed in the private sector and whose earning differentials are therefore more likely to reflect variations in productive traits.<sup>13</sup> For each demographic bin, we compute the Gini index of earned income as the primary measure of income inequality,<sup>14</sup> as well as the share of income held by the top 1%, top 5%, and top 10% of the income distribution.<sup>15</sup>

## 2.3 Independent Variable - Distance from the Cradle of Humanity

The independent variable is the level of population diversity in the ancestral homeland of each demographic bin, as captured by the ancestry-adjusted migratory distance from this ancestral homeland to the cradle of humanity in Africa.<sup>16</sup> The prehistoric migration of Homo

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<sup>12</sup>The working age population is segmented into three age groups: 25-34, 35-44, and 45-54. The findings are robust to alternative clarifications of age groups (Table C.2).

<sup>13</sup>The findings are unaffected qualitatively if the hypothesis is tested on the following three samples: (i) all individuals, (ii) individuals in the labor force, (iii) employed individuals (Columns (1)-(3) in Table C.3). Moreover, the findings are unaffected qualitatively if the hypothesis is tested on a sample of working age individuals rather than prime working age individuals (Columns (4)-(5) in Table C.3).

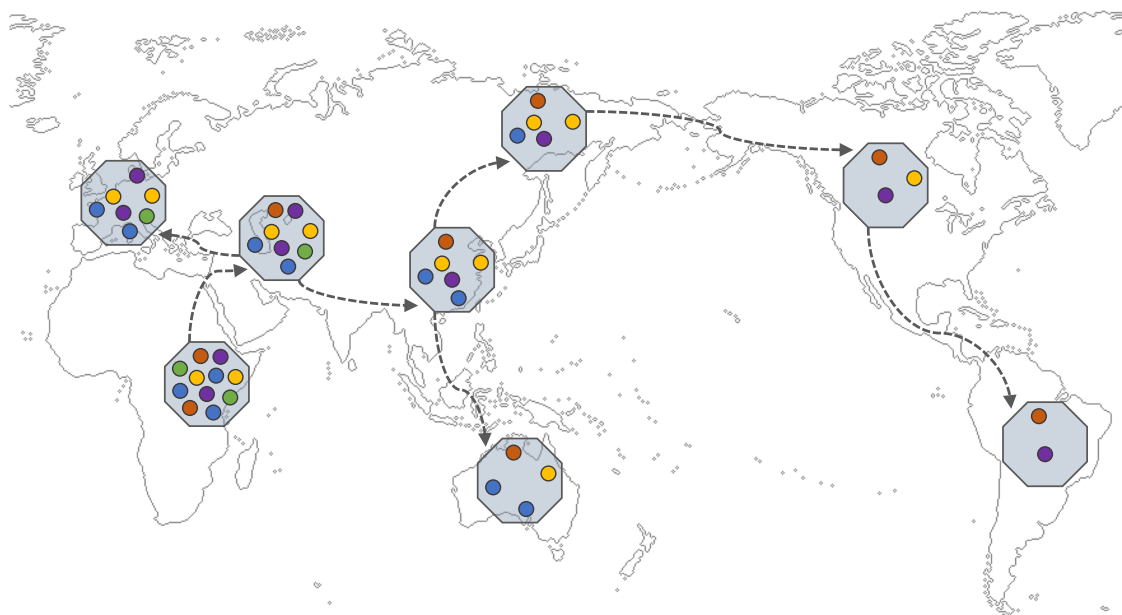
<sup>14</sup>At the bottom of the distribution there are some self-employed individuals with negative earned income. Since the Gini index is not defined for distributions which include negative values, we bottom code those observations to zero in order to compute inequality. As shown in Columns (5)-(6) in Table C.3, the results are robust to the exclusion of those observations.

<sup>15</sup>Figure A.1(a) depicts the histogram of the level of inequality, as captured by the Gini index, across demographic bins.

<sup>16</sup>Since the ancestral homeland may consist of population which are themselves from different ancestries, the ancestry-adjusted migratory distance from Africa to the ancestral homeland captures the weighted



sapiens out of Africa was largely characterized by a stepwise expansion, where in each step a subgroup of individuals left their ancestral settlement to establish a new colony farther away, carrying only a subset of the diversity of traits in their ancestral settlement.



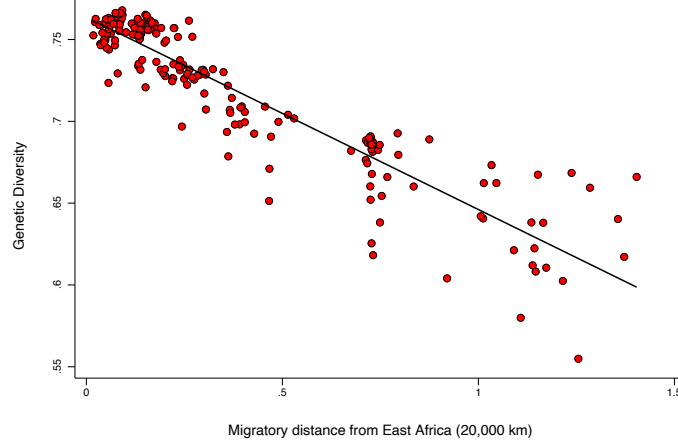
**Figure 2. The Serial Founder Effect.**

*Notes:* This figure depicts the decline in the level of diversity along the migratory routes out of Africa (Source: Ashraf, Galor and Klemp, 2021.)

Due to the serial nature of this human dispersal, the resulting *Serial Founder Effect* was inherently associated with a reduction in the diversity of populations that settled at greater migratory distances from Africa (Figure 2). As humans migrated further from Africa, the cultural, linguistic, behavioral, and physical diversity in the societies that their descendants formed decreased (Figure 3).

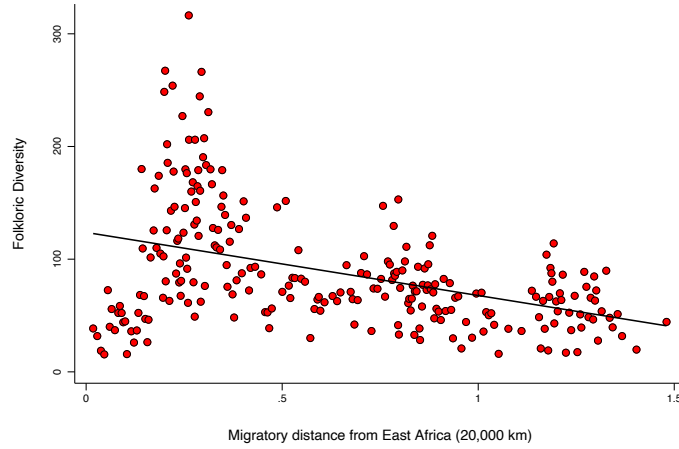
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average of the migratory distances from Africa of each of these ancestral populations, accounting for the proportional representation of these deeper ancestral populations in the ancestral homeland, using the migration matrix of Putterman and Weil (2010).



Slope coefficient = -0.118; (robust) standard error = 0.003; t-statistic = -33.612; observations = 207

(a) Genetic diversity



Slope coefficient = -55.572; (robust) standard error = 6.822; t-statistic = -8.146; observations = 958

(b) Folkloric diversity

### Figure 3. Declining Diversity along the Migratory Routes out-of-Africa.

*Notes:* This figure presents the reduction in population diversity among indigenous populations at greater migratory distances from Africa. Panel (a) depicts the scatterplot of the association between the prehistoric migratory distance from East Africa and genetic diversity across 207 indigenous ethnic groups (Ashraf, Galor and Klemp (2021), and Panel (b) depicts the binned scatterplot of association between the prehistoric migratory distance from East Africa and folkloric diversity across 958 ethnic groups (Galor, Klemp and Wainstock, 2023).

Following the traditional view in the out-of-Africa literature, we associate the cradle of humanity with East Africa. While there is some uncertainty about the origin of humans within the African continent (e.g., Ragsdale et al. 2023), the precise location has no impact on predicted interpersonal diversity for populations outside of Africa. Since it appears that humans dispersed to the rest of the world via East Africa, a different place of origin would

amount to adding the same constant to the distances from East Africa to all ancestral homelands outside of Africa. Yet, the precise location would have an impact on predicted diversity within Africa. In fact, migratory distance from East Africa is a weak predictor of the decline in the level of diversity in phenotypic, genotypic or cultural traits within the African continent (e.g., Ramachandran et al. 2005, Galor et al. 2023), and therefore the absence of the precise origin of humanity within Africa would weaken the estimated impact of diversity on the US population who declare that their ancestral homeland is in Africa.

## 2.4 Empirical Strategy

In view of the fact that contemporary income inequality in the US had not affected, tens of thousands of years earlier, the migratory distances out of Africa to the ancestral homelands of the current US population, our empirical strategy is immune from concerns about reverse causality. However, to the extent that migratory distance out of Africa could be correlated with other ancestral determinants of contemporary income inequality in the US, our analysis could be plagued by omitted variable bias.

First, migratory distance out of Africa could be correlated with deep-rooted geographical determinants of societal interpersonal diversity and thus, plausibly, inequality. Hence, to capture the impact of these potentially confounding geographical characteristics, we account for a range of ancestral geographical characteristics which could have arguably shaped diversity. In particular: (ii) absolute distance from the equator and its web-documented adverse effect on biodiversity, (i) ecological diversity and its influence on ethnolinguistic fragmentation (Michalopoulos 2012), (iii) geographical isolation and its tendency to reduce biodiversity as well as cultural diversity.

Second, migratory distance from Africa is correlated with the decline in the number of ethnic groups (Galor and Klemp 2023) and with the decrease in the degree of ethnolinguistic fragmentation (Ashraf and Galor 2013b). Hence, it is a-priori plausible that impact of migratory distance from Africa on inequality operates through ethnic fragmentation rather than interpersonal diversity in productive traits. To explore this potential alternative channel, we account for the confounding effect of ancestral ethnic fragmentation of the population of each demographic bin in the US, accounting for measures of ethnic fractionalization (Alesina et al. 2003) and ethnolinguistic fractionalization (Desmet, Ortuno-Ortin, and Weber 2009) in the ancestral countries of origin.<sup>17</sup>

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<sup>17</sup>While some aspects of interpersonal diversity can be captured by indices of ethnolinguistic fractionalization and polarization, these measures predominantly reflect the proportional representation of ancestral groups in the population, disregarding the importance of the degree of interpersonal diversity *within* each ancestral group for the overall level of diversity at the national level.

Third, the observed relationship between migratory distance out of Africa and contemporary inequality may reflect instead the transmission of the intensity of inequality in the ancestral homeland, to their descendants in the US. To rule out such a potential threat to our identification, we account for the potentially confounding effects of ancestral inequality on inequality across demographic bins in the US.

Fourth, the degree of inequality in the ancestral homelands of the US population may reflect the institutional and the cultural characteristics that are prevalent in these homelands. The presence of inequality-mitigating institutions in an ancestral homeland may have reduced inequality in the ancestral environment. Yet, the descendants of this homeland in the US are subjected to the institutional characteristics of the US rather than those of their ancestral homeland. Nevertheless, the institutional setup in the ancestral homeland could have mattered via its impact on ancestral inequality and its possible persistent effect on the current level of inequality among the descendants of this homeland in the US. It will be necessary, therefore, to account for the degree of inequality in the ancestral homeland.

Furthermore, cultural characteristics in the ancestral homeland are entirely portable and could be carried by migrants and their descendants. In particular, several cultural traits that are present in some ancestral homelands could have a significant impact on inequality among the descendants of this homeland: *Uncertainty Avoidance* could diminish the degree of entrepreneurship and the variability in earned income, and *Long-Term Orientation* could foster investment in physical and human capital, as well as technological adoption, increasing wage variability. To rule out such threat to our identification, we account for the potentially confounding effects of these ancestral cultural factors on inequality across demographic bins in the US.

Finally, post-1500 migration flows have drastically affected the composition of the population in many ancestral homelands in the New World and could have therefore affected the inequality among individuals in the US who are originated from those homelands. To mitigate concerns that this unusual change in the composition of the population in the New World had impacted our qualitative findings, we explore the impact of migratory distance out of Africa on contemporary inequality in the US in a restricted sample of demographic bins that represent ancestral homelands which were not subjected to significant migration. In particular, we consider ancestral homelands that are entirely in the Old World and ancestral homelands with a significant fraction of native population.

## 2.5 The Empirical Model

Following our hypothesis, we model inequality in each demographic bin as a function of population diversity in the bin, as captured by the prehistoric migratory distance from Africa of the ancestral population of the individuals in the bin. The model accounts for sex fixed effects, age group fixed effects, and survey year fixed effects of the US population, as well as potentially confounding characteristics in the ancestral homeland: geographical characteristics such as ecological diversity, isolation and distance from the equator, and ancestral characteristics, such as ethnic fragmentation, inequality, and cultural factors.

In particular, we estimate the following OLS model:

$$G_{s,a,h,t} = \alpha + \beta D_h + \gamma_t + \delta_s + \zeta_a + \theta X_h + \eta N_{s,a,h,t} + \epsilon_c,$$

where the dependent variable  $G_{s,a,h,t}$  is the measure of inequality in a demographic bin composed of individuals surveyed in year  $t$ , who are of the same sex,  $s$ , and age-group,  $a$ , and whose ancestral homeland is  $h$ . The independent variable,  $D_h$ , is the ancestry-adjusted migratory distance from Africa to ancestral homeland  $h$ . The coefficient of interest,  $\beta$ , is hypothesized to be negative.

In addition,  $\gamma_t$  are survey year fixed-effects,  $\delta_s$  are sex fixed-effects,  $\zeta_a$  are age-group fixed-effects,  $X_h$  is a vector of confounding geographical and ancestral characteristics in ancestral homeland  $h$ , and  $N_{s,a,h,t}$  is the log number of individuals in each demographic bin.<sup>18</sup> Since the main independent variable varies at the level of the ancestral origin of individuals across demographic bins, standard errors are clustered at each ancestral origin of the US population.

## 3 Main Findings

### 3.1 Main Findings

The estimated effect of the prehistoric migratory distance from Africa, and its associated level of societal interpersonal diversity, on various measures of inequality – the Gini index, and the shares of income held by the top 1%, top 5%, and top 10% – is reported in Table 1, accounting for potential geographic and ancestral confounders.

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<sup>18</sup>Given the association between bin size and inequality (Table D.1) and the distribution of bin sizes (Figure A.1(b)), in the baseline analysis, we account for the log number of individuals within each demographic bin. However, the results are robust to the use of various restrictions on the admissible size of the bin (Figure D.1).

**Table 1. Baseline Analysis**

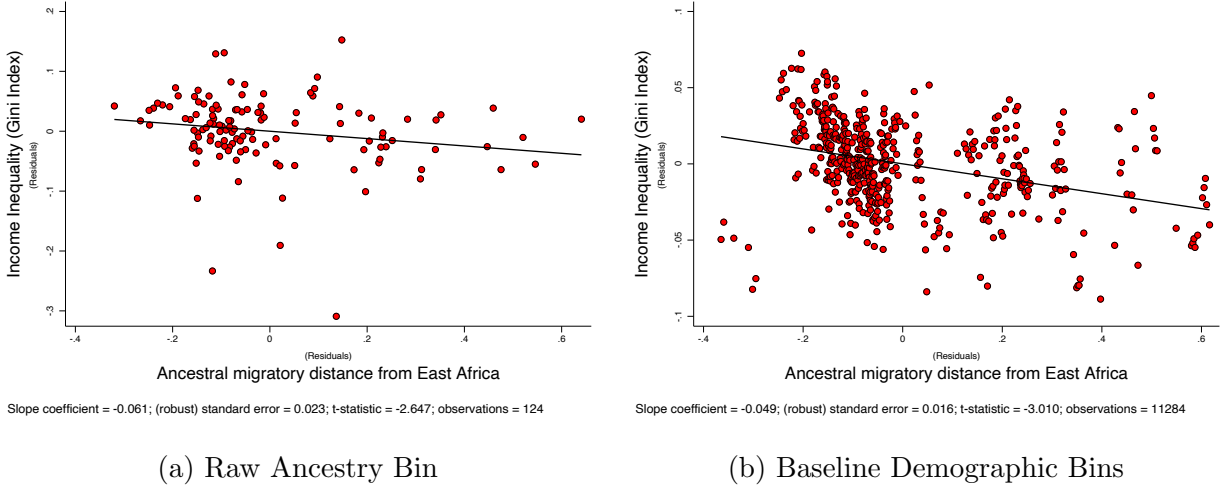
	GINI	TOP 1%	TOP 5%	TOP 10%
	(1)	(2)	(3)	(4)
Ancestral migratory distance	−0.049***	−0.013**	−0.040***	−0.042***
from East Africa (in 20K km)	(0.016)	(0.0057)	(0.0090)	(0.0097)
Dep. var. mean	0.38	0.076	0.22	0.34
Individuals	6309382	6143964	6271956	6294292
Demographic bins	11284	3835	6379	8006
Ancestral homelands	120	47	79	92
Adjusted $R^2$	0.25	0.16	0.21	0.23

*Notes:* This table reports the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on various measures of inequality. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.

The estimated effect in Column (1) indicates that the prehistoric migration out of Africa, and its impact on interpersonal diversity, is indeed a highly significant negative determinant of our preferred measure of income inequality, i.e., the Gini index. Moreover, the baseline estimated effect increases to 7.3 percentage points and it remains highly significant statistically if we account for the ancestral origin’s continent fixed effects and thereby estimate the effect of the prehistoric migratory distance from Africa on inequality based on variation in population diversity of ancestral homelands within each continent (Column (7) in Table C.4).

The estimates in Columns (2)-(4) suggest that a qualitatively similar pattern holds under alternative measures of income inequality - the shares of income held by the top 1%, top 5%, and top 10%.<sup>19</sup>

<sup>19</sup>Since the computation of the share of income held by the top 1% requires at least 100 individuals within a demographic bin, smaller bins are excluded, and thus the number of ancestral homelands drops by a factor of nearly 2/3. The coefficient in Column (2) is therefore less representative of the sample as a whole. In particular, when the truncation in the sample is less severe, as in the case of the share of income held by the top 5% and top 10% (where only 20 or 10 individuals are required within each bin, respectively), the coefficient is more representative of the true effect.



**Figure 4. Income Inequality Among US Inhabitants, Originated from the same Ancestral Homeland & Migratory Distance from East Africa of this Homeland**

*Notes:* This figure depicts the association between the ancestral migratory distance from East Africa and inequality across groups of individuals in the United States originated from the same ancestral background. Panel (a) depicts the scatterplot of the association between income inequality and migratory distance from East Africa, irrespective of the inclusion of sex, age, and year of survey (i.e., Table C.1, Column (1)). Panel (b) depicts a (binned) scatterplot of the association between income inequality and migratory distance from East Africa in the baseline specification (i.e., Table 1, Column (1)).

The impact of an increase in the prehistoric migratory distance from Africa, and its associated reduction in the level of interpersonal diversity on inequality, is sizable. In particular, a shift in the geographic origin of an ancestral population from the lowest ancestry adjusted migratory distance from Africa to the highest one (i.e., a 20,000 km increase in the adjusted migratory distance from Africa) would decrease the Gini index by 4.9 percentage points (i.e., 13% reduction relative to the mean level of 0.38). This would represent an increase in the Gini index from the median to the 75th percentile of the inequality distribution.

### 3.2 Impact on Inequality in Earlier Periods

As long as the reward to productive traits is stable, the qualitative impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on measures of inequality would be expected to be present in earlier decades.

**Table 2. Impact on Inequality in Earlier Periods**

	GINI			
	CENSUS 1980	CENSUS 1990	CENSUS 2000	ACS
	(1)	(2)	(3)	(4)
Ancestral migratory distance from East Africa (in 20K km)	−0.048** (0.024)	−0.088*** (0.024)	−0.074*** (0.022)	−0.049*** (0.016)
Dep. var. mean	0.32	0.35	0.38	0.38
Individuals	1702808	2067957	1781319	6309382
Demographic bins	524	520	566	11284
Ancestral homelands	104	103	105	120
Adjusted $R^2$	0.17	0.20	0.22	0.25

*Notes:* This table establish the robustness of the qualitative impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality in earlier periods. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Indeed, Table 2 shows that the patterns established in Table 1, based on data from the American Community Survey (ACS) over the period 2000-2021, are unaffected qualitatively if the Gini index is measured based on the Censuses of 1980, 1990, and 2000. The estimates reported in Columns (1)-(3) suggest that the prehistoric migration out-of-Africa is a highly significant negative determinant of the Gini index in these earlier periods.<sup>20</sup>

### 3.3 Accounting for Educational and Occupational Categories

Interpersonal diversity may induce individuals within each demographic bin to sort into different educational groups and occupational categories. In fact, a-priori, some of the impact of diversity on inequality may reflect this sorting, reducing the impact of diversity on inequality. Nevertheless, as established in Tables 3 and 4, the impact of interpersonal diversity on inequality still hold if demographic bins are further refined, accounting for the range

<sup>20</sup>The number of individuals surveyed in 2000 is larger in 1990. Yet, the number of individuals in our sample in the year 2000 is smaller because a larger number of them did not report their ancestry.



of educational categories reported by IPUMS, or alternatively for the major occupational categories in the International Standard Classification of Occupations (ISCO).

As reported in Table 3, the impact of diversity on inequality remains qualitatively unchanged if the demographic bins are further subdivided according to education categories. The estimated effect remain significant statistically across all samples although, as expected, the point estimate is smaller, due to the impact of migratory distance from Africa on the decline in educational dispersion, as explored in Section 4.

**Table 3. Impact within Educational Categories**

	GINI	TOP 1%	TOP 5%	TOP 10%
	(1)	(2)	(3)	(4)
Ancestral migratory distance from East Africa (in 20K km)	−0.029** (0.014)	−0.0084** (0.0032)	−0.024** (0.0092)	−0.028** (0.012)
Dep. var. mean	0.32	0.38	0.38	0.37
Individuals	6295319	5514789	6104894	6202582
Demographic bins	50411	7960	20943	27977
Ancestral homelands	116	30	59	78
Adjusted $R^2$	0.23	0.19	0.16	0.19

*Notes:* This table reports the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on various measures of inequality. All specifications accounts for sex, age-group, educational categories, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Similarly, as reported in Table 4, the impact of diversity on inequality remains qualitatively unchanged if the demographic bins include the major occupational categories in ISCO-88. The estimates remain highly significant across (except for the smaller sample of the top 1%) and the point estimates are rather similar.

**Table 4. Impact within Occupational Categories**

	GINI	TOP 1%	TOP 5%	TOP 10%
	(1)	(2)	(3)	(4)
Ancestral migratory distance from East Africa (in 20K km)	−0.043*** (0.014)	−0.0071* (0.0039)	−0.026*** (0.0089)	−0.032*** (0.012)
Dep. var. mean	0.33	0.38	0.38	0.38
Individuals	6295567	5424619	6075564	6190828
Demographic bins	57358	9521	23827	32139
Ancestral homelands	117	25	54	75
Adjusted $R^2$	0.29	0.29	0.31	0.29

*Notes:* This table reports the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on various measures of inequality. All specifications accounts for sex, age-group, occupational categories, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

### 3.4 Accounting for Geographical Determinants of Diversity in the Ancestral Homeland

Migratory distance out of Africa could be correlated with exogenous deep-rooted geographical determinants of societal interpersonal diversity and the estimated impact of diversity on inequality may partly capture the impact of these deep-rooted geographical factors.

Hence, in order to mitigate this concern, we account for a range of potentially confounding ancestral geographic characteristics which could have arguably also shaped diversity: (a) absolute distance from the equator and its well documented adverse effect on biodiversity, (b) ecological diversity and its influence on ethnolinguistic fragmentation (Michalopoulos, 2012), and (c) geographical isolation and its impact on the reduction in biodiversity.<sup>21</sup>

<sup>21</sup>These ancestral geographic characteristics are ancestry-adjusted, reflecting the ancestral composition of the population in each ancestral homeland, and thus the geographical heritage of each of these segments of the population.

**Table 5. Accounting for Geographical Determinants of Diversity in the Ancestral Homeland**

	GINI						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ancestral migratory distance from East Africa (in 20K km)	−0.049*** (0.016)		−0.043** (0.017)		−0.061*** (0.020)		−0.048*** (0.016)
Ancestral absolute latitude		0.0074* (0.0038)	0.0040 (0.0040)				
Ancestral caloric suitability (s.d.)				−0.0028 (0.0054)	−0.0019 (0.0050)		
Ancestral elevation (s.d.)				−0.0015 (0.0068)	0.0082 (0.0076)		
Ancestral caloric suitability (mean)				−0.0060 (0.0044)	−0.0020 (0.0043)		
Ancestral elevation (mean)				0.0098 (0.0087)	0.0029 (0.0089)		
Ancestral island						−0.0021 (0.0018)	−0.00060 (0.0017)
Dep. var. mean	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Individuals	6309382	6309382	6309382	6309382	6309382	6309382	6309382
Demographic bins	11284	11284	11284	11284	11284	11284	11284
Ancestral homelands	120	120	120	120	120	120	120
Adjusted $R^2$	0.25	0.24	0.25	0.24	0.25	0.24	0.25

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected by geographical determinants of diversity in the ancestral homeland. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. We report standardized coefficients for all geographical controls. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Reassuringly, Table 5 establishes that the baseline results are unaffected qualitatively by the inclusion of these potential deep-rooted geographic determinants of societal interpersonal diversity. Columns (2)-(3) account for the potentially confounding effect of absolute latitude, Columns (4)-(5) account for ecological diversity, as captured by the mean and standard deviation of elevation, as well as the mean and the standard deviation of the caloric suitability of the land for agriculture (i.e., potential calories per hectare per year of the most productive

crop), and Columns (6)-(7) consider the potential influence of the degree of isolation of an ethnic group on the compression of traits, accounting for this potential impact by including a dummy variable for whether the ancestral origin of a group is located on an island.

### 3.5 Accounting for Ancestral Ethnic Fragmentation

Migratory distance from Africa has been shown to be correlated with the decline in the number of ethnic groups (Galor and Klemp 2023) and with the decrease in the degree of ethnolinguistic fragmentation (Ashraf and Galor 2013b). Hence, it is a-priori plausible that the baseline results may reflect the impact of migratory distance from Africa on inequality through ethnic fragmentation rather than interpersonal diversity.

**Table 6. Accounting for the Impact of Ancestral Ethnic Fragmentation**

	GINI					
	(1)	(2)	(3)	(4)	(5)	(6)
Ancestral migratory distance	−0.042**		−0.041**	−0.045**		−0.044**
from East Africa (in 20K km)	(0.018)		(0.018)	(0.018)		(0.019)
Ancestral ethnic fractionalization		−0.0047	−0.0039			
		(0.0044)	(0.0042)			
Ancestral ethnolinguistic fractionalization					−0.0028	−0.00078
					(0.0045)	(0.0044)
Dep. var. mean	0.38	0.38	0.38	0.38	0.38	0.38
Individuals	6009124	6009124	6009124	5929506	5929506	5929506
Demographic bins	10875	10875	10875	11020	11020	11020
Ancestral homelands	116	116	116	118	118	118
Adjusted $R^2$	0.25	0.25	0.25	0.25	0.24	0.25

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected by ancestral ethnic fragmentation. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. We report standardized coefficients for all geographical controls. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.

To investigate the impact of this potential channel, we account for the confounding effect of ancestral ethnic fragmentation of the population of each demographic bin, accounting for measures of ethnic fractionalization (Alesina et al. 2003) and ethnolinguistic fractionalization (Desmet, Ortuno-Ortin, and Weber 2009) in the ancestral countries of origin.<sup>22</sup>

Table 6 suggests that these measures of ancestral ethnic fragmentation are largely orthogonal to the level of inequality in the US. Moreover, as reported in Columns (3) and (5), in regressions that include both interpersonal diversity, as captured by migratory distance from Africa, and the different measures of ancestral ethnic fragmentation, the coefficient on interpersonal diversity and its statistical significance remains largely unaltered. The evidence suggests therefore that the baseline results are not driven by the impact of the migration from Africa on ethnic fragmentation in the ancestral homelands.

### 3.6 Accounting for the Impact of Ancestral Inequality

The observed relationship between migratory distance from Africa and contemporary inequality may reflect the persistence of inequality that was prevalent in the ancestral homeland rather than the deep determinants of interpersonal diversity. To rule out this potential threats to our identification, we account for the potentially confounding effects of ancestral inequality.

Table 7 explores the effect of ancestral inequality on the Gini index in each demographic bin in the US (Columns (1)-(3)), and on the income share of the top 10% of these demographic bins (Columns (4)-(6)), accounting for the ancestral inequality, as proxied by the share of the top 10% of the income distribution in the ancestral homeland over the period 1980-1999.<sup>23</sup> The results indicate that the estimated effects of ancestral inequality are insignificantly different than zero, and even slightly negative (Column (2) and (4)). Ancestral inequality therefore does not appear to persist.<sup>24</sup> The finding further suggests that the estimated impact of the migration from Africa on inequality does not capture the impact of the persistence of ancestral inequality (Column (3) and (5)).

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<sup>22</sup>While some aspects of interpersonal diversity can be captured by indices of ethnolinguistic fractionalization, these measures predominantly reflect the proportional representation of ancestral groups in the population, abstracting by construction from the importance of the degree of interpersonal diversity within each ancestral group for the overall level of diversity at the national level. These measures of population diversity may thus obfuscate the true impact of population diversity on inequality within nations.

<sup>23</sup>The data constructed and extrapolated by Chancel, Piketty, Saez, Zucman, et al., 2022 is available for a large number of ancestral homelands. As reported in Table F.1, using the ancestral Gini (World Bank Development Indicators) over the same period would not affect the results qualitatively, but will affect its significance due to a large reduction in the sample size. The analysis is also robust for the use of ancestral ethnic inequality (Alesina, Michalopoulos, and Papaioannou, 2016).

<sup>24</sup>The estimates in Table F.2 further suggest that a qualitatively similar pattern holds under alternative measures of income inequality - the shares of income held by the top 1% and top 5%.

**Table 7. Accounting for Ancestral Inequality**

	GINI			TOP 10%		
	(1)	(2)	(3)	(4)	(5)	(6)
Ancestral migratory distance from East Africa (in 20K km)	-0.043** (0.018)		-0.048** (0.020)	-0.046*** (0.010)		-0.047*** (0.013)
Ancestral share of income held by the top 10%		-0.010 (0.034)	0.023 (0.036)		-0.029 (0.022)	0.0045 (0.026)
Dep. var. mean	0.38	0.38	0.38	0.34	0.34	0.34
Individuals	6010499	6010499	6010499	5995486	5995486	5995486
Demographic bins	10996	10996	10996	7742	7742	7742
Ancestral homelands	117	117	117	90	90	90
Adjusted $R^2$	0.25	0.24	0.25	0.22	0.21	0.22

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected by ancestral inequality. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

### 3.7 Ancestral Cultural and Institutional Factors

The degree of inequality in the ancestral homelands of the US population may reflect the institutional and cultural characteristics that are prevalent in these homelands.

The presence of inequality-mitigating institutions in ancestral homelands may have reduced inequality in the ancestral environment. Yet, the descendants of these homelands in the US are subjected to the institutional characteristics of the US rather than those of their ancestral homeland. Nevertheless, the institutional setup in the ancestral homeland could have mattered via its impact on ancestral inequality and its possible persistent effect on the current level of inequality among the descendants of these homelands in the US. However, as was shown in Table 7, ancestral inequality does not appear to have a persistent effect on inequality today.

**Table 8. Accounting for Ancestral Cultural Factors**

	UNCERTAINTY				LONG-TERM			
	AVOIDANCE	GINI			ORIENTATION	GINI		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ancestral migratory distance	8.91	−0.042**		−0.044**	−0.25	−0.049**		−0.049**
from East Africa (in 20K km)	(12.4)	(0.019)		(0.019)	(18.2)	(0.024)		(0.024)
Ancestral Uncertainty Avoidance			0.0035	0.0041				
			(0.0034)	(0.0032)				
Ancestral Long-term Orientation							0.0017	0.0011
							(0.0043)	(0.0044)
Dep. var. mean	67.0	0.39	0.39	0.39	44.6	0.40	0.40	0.40
Individuals		5961083	5961083	5961083		5950610	5950610	5950610
Demographic bins		9310	9310	9310		8865	8865	8865
Ancestral homelands	85	85	85	85	84	84	84	84
Adjusted $R^2$	−0.0066	0.23	0.23	0.23	−0.012	0.23	0.23	0.23

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected and is not mediated by cultural characteristics in the ancestral homelands that are conducive for inequality: (i) *Uncertainty Avoidance* (Columns (1),(3)-(4)) and (ii) *Long-Term Orientation* (Columns (5),(7)-(8)). All specifications account for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. We report standardized coefficients for all geographical controls. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Furthermore, cultural characteristics in the ancestral homeland are entirely portable and could be carried by migrants and their descendants. In particular, some cultural traits that are present in some ancestral homelands could have a significant impact on inequality among the descendants of this homeland and could have mediated the effect of migratory distance from Africa on inequality. In particular, (i) *Uncertainty Avoidance* could diminish the degree of entrepreneurship and the variability in earned income, (ii) *Long-Term Orientation* could foster investment in physical and human capital, as well as technological adoption, increasing wage variability, and (iii) *Individualism*, and (iv) *Entrepreneurial Spirit* could have fostered inequality in the upper tail of the income distribution.

Table 8 establishes that *Uncertainty Avoidance* and *Long-Term Orientation* do not mediate the effect of migratory distance from Africa on inequality. As reported in Columns (1)

and (4), they are uncorrelated with migratory distance from Africa. Moreover, in regressions that include both interpersonal diversity and each of these cultural factors (as Columns (3) and (6)), the coefficient on interpersonal diversity remains largely unaltered. Moreover, the estimated effects of these cultural forces are statistically insignificant different from zero. These results suggest that our estimates do not capture the impact of the persistence of the intergenerational transmission of these cultural forces from the ancestral homeland to the US.

In contrast, migratory distance from the cradle of humanity in Africa and its adverse impact of diversity would be expected to diminish the degree of of *Individualism*, and (iv) *Entrepreneurial Spirit*, affecting the share of income of the upper tail of the income distribution. Indeed, as established in section 4, these are important mediating channels.

### 3.8 Accounting for the Impact of the Post-1500 Migration Flows

The post-1500 migration flows have drastically affected the composition of the population in many ancestral homelands in the New World, affecting their degree of societal interpersonal diversity. To overcome this potential source of endogeneity, we restrict our sample to demographic bins that represent ancestral homelands which were not subjected to significant migration, and show that the impact of migratory distance out of Africa on contemporary inequality in the US is qualitatively similar in this restricted sample of demographic bins.

In particular, as established in Table 9, the impact of migratory distance out of Africa on contemporary inequality in the US among individuals who are originated from the Old World (i.e., Asia, Europe, and North Africa), and have thus not experienced massive post-1500 migration flows, remains sizable and significant statistically.



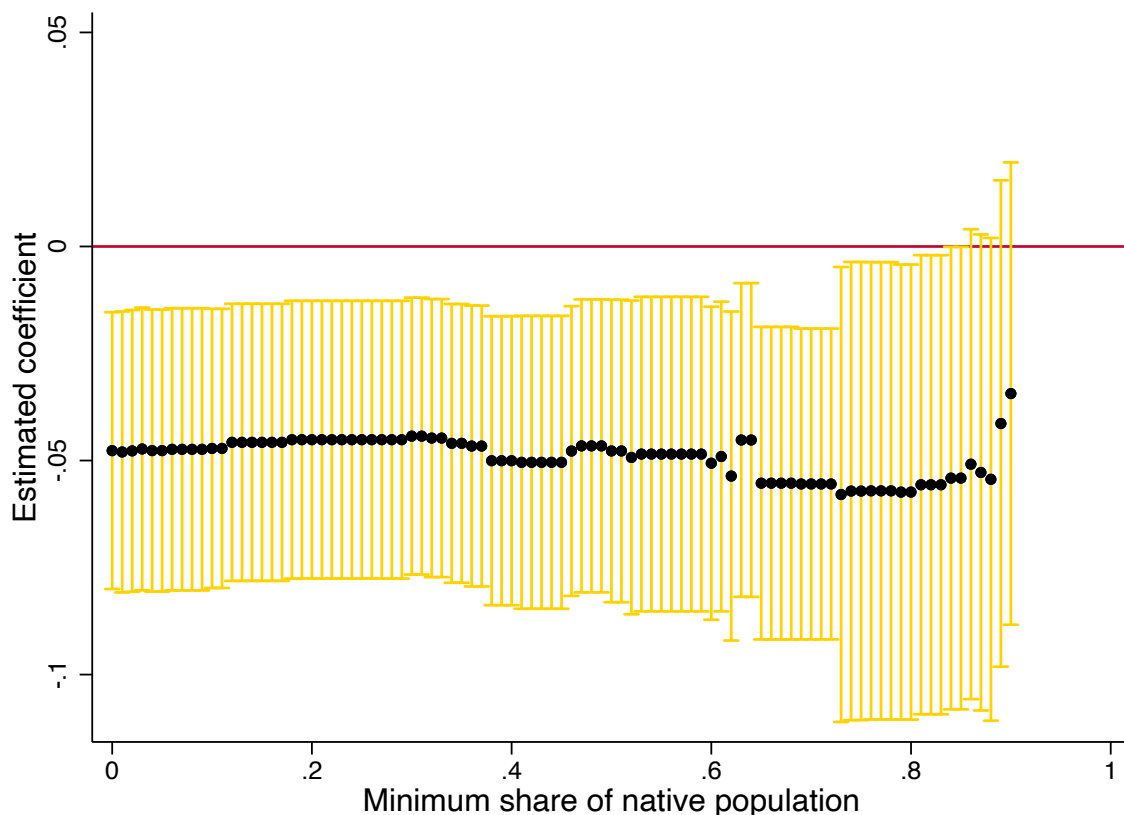
**Table 9. Robustness to Restricting the Sample to Old World Ancestry**

	GINI	TOP 1%	TOP 5%	TOP 10%
	(1)	(2)	(3)	(4)
Ancestral migratory distance	−0.095**	−0.027***	−0.067***	−0.069***
from East Africa (in 20K km)	(0.036)	(0.0058)	(0.016)	(0.022)
Dep. var. mean	0.40	0.077	0.22	0.34
Individuals	5542786	5434558	5522932	5534722
Demographic bins	7457	3192	4862	5721
Ancestral homelands	73	36	52	61
Adjusted $R^2$	0.25	0.18	0.21	0.25

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected by restricting our sample to demographic bins of individuals who are originated from the Old World (i.e., Asia, Europe, and North Africa). All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Moreover, quite strikingly, as depicted in Figure 5, the estimated impact of migratory distance out of Africa on contemporary inequality in the US is rather stable, as we vary the required fraction of the native population in the ancestral homelands from 0 to 90%.<sup>25</sup>

<sup>25</sup>It should be noted, that the sample size drops drastically when the requirement is raised above 90% and the statistical significance drops accordingly.



**Figure 5. The Effect of Migratory Distance from East Africa on Inequality as the Share of Native Populations in Ancestral Homelands Varies from 0 to 90%**

*Notes:* This figure depicts the changes in estimated coefficient in our baseline specification, as we restrict the set of ancestral backgrounds to include a minimum percentage of native in the population. Naturally, we lose precision in our estimates as we impose a higher threshold. In particular, we are left with 57 ancestral backgrounds when requiring that at least 90% of the population is native. Error bars report 95% confidence intervals.

## 3.9 Additional Robustness Checks

### 3.9.1 Assessing the Dominating Role of some Continents

The findings are not driven by a pattern that is present in any single continent. As established in Table C.4, dropping one continent at a time has no qualitative impact on the results. The estimated effect remains sizable and significant.

In view of the uncertainty about the precise origins of humanity within the African continent, migratory distance from East Africa has poor predictive power for compression of traits within this continent. Thus, in light of the weak explanatory power of migratory

distance from East Africa for demographic bins whose populations are originated in Africa, the exclusion of the African continent (Column (2) of Table C.4) reduces the measurement error and therefore increases the estimated effect and its statistical significance.

### 3.9.2 Spatial Dependence and Selection on Unobservables

The main findings are qualitatively unaffected when accounting for spatial dependence. As established in Table E.1, using Conley (1999)’s method, the estimated effects remain significant statistically.

Furthermore, it is very improbable that omitted variables could have affected the qualitative results with respect to the Gini index. In particular, as established in Columns (1)-(2) in Table E.2 based on Oster (2019)’s methodology, if unobservables were as correlated with the dependent variable as the observables, the estimated effect of migratory distance from Africa on the Gini index,  $\beta^*$ , is qualitatively similar to the raw coefficient, as we account for the exogenous controls (i.e., the size of the demographic bin and the geographic controls presented in Table 5).

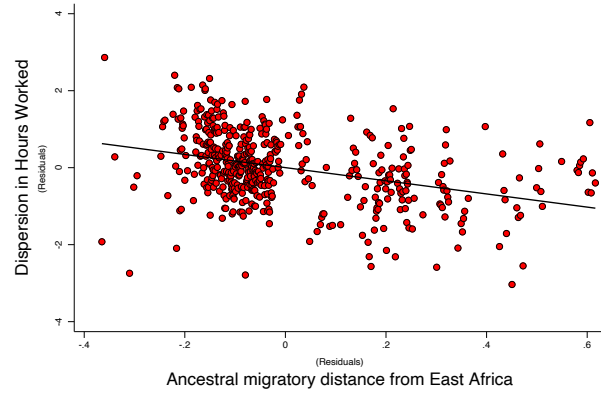
## 4 Mediating Channels

This section explores the mechanism through which shorter prehistoric migratory distance from Africa, and thus greater ancestral diversity, resulted in a higher level of inequality among groups of individuals in the US who descended from more diverse ancestral homelands.

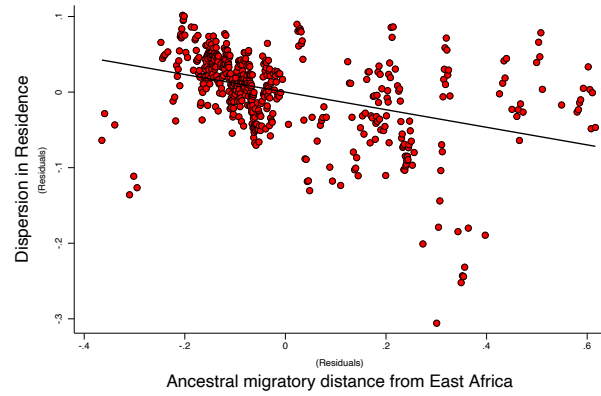
### 4.1 Dispersion in Education, Location & Work Effort

As implied by the proposed hypothesis, the impact of interpersonal diversity on inequality is plausibly operating via the impact of greater population diversity on a wider dispersion of productive traits.

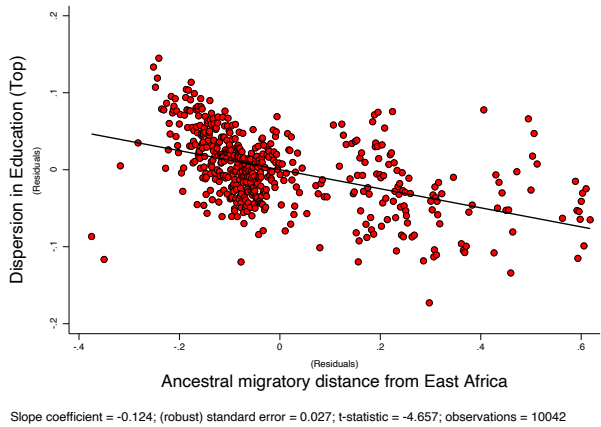
While our data does not provide us with direct measures of the dispersion in cognitive and non-cognitive skills across demographic bins, it does enable us to explore closely related mediating channels. Namely, the impact of migratory distance from Africa and interpersonal diversity on the dispersion in: (a) work effort, as captured by hours worked per week, (b) place of residence, as captured by the state of residence, and (c) the intensity of educational attainment within the top education category (college completed, professional degree, master’s degree, and doctoral degree).



(a) Work Effort Dispersion



(b) Location Dispersion



(c) Education Dispersion

**Figure 6. Migratory Distance from East Africa to Ancestral Homeland of US Inhabitants and Dispersion in their Traits**

*Notes:* This figure depicts the association between migratory distance from East Africa to the ancestral homeland of US inhabitants and dispersion in traits among individuals in the US originated from this ancestral background.

**Table 10. Mediating Channels: Dispersion in Education, Location & Work Effort**

	DISPERSION IN		DISPERSION IN		DISPERSION IN		
	GINI	HOURS WORKED	GINI	RESIDENCE	GINI	EDUCATION (TOP)	GINI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ancestral migratory distance	-0.049***	-1.72***	-0.036**	-0.12***	-0.018	-0.12***	-0.023*
from East Africa (in 20K km)	(0.016)	(0.40)	(0.015)	(0.042)	(0.013)	(0.027)	(0.012)
Dispersion in Hours Worked			0.0073***				
			(0.00044)				
Dispersion in Residence					0.27***		
					(0.021)		
Dispersion in Education (Top)							0.13***
							(0.011)
Dep. var. mean	0.38	10.6	0.38	0.80	0.38	0.42	0.36
Individuals	6309382	6309382	6309382	6309382	6309382	2307440	2307440
Demographic bins	11284	11284	11284	11284	11284	10042	10042
Ancestral homelands	120	120	120	120	120	119	119
Adjusted $R^2$	0.25	0.033	0.32	0.44	0.34	0.14	0.31

*Notes:* This table explores potential mediating channels that may govern the impact of the prehistoric migratory distance from Africa migratory distance from Africa (and thus ancestral diversity) on inequality. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Columns (6)-(7) are estimated in the restricted sample of individuals within the top education category which implies fewer demographic bins and ancestral homelands. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.

In line with the proposed hypothesis, as depicted in Figure 6 (based on Columns (2),(4), and (6) of Table 10), demographic bins of US inhabitants whose ancestors resided closer to the cradle of humanity in Africa, and are therefore more diverse, have: (i) greater education dispersion within the top education category,<sup>26</sup> reflecting a wider range of abilities in the upper tail of the ability distribution, (ii) larger geographical dispersion within the US; a possible manifestation of greater range of abilities and tastes, and (iii) greater dispersion in the number of hours worked, reflecting plausibly a wider range of predisposition towards labor and leisure.<sup>27</sup>

<sup>26</sup>As reported in Table G.1, greater proximity of the ancestors of US inhabitants to East Africa has no significant impact on education dispersion in the bottom education category but only at the top.

<sup>27</sup>Dispersion in these variables within a demographic bin is captured by (i) the standard deviation of hours

In Column (1), we present as a benchmark the reduced-form association between pre-historic migratory distance from Africa and inequality. In Columns (2), (4), and (6), we report a negative and statistically significant association between interpersonal diversity and dispersion in hours worked, state of residence, and education. This finding strengthens the argument that the *out-of-Africa migration* and the associated *Serial Founder Effect* have generated a compression in traits which has persisted to the present day. Furthermore, as expected, we observe in Columns (3), (5), and (7) that dispersions in hours worked, state of residence, and education have a positive and statistically significant association with income inequality.<sup>28</sup> Moreover, consistent with the view that these are indeed mediating channels, the point estimates of the effect of interpersonal diversity on inequality drop as compared to the reduced-form estimates.

## 4.2 Individualism & Entrepreneurial Spirit

Cultural traits that are conducive for heterogeneous behavior also appear to mediate part of the effect of migratory distance from the cradle of humanity in Africa on inequality. In particular, the analysis establishes that demographic bins of US inhabitants whose ancestors resided closer to cradle of humanity in Africa, and are therefore more diverse, have ancestors that are more individualistic and are themselves more entrepreneurial.<sup>29</sup> Furthermore, these traits *Individualism* and *Entrepreneurial Spirit* are indeed positively associated with inequality and appear to be additional mediating forces in the impact of migratory distance from the cradle of humanity in Africa on inequality.<sup>30</sup>

As established in Table 11 and depicted in Figure 7 (based on Columns (2) and (6)), migratory distance from the cradle of humanity in Africa and its adverse impact of diversity have diminishes the degree of *Individualism* (Column (2)) and *Entrepreneurial Spirit* (Column (6)), affecting the share of income of the upper tail of the income distribution. Furthermore, *Individualism* (Column (3)) and *Entrepreneurial Spirit* (Column (7)) have a

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worked, (ii) 1- [The Herfindahl index of state of residence], and (iii) 1 - [The Herfindahl index of the intensity of education within the top education category (college completed, professional degree, master's degree, and doctoral degree)]. The granular educational attainment levels follow the coding of "educd" (i.e., detailed educational attainment) in IPUMS.

<sup>28</sup>As reported in Table G.1, the entire set of education categories are highly correlated with inequality, but only the top category appears to be a potential mediating channel. The dispersion in education over all categories or at the bottom categories are unaffected by the prehistoric migratory distance from Africa, and their inclusion does not affect the contribution of interpersonal diversity to inequality.

<sup>29</sup>More diverse societies have a denser upper tail of the distribution of skills necessary to become an entrepreneur. Therefore, we expect to observe more entrepreneurs among US inhabitants whose ancestors resided closer to the cradle of humanity in Africa.

<sup>30</sup>While it is plausible to consider individualism as a potential trigger of entrepreneurial spirit, Table G.2, suggests that in fact they operate independently.

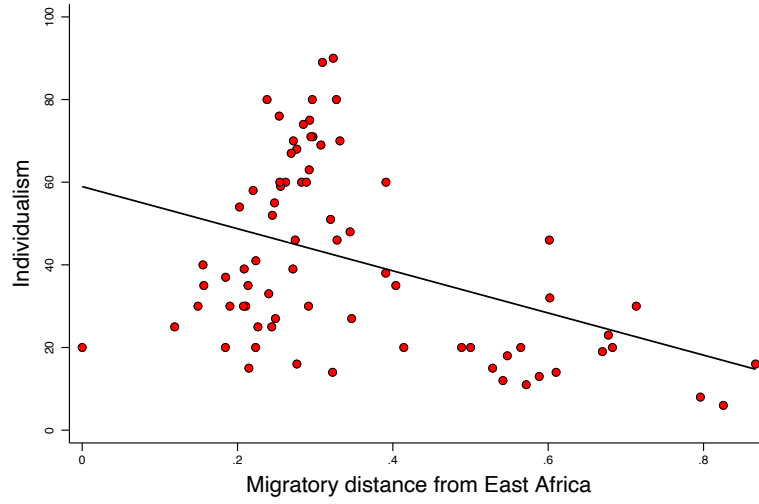
positive and statistically significant association with the share of income help by the top 10%. Finally, consistent with the view that these are indeed mediating channels, the point estimates of the effect of interpersonal diversity on inequality drop as compared to the reduced-form estimates (Column (4) and (8)).<sup>31</sup>

**Table 11. Mediating Channels: Individualism & Entrepreneurial Spirit**

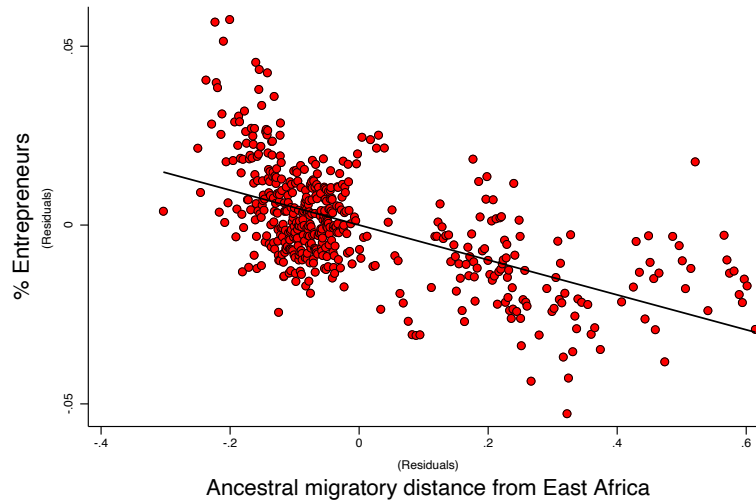
	TOP 10%	INDIVIDUALISM	TOP 10%			% ENTREPRENEURS	TOP 10%	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ancestral migratory distance from East Africa (in 20K km)	-0.049*** (0.0100)	-51.0*** (10.5)		-0.038*** (0.014)	-0.042*** (0.0097)	-0.049*** (0.0089)		-0.036*** (0.0092)
Ancestral Individualism			0.0078** (0.0030)	0.0043 (0.0036)				
Share of Entrepreneurs							0.17*** (0.030)	0.14*** (0.030)
Dep. var. mean	0.34	41.1	0.34	0.34	0.34	0.056	0.34	0.34
Individuals	5950007		5950007	5950007	6294292	6294292	6294292	6294292
Demographic bins	7006		7006	7006	8006	8006	8006	8006
Ancestral homelands	75	75	75	75	92	92	92	92
Adjusted $R^2$	0.23	0.15	0.23	0.23	0.23	0.31	0.23	0.23

*Notes:* This table explores the role of *Individualism* and *Entrepreneurial Spirit* as potential mediating channels that govern the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

<sup>31</sup>Incorporated businesses have been shown to engage relatively more in activities which demand strong nonroutine cognitive skills. Therefore, the share of entrepreneurs in each demographic bin represents the share of incorporated self-employed individuals within the bin. In contrast, the level of individualism is an aggregate magnitude at the national level based on Hofstede (1991).



(a) Individualism



(b) Entrepreneurial Spirit

## Figure 7. Individualism, Entrepreneurial Spirit & Distance from Africa

*Notes:* Panel (a) depicts the association between migratory distance from East Africa and Individualism at the ancestral homeland level (Column (2) in Table 11). Panel (b) depicts the association between the ancestral migratory distance from East Africa and the entrepreneurial spirit of individuals in the US originated from this ancestral background (Column (6) in Table 11).



## 5 Concluding Remarks

This research sheds new light on the roots of the variation in the intensity of inequality across societies. We advance a novel hypothesis that in a market economy, where earning differentials reflect variations in productive traits across individuals, a significant component of the differences in inequality across societies can be attributed to variation in societal interpersonal diversity, shaped by the prehistorical out-of-Africa migration.

Considering the impact of the prehistoric out-of-Africa migration on institutional and cultural characteristics, a conclusive empirical examination of the proposed hypothesis would not be feasible in a cross-country setting. Instead, the desirable empirical setting would require the exploration of the origins of variation in inequality within groups of individuals, who reside in a single country, and are exposed to the same economic forces and political institutions, but differ in their ancestral origin. In such a single-country context, the proposed hypothesis would imply that greater income inequality would be prevalent among groups of individuals, within the society, whose ancestral populations resided closer to the cradle of humanity in Africa and who are therefore more diverse.

Exploring the roots of inequality within the US population, leveraging rich micro-data on millions of US-born individuals, with more than hundred different ancestries, we find supporting evidence for our hypothesis. The effect migratory distance from the cradle of humanity in Africa on inequality is sizable: a move from the lowest to the highest level of diversity in the sample is associated with an increase in the Gini index from the median to the 75th percentile of the inequality distribution.

The impact of interpersonal diversity on inequality appear to be mediated through its impact on the diversity in productive traits. In particular, the analysis establishes that demographic bins of US inhabitants whose ancestors resided closer to cradle of humanity in Africa, and are therefore more diverse, have: (i) greater educational diversity, (ii) larger geographical dispersion within the US, and (iii) greater heterogeneity in the number of hours worked, and these dispersions are indeed associated with greater income inequality, mediating the effect of migratory distance from cradle of humanity in Africa on inequality.

Moreover, cultural traits that are conducive for heterogeneous behavior appear to also mediate part of the effect of migratory distance from the cradle of humanity in Africa on inequality. US inhabitants whose ancestors resided closer to cradle of humanity in Africa, and are therefore more diverse, have ancestors that are more individualistic and are themselves more entrepreneurial. Furthermore, these traits *Individualism* and *Entrepreneurial Spirit* are positively associated with inequality, and appear to be additional mediating forces in the impact of migratory distance from the cradle of humanity in Africa on income inequality.

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# Appendix

## A. Variable Definitions, Sources and Summary Statistics

### A.1. Variable Definition and Sources

#### A.1.1. Ancestral Homeland

- Self-reported ancestry of the US population. We follow the coding of the variable "ancestr1d" (i.e., detailed ancestry, first response) in IPUMS USA to match the self-reported ancestry to a modern national boundary. Data Source: Authors' assignment based on Ruggles et al., (2022).

#### A.1.2. Dependent Variable - Income Inequality

- **Gini:** The Gini index of earned income within each demographic bin. Data Source: Authors' computation based on Ruggles et al., (2022).
- **Top 1%:** The share of earned income held by the top 1% within each demographic bin. Data Source: Authors' computation based on Ruggles et al., (2022).
- **Top 5%:** The share of earned income held by the top 5% within each demographic bin. Data Source: Authors' computation based on Ruggles et al., (2022).
- **Top 10%:** The share of earned income held by the top 10% within each demographic bin. Data Source: Authors' computation based on Ruggles et al., (2022).

#### A.1.3. Independent Variable - Ancestral Migratory Distance from Africa

- **Migratory distance from Africa:** The great circle distance from Addis Ababa (Ethiopia) to the ancestral homeland modern capital city along a land-restricted path. Data Source: Ashraf and Galor (2013).<sup>32</sup>

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<sup>32</sup>Since the ancestral homeland may consist of population which are themselves from different ancestries, the ancestry-adjusted migratory distance from Africa to the ancestral homeland captures the weighted average of the migratory distances from Africa of each of these ancestral populations, accounting for the proportional representation of these deeper ancestral populations in the ancestral homeland, using the migration matrix of Putterman and Weil (2010). If the ancestral homeland is not in the matrix but is in the Old World, we keep the unadjusted migratory distance. If the ancestral homeland is not in the matrix and is in the New World, we drop the ancestral homeland.

#### A.1.4. Fixed-Effects

- **Sex:** Each individual’s sex. Data Source: Authors’ computation based on Ruggles et al., (2022).
- **Age group:** Each individual’s age group: 25-34, 35-44, or 45-54. Data Source: Authors’ computation based on Ruggles et al., (2022).
- **Year of survey:** Each individual’s year of interview. Data Source: Authors’ computation based on Ruggles et al., (2022).
- **Continental Fixed-Effects:** Dummy variables capturing the location of each ancestral homeland of the US population in either: Africa, Asia, Europe, Americas, or Oceania. Data Source: Authors’ assignment.

#### A.1.5. Baseline controls

- **Size of demographic bin:** Number of individuals in a demographic bin. Data Source: Authors’ computation based on Ruggles et al., (2022).

#### A.1.6. Ancestral Geographical Controls

- **Absolute latitude:** The absolute value of the latitude of the geodesic centroid of each ancestral homeland of the US population. Data Source: Authors’ computation.
- **Ecological Diversity:** Standard deviation and mean of caloric suitability and elevation within the territory of each ancestral homeland. Data Source: Authors’ computation based on Galor and Ozak (2016) and Fick and Hijmans (2017), respectively.
- **Island:** A dummy variable that captures whether each ancestral homeland of the US population is located on an island. Data Source: Authors’ assignment.

#### A.1.7. Ancestral Ethnic Fragmentation Controls

- **Ethnic Fractionalization:** The index captures the probability that two individuals in a country share the same ethnicity. Data Source: Alesina et al., (2003).
- **Ethnolinguistic Fractionalization:** The index captures the probability that two individuals in a country share the same ethnicity, weighted by their linguistic distance. This is also known as the Greenberg index. Data Source: Desmet, Ortuño-Ortín, and Weber (2009).

### A.1.8. Ancestral Inequality Controls

- **Gini:** The Gini index during the time period 1980-1999 in each demographic bin. Data Source: World Bank Development Indicators.
- **Share of income held by the top 10%:** The share of income held by the top 10% during the time period 1980-1999 in each demographic bin. Data Source: World Inequality Database (Chancel, Piketty, Saez, Zucman, et al. 2022).
- **Ethnic Inequality:** The Gini index of mean luminosity per capita across ethnic homelands (GREG) within a given country. Data Source: Alesina, Michalopoulos, and Papaioannou (2016).

### A.1.9. Ancestral Cultural Controls

- **Uncertainty Avoidance:** “The dimension Uncertainty Avoidance has to do with the way that a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? This ambiguity brings with it anxiety and different cultures have learnt to deal with this anxiety in different ways. The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these is reflected in the score on Uncertainty Avoidance”. Data Source: Hofstede (1991), and Hofstede et al. (2010).
- **Long-Term Orientation:** “This dimension describes how every society has to maintain some links with its own past while dealing with the challenges of the present and future, and societies prioritise these two existential goals differently. Normative societies. which score low on this dimension, for example, prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. Those with a culture which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future”. Data Source: Hofstede (1991), and Hofstede et al. (2010).

### A.1.10. Mediating Channels

- **Dispersion in Hours Worked:** The standard deviation of hours worked within each demographic bin. Data Source: Authors’ computation based on Ruggles et al., (2022).
- **Dispersion in Residence:** 1- [The Herfindahl index of state of residence] within each demographic bin. Data Source: Authors’ computation based on Ruggles et al., (2022).



- **Dispersion in Education (Top):** 1 - [The Herfindahl index of the intensity of education within the top education category (college completed, professional degree, master's degree, and doctoral degree)] within each demographic bin. Data Source: Authors' computation based on Ruggles et al., (2022).
- **Entrepreneurial Spirit:** Share of incorporated self-employed individuals within each demographic bin. Data Source: Authors' computation based on Ruggles et al., (2022).
- **Individualism:** "The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among its members. It has to do with whether people's self-image is defined in terms of "I" or "We". In Individualist societies people are supposed to look after themselves and their direct family only. In Collectivist societies people belong to 'in groups' that take care of them in exchange for loyalty". Data Source: Hofstede (1991), and Hofstede et al. (2010).

## A.2. Summary Statistics

**Table A.2. Summary Statistics I**

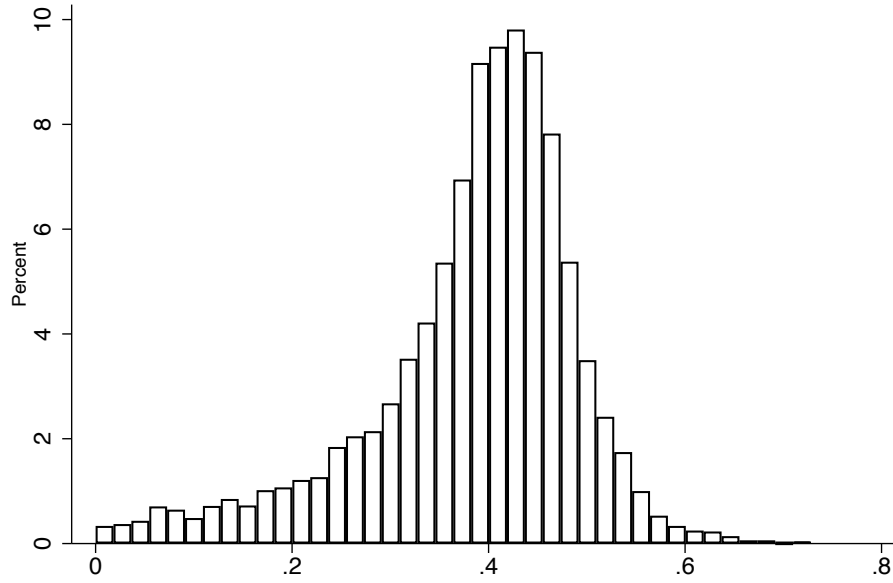
	MEAN	SD	MEDIAN	MIN	MAX	N
<b>A. DEPENDENT VARIABLES</b>						
Gini index	0.38	0.11	0.40	0	0.7	11,284
Share of income held by the top 1%	0.08	0.02	0.07	0	0.2	3,835
Share of income held by the top 5%	0.22	0.05	0.21	0	0.5	6,379
Share of income held by the top 10%	0.34	0.07	0.33	0	0.8	8,006
<b>B. INDEPENDENT VARIABLES</b>						
Ancestral migratory distance from East Africa	0.34	0.19	0.29	0	1.0	120
<b>C. BASELINE CONTROLS</b>						
Size of demographic bin	559.14	1864.79	31.00	2	22999.0	11,284
<b>D. ANCESTRAL GEOGRAPHY</b>						
Absolute latitude	32.60	16.11	32.59	1	68.8	120
Caloric suitability (s.d.)	1600.08	877.27	1595.05	0	3986.4	120
Elevation (s.d.)	399.82	295.00	340.93	12	1712.3	120
Caloric suitability (mean)	6545.36	2774.22	7562.04	0	10109.4	120
Elevation (mean)	552.59	383.41	475.22	25	2048.8	120
Island	0.05	0.20	0.00	0	1.0	120

*Notes:* The table provides for all variables used in the data analysis the mean, the standard deviation (SD), the median, the minimum value (MIN), the maximum value (MAX), and the number of observations (N).

**Table A.2. Summary Statistics II**

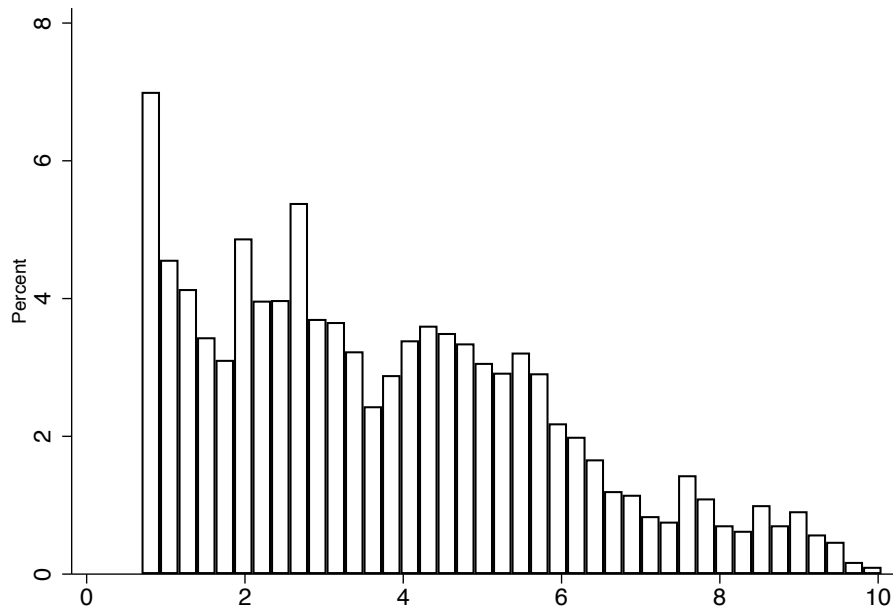
	MEAN	SD	MEDIAN	MIN	MAX	N
<hr/> E. ANCESTRAL ETHNIC FRAGMENTATION <hr/>						
Ethnic fractionalization	0.42	0.25	0.42	0	0.9	116
Ethnolinguistic fractionalization	0.16	0.17	0.09	0	0.6	118
<hr/> F. ANCESTRAL INEQUALITY <hr/>						
Gini index	0.40	0.10	0.38	0	0.6	78
Share of income held by the top 1%	0.15	0.06	0.16	0	0.3	117
Share of income held by the top 5%	0.32	0.10	0.34	0	0.5	117
Share of income held by the top 10%	0.43	0.11	0.46	0	0.6	117
Ethnic inequality	0.44	0.25	0.43	0	1.0	114
<hr/> G. ANCESTRAL CULTURAL FACTORS <hr/>						
Uncertainty avoidance	67.01	21.19	67.00	13	112.0	85
Long term orientation	44.59	22.95	44.50	4	100.0	84
<hr/> H. MEDIATING CHANNELS <hr/>						
Dispersion in Hours Worked	10.64	3.93	10.82	0	46.9	11,284
Dispersion in Residence	0.80	0.16	0.85	0	1.0	11,284
Dispersion in Education (Top)	0.42	0.17	0.44	0	0.8	10,042
% Entrepreneurs	0.06	0.09	0.03	0	1.0	11,284
Individualism	40.28	22.30	35.00	6	90.0	86

*Notes:* The table provides for all variables used in the data analysis the mean, the standard deviation (SD), the median, the minimum value (MIN), the maximum value (MAX), and the number of observations (N).



Mean = 0.385; median = 0.405; standard deviation = 0.107; observations = 11284

(a) Gini index

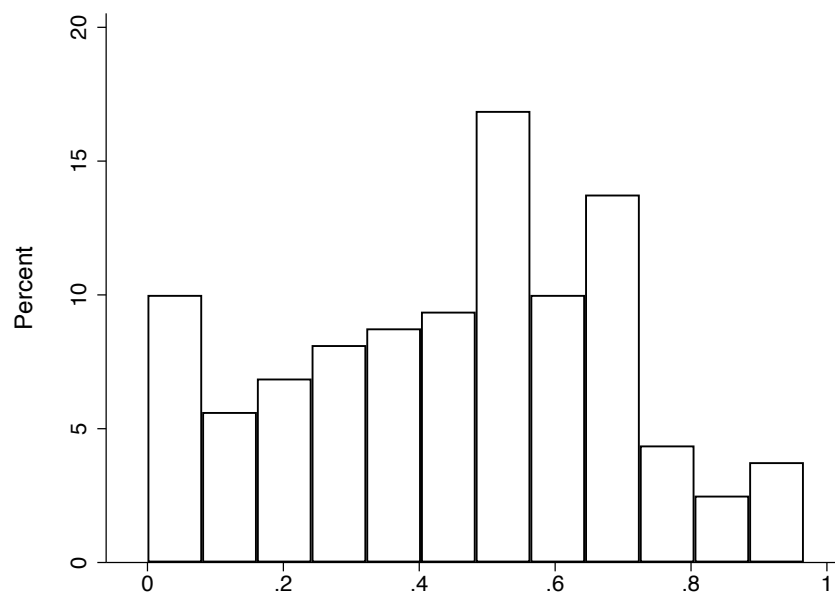


(b) Log Bin size

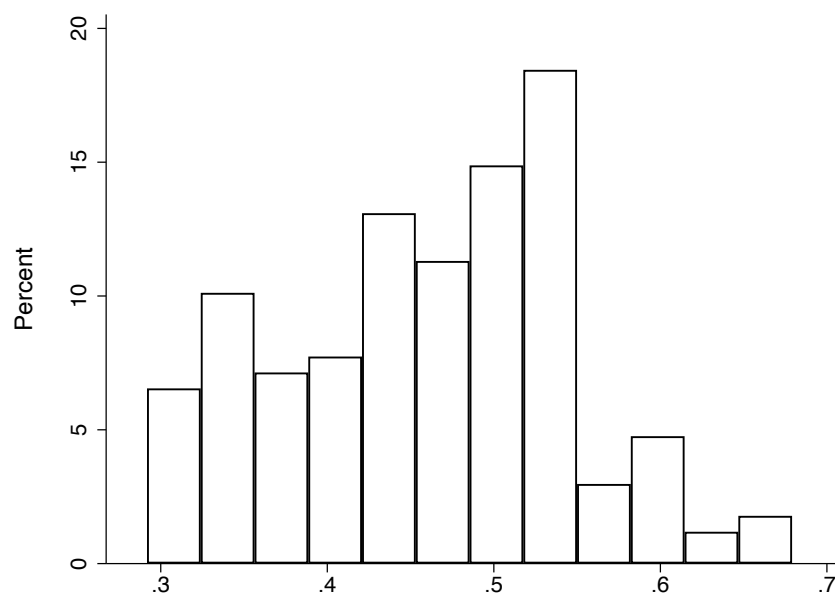
### Figure A.1. The Structure of Demographic Bins.

*Notes:* This figure depicts the histograms of: (a) inequality across demographic bins as captured by the Gini index, and (b) the distribution of the log number of individuals in each demographic bin.

## Appendix B - Disparity in National Inequality



(a) Ethnic Inequality



(b) Share of income held by the top 10%

**Figure B.1. Disparity in in Ethnic Inequality within Nations and in Inequality across Countries.**

*Notes:* This figure depicts the histogram of the: (a) global distribution of inequality across ethnic groups within a nation (Alesina, Michalopoulos and Papaioannou 2016), and (b) share of income held by the top 10% across countries during the time period 2000-2020 (Chancel, Piketty, Saez, Zucman, et al. 2022).

# Appendix C - Alternative Empirical Specifications and Classifications

Table C.1. Robustness to the Alternative Demographic Bins

	GINI			
	(1)	(2)	(3)	(4)
Ancestral migratory distance from East Africa (in 20K km)	−0.061*** (0.023)	−0.047** (0.020)	−0.049** (0.020)	−0.049*** (0.016)
Ancestry	yes	yes	yes	yes
Year	no	yes	yes	yes
Sex	no	no	yes	yes
Age	no	no	no	yes
Dep. var. mean	0.45	0.42	0.40	0.38
Individuals	6310718	6310624	6310445	6309382
Demographic bins	124	2346	4440	11284
Ancestral homelands	124	122	120	120
Adjusted $R^2$	0.13	0.21	0.24	0.25

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality holds unconditionally, and in particular irrespective of the inclusion of sex, age, and year of survey in the analysis. All specifications accounts for the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a bin at the level of: (a) ancestry, (b) ancestry and survey year, (c) ancestry, survey year, and sex, (d) baseline demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.

**Table C.2. Robustness to Alternative Classifications of Age Group**

Split in groups of:	GINI						
	15-YEAR	10-YEAR	6-YEAR	5-YEAR	3-YEAR	2-YEAR	1-YEAR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ancestral migratory distance from East Africa (in 20K km)	−0.051*** (0.018)	−0.049*** (0.016)	−0.056*** (0.015)	−0.055*** (0.016)	−0.052*** (0.014)	−0.058*** (0.016)	−0.054*** (0.016)
Dep. var. mean	0.39	0.38	0.38	0.37	0.36	0.36	0.35
Individuals	6309929	6309382	6308306	6307755	6306491	6302009	6292197
Demographic bins	7990	11284	17353	20222	24765	41620	69651
Ancestral homelands	120	120	120	119	118	119	116
Adjusted $R^2$	0.24	0.25	0.26	0.27	0.28	0.29	0.29

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected by the classification of age groups. All specifications include sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin as a control. Heteroskedasticity robust standard errors (clustered at the ancestral origins of the US population) is reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

**Table C.3. Robustness to Alternative Employment Status, Working Age, and Exclusion of Individuals with Negative Income**

	GINI					
	ALL	LABOR FORCE	EMPLOYED			
	(1)	(2)	(3)	(4)	(5)	(6)
Ancestral migratory distance from East Africa (in 20K km)	−0.045*** (0.015)	−0.043*** (0.015)	−0.046*** (0.016)	−0.055*** (0.016)	−0.049*** (0.016)	−0.049*** (0.016)
Working age	yes	yes	yes	yes	no	no
Prime age	no	no	no	no	yes	yes
Drop negative income	no	no	no	no	no	yes
Only private sector	no	no	no	yes	yes	yes
Dep. var. mean	0.42	0.40	0.40	0.41	0.38	0.38
Individuals	14600291	13564013	13043035	9601068	6309382	6299566
Demographic bins	19584	19326	19201	18312	11284	11280
Ancestral homelands	123	123	123	122	120	120
Adjusted $R^2$	0.36	0.32	0.31	0.30	0.25	0.25

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is unaffected by estimating our specification on the sample of: (i) all working age individuals, (ii) working age individuals in the labor force, (iii) employed working age individuals, or (iv) employed in the private sector. It also establishes that the point estimate is unaffected if individuals with negative income are excluded. All specifications include sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin as a control. Heteroskedasticity robust standard errors (clustered at the ancestral origins of the US population) is reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.



**Table C.4. Robustness: Continent Fixed-Effects & Exclusion of Each Continent**

Exclude:	GINI						
	AFRICA		AMERICAS	ASIA	EUROPE	OCEANIA	
	(1)	(2)	(3)	(4)	(5)	(6)	
Ancestral migratory distance	−0.049***	−0.064***	−0.063*	−0.032*	−0.072***	−0.048***	−0.073***
from East Africa (in 20K km)	(0.016)	(0.016)	(0.035)	(0.017)	(0.020)	(0.016)	(0.019)
Continent FE	no	no	no	no	no	no	yes
Dep. var. mean	0.38	0.39	0.39	0.38	0.37	0.39	0.38
Individuals	6309382	6302794	5548525	6133141	945008	6308060	6309382
Demographic bins	11284	10485	8232	8705	6630	11084	11284
Ancestral homelands	120	99	93	89	82	117	120
Adjusted $R^2$	0.25	0.25	0.26	0.26	0.24	0.25	0.26

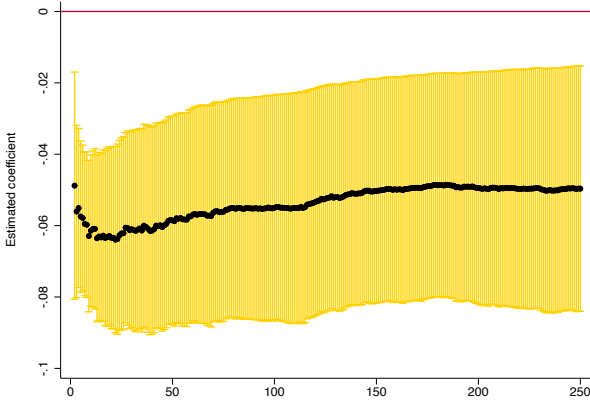
*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality is not driven by a dominating pattern in a single continent and is unaffected by continent fixed-effects. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

## Appendix D - Structure of the Demographic Bins

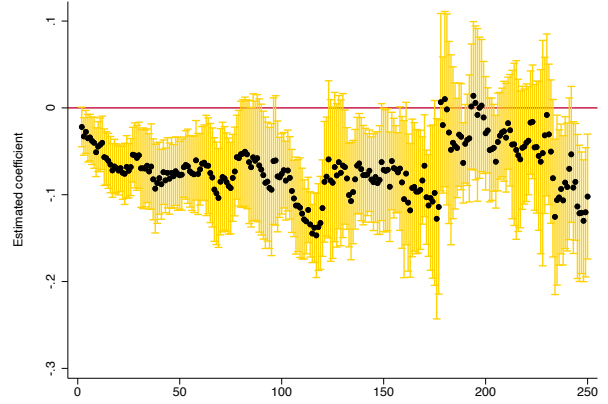
Table D.1. The Size of Demographic Bin and Inequality

	GINI			
	(1)	(2)	(3)	(4)
Ancestral migratory distance from East Africa (in 20K km)			−0.049** (0.022)	−0.049*** (0.016)
Log number of individuals in the cluster	0.021*** (0.0022)	0.048*** (0.0041)		0.021*** (0.0021)
Ancestry FE	no	yes	no	no
Dep. var. mean	0.38	0.38	0.38	0.38
Individuals	6309382	6309380	6309382	6309382
Demographic bins	11284	11283	11284	11284
Ancestral homelands	120	119	120	120
Adjusted $R^2$	0.24	0.38	0.061	0.25

*Notes:* This table reports the positive and significant impact of the log number of individuals in each demographic bin on inequality. All specifications accounts for sex, age-group, and survey year fixed-effects. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.



(a) Minimum bin size  $x \in [1, 250]$



(b) Ranges of bins' sizes  $[x, x + 10]$ ;  $x \in [1, 250]$

**Figure D.1. Robustness to various Ranges of Demographic Bins' Sizes.**

*Notes:* This figure depicts the changes in estimated coefficient in our baseline specification, as we restrict the sample to demographic bins to include: (a) a minimum bin size and varying level from 1 to 250, and (b) ranges of bin sizes,  $[x, x + 10]$ ;  $x \in [1, 250]$ .

## Appendix E. Spatial Dependence and Selection on Unobservables

**Table E.1. Robustness to Conley's Spatial Correlation.**

	GINI		TOP 1%		TOP 5%		TOP 10%	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ancestral migratory distance	-0.049**	-0.058***	-0.015***	-0.0088*	-0.043***	-0.035***	-0.044***	-0.033***
from East Africa (in 20K km)	(0.023)	(0.021)	(0.0047)	(0.0050)	(0.012)	(0.011)	(0.016)	(0.011)
All exogenous controls	no	yes	no	yes	no	yes	no	yes
Dep. var. mean	0.38	0.38	0.43	0.43	0.42	0.42	0.42	0.42
Individuals	6309382	6309382	6143964	6143964	6271956	6271956	6294292	6294292
Demographic bins	11284	11284	3835	3835	6379	6379	8006	8006
Ancestral homelands	120	120	47	47	79	79	92	92

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality remains significant if spatial autocorrelation across ancestral homelands are accounted for using the Conley's method. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Conley standard errors (500 km cutoff) are reported in parentheses. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

**Table E.2. Robustness to Selection on Unobservables**

	GINI		TOP 1%		TOP 5%		TOP 10%	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ancestral migratory distance	-0.049**	-0.058***	-0.015***	-0.0088*	-0.043***	-0.035***	-0.044***	-0.033***
from East Africa (in 20K km)	(0.022)	(0.020)	(0.0047)	(0.0049)	(0.010)	(0.0098)	(0.014)	(0.011)
All exogenous controls	no	yes	no	yes	no	yes	no	yes
Dep. var. mean	0.38	0.38	0.076	0.076	0.22	0.22	0.34	0.34
Individuals	6309382	6309382	6143964	6143964	6271956	6271956	6294292	6294292
Demographic bins	11284	11284	3835	3835	6379	6379	8006	8006
Ancestral homelands	120	120	47	47	79	79	92	92
Adjusted $R^2$	0.061	0.25	0.095	0.17	0.16	0.22	0.14	0.24
$\beta^*$		-0.064		-0.00012		-0.0097		-0.016

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality,  $\beta^*$ , is qualitatively similar to the raw effects as we account for the exogenous controls (i.e., the size of the demographic bin and the geographic controls presented in Table 5), using Oster's method, if selection on unobservables is of equal proportion to selection on observables and the maximum  $R^2$  is equal to 1.3 times the observed  $R^2$ . All specifications accounts for sex, age-group, and survey year fixed-effects Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

## Appendix F - Accounting for Ancestral Inequality

**Table F.1. Accounting for Ancestral Inequality**

	GINI					
	(1)	(2)	(3)	(4)	(5)	(6)
Ancestral migratory distance	−0.041**		−0.047*	−0.041**		−0.044**
from East Africa (in 20K km)	(0.020)		(0.027)	(0.018)		(0.020)
Ancestral Gini		−0.042	0.019			
		(0.037)	(0.048)			
Ancestral ethnic inequality					−0.0010	0.0089
					(0.015)	(0.016)
Dep. var. mean	0.38	0.38	0.38	0.38	0.38	0.38
Individuals	5486517	5486517	5486517	6001806	6001806	6001806
Demographic bins	7519	7519	7519	10712	10712	10712
Ancestral homelands	78	78	78	114	114	114
Adjusted $R^2$	0.24	0.23	0.24	0.25	0.24	0.25

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality, as measured by the Gini Index, is unaffected by ancestral inequality, as captured by Ancestral Gini over the period 1980-1999 (Columns (2)-(3)), and ancestral ethnic inequality (Columns (5)-(6)). All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.

**Table F.2. Accounting for Ancestral Inequality**

	TOP 1%			TOP 5%		
	(1)	(2)	(3)	(4)	(5)	(6)
Ancestral migratory distance from East Africa (in 20K km)	−0.022*** (0.0056)		−0.023*** (0.0064)	−0.044*** (0.0100)		−0.051*** (0.013)
Ancestral share of income held by the top 1%		−0.020 (0.016)	0.0096 (0.018)			
Ancestral share of income held by the top 5%					−0.011 (0.023)	0.030 (0.026)
Dep. var. mean	0.077	0.077	0.077	0.22	0.22	0.22
Individuals	5845891	5845891	5845891	5973163	5973163	5973163
Demographic bins	3582	3582	3582	6116	6116	6116
Ancestral homelands	45	45	45	77	77	77
Adjusted $R^2$	0.16	0.14	0.16	0.20	0.18	0.21

*Notes:* This table establishes that the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality (as measured by the income share held by the top 1% (Columns (1)-(3)) and the top 5% (Columns (4)-(6)) is unaffected by ancestral inequality, as captured by the ancestral income share held by the top 1% and the top 5%, respectively, over the period 1980-1999. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

## Appendix G - Mediating Channels

**Table G.1. Educational Dispersion as a Determinant of Inequality**

	DISPERSION IN EDUCATION						
	GINI				GINI		
	ENTIRE	BOTTOM	TOP				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ancestral migratory distance	-0.049***	-0.0024	0.021	-0.12***			-0.048***
from East Africa (in 20K km)	(0.016)	(0.031)	(0.029)	(0.027)			(0.012)
Dispersion in Education (Entire)					0.27***	0.19***	0.27***
					(0.017)	(0.015)	(0.017)
Ancestry FE	no	no	no	no	no	yes	no
Dep. var. mean	0.38	0.38	0.33	0.36	0.38	0.38	0.38
Individuals	6309382	6309382	4000256	2307440	6309382	6309380	6309382
Demographic bins	11284	11284	10046	10042	11284	11283	11284
Ancestral homelands	120	120	114	119	120	119	120
Adjusted $R^2$	0.25	0.29	0.34	0.14	0.32	0.42	0.33

*Notes:* This table reports the lack of impact of the prehistoric migratory distance from Africa on education dispersion over: (i) the entire education categories (Column (2)), (ii) the bottom education categories (Column (3)). It establishes that it reduces dispersion only in the top educational categories (column (4)). Moreover, it shows that while the dispersion in the entire educational categories is positively correlated with inequality (Column (5)-(7)), it is not a mediating factor for the effect of the ancestral migration from Africa on inequality (Column (7)). All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.



**Table G.2. Individualism & Entrepreneurial Spirit: Independent Mediating Channels**

	TOP 10%	INDIVIDUALISM	% ENTREPRENEURS			TOP 10%			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ancestral migratory distance	−0.049***	−51.0***	−0.051***		−0.055***				−0.031**
from East Africa (in 20K km)	(0.0100)	(10.5)	(0.0098)		(0.012)				(0.013)
Ancestral Individualism				0.0034	−0.0017	0.0078**		0.0073**	0.0045
				(0.0020)	(0.0020)	(0.0030)		(0.0029)	(0.0034)
Share of Entrepreneurs							0.16***	0.15***	0.13***
							(0.031)	(0.031)	(0.031)
Dep. var. mean	0.34	41.1	0.057	0.057	0.057	0.34	0.34	0.34	0.34
Individuals	5950007		5950007	5950007	5950007	5950007	5950007	5950007	5950007
Demographic bins	7006		7006	7006	7006	7006	7006	7006	7006
Ancestral homelands	75	75	75	75	75	75	75	75	75
Adjusted $R^2$	0.23	0.15	0.32	0.30	0.32	0.23	0.23	0.24	0.24

*Notes:* This table establishes that *Individualism* and *Entrepreneurial Spirit* are indepdent mediating channels that govern the impact of the prehistoric migratory distance from Africa (and thus ancestral diversity) on inequality. All specifications accounts for sex, age-group, and survey year fixed-effects as well as the log number of individuals in the demographic bin. Heteroskedasticity-robust standard errors (clustered at the ancestral origins of the bin) are reported in parentheses. The unit of observation is a demographic bin. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level.\* Significant at the 10 percent level.