

# Democracy, Social Mobility, and Culture\*

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## Abstract

In this paper, we investigate the role of parental exposure to democratic institutions in shaping social mobility. First, we find that people whose parents hail from more democratic societies experience more upward mobility. This result is established in a sample of second-generation immigrants in the United States. Identification primarily focuses on exploiting within-origin-country variation in democracy over time. Second, we investigate the potential channel for this finding. We find that people in more democratic societies believe more in meritocracy, and that this difference in beliefs translates into higher upward mobility. Our results imply that people who grew up in more democratic societies hold more favorable beliefs about meritocracy, that these beliefs are retained after emigration, and are transmitted to the next generation. This ultimately affects how successful second-generation immigrant children are relative to their parents.

*Keywords:* social mobility, meritocracy, culture, institutions, democracy, autocracy.

*JEL classification:* O43, O10, P16, I25, Z10.

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# 1 Introduction

Institutions and culture have both been shown to be important in shaping economic outcomes, but this begs the question of what the origin of culture and institutions are.<sup>1</sup> While there likely are many deep-rooted factors that have shaped culture and institutions<sup>2</sup>, there is also a growing body of evidence that culture shapes institutions and institutions shape culture.<sup>3</sup> Our focus here is the latter: the effect of institutions on culture. It is quite conceivable that institutions can affect culture as they shape the environment and the incentives of the people they have jurisdiction over. This can ultimately change people’s behavior, and such behavioral changes can become persistent and part of local culture. Institutions are often represented by the state. And in fact, the important role of the state in shaping people’s culture and behavior has been documented in a variety of settings.<sup>4</sup>

This paper examines the relationship between parental exposure to democratic institutions and social mobility. We also investigate whether the intergenerational transmission of cultural values can be a mechanism behind this relationship. Our main hypothesis is that exposure to democracy affects cultural beliefs that are conducive to social mobility such as perceptions about meritocracy.

A key challenge in testing this hypothesis is that there is little variation in exposure to democracy within countries, so a cross-country study is necessary. But even if one finds differences in mobility in a cross-country setting, it is difficult to ascertain whether the source of this variation is indeed cultural. For this reason, we look at data on second-generation immigrants in the United States. This group was born in the same country and was exposed to the same set of institutions. Yet they differ on where their parents came from and when. By focusing on this group, we can try to pinpoint what aspects of these individuals’ origin country is an important determinant of their social mobility. Crucially, the fact that the parents of these immigrants entered the United States in different years allows us to add origin-country fixed effects to our regressions, which greatly helps identification.

Our empirical strategy primarily relies on individual-level data on second-generation immigrants from the American Community Survey (ACS). First, we establish a robust positive association between social mobility and parental exposure to democracy. We measure social mobility by the difference in education between parents and children. Since democracy varies over time, our specifications include origin-country fixed effects, which is our key method

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<sup>1</sup>On institutions, see e.g. Acemoglu et al. (2001), Acemoglu and Robinson (2012). On culture, see e.g. Greif (1994), Tabellini (2010), Doepke and Zilibotti (2014), Algan and Cahuc (2014).

<sup>2</sup>See e.g. Galor (2016).

<sup>3</sup>For the effect of culture on institutions see e.g. Tabellini (2010). For the effect of institutions on culture, see the literature review in the second half of this section.

<sup>4</sup>See e.g. Heldring (2016), Lowes et al. (2017), Shiue (2017).

of identification. Second, we investigate a potential cultural channel for this association between exposure to democracy and social mobility. We examine the association between democracy and various beliefs, most notably belief in meritocracy, in World Values Survey (WVS) data. Finally, we investigate whether a difference in cultural beliefs generated by different parental exposure to democracy predicts social mobility at the individual level.

Our key finding is that individuals whose parents come from more democratic places experience more upward mobility relative to their parents than individuals whose parents come from less democratic places. We find that the mobility of individuals with parents from more democratic places can be tens of percentage points larger, implying several years of additional education. This finding is robust to a variety of potential concerns including alternative explanations or selection into migration. It is also valid across a number of geographic regions. Our second finding is that this relationship between democracy and mobility is to some extent driven by cultural beliefs. In particular, we establish that belief in meritocracy and in the importance of success are both strongly predicted by exposure to democracy. Then we confirm that differences in democracy can generate differences in these two beliefs that provide a partial explanation for the relationship between exposure to democracy and social mobility.

## **Related literature**

This paper is related to three strands of literature. First, there is a set of papers on how the state can have lasting effects on cultural values. Perhaps the most closely related paper is Guiso et al. (2016), which shows that democratic institutions, as measured by the existence of Italian free city states, had long lasting positive effects on social capital. In addition, Heldring (2016) and Lowes et al. (2017) both show how a longer exposure to a formal state by one's ancestors can increase rule-following behavior in individuals even today. This paper in turn looks not at the length of exposure to a formal state, but the type of state one was exposed to. This aspect makes the paper quite similar to Guiso et al. (2016). However, this research focuses on social mobility, not social capital, and the setting is much broader: Guiso et al. (2016) look only at Italian localities, while immigrants in our sample originate from all over the world.

Second, this paper also contributes to the literature on the intergenerational transmission of cultural norms. Papers in this literature generally show that some cultural traits tend to be quite persistently transmitted across many generations. For instance, Nunn and Wantchekon (2011) show that slavery reduced trust among African ethnic groups, and trust is lower even today in countries that were subject to more intensive slave trade. Voigtlaender and Voth

(2012) shows that there is a surprising persistence in anti-Semitism in Germany that can be traced back to the Middle Ages. Galor et al. (2013), Alesina et al. (2013), and Grosjean (2014) show that the transmission of cultural values can persist even when the conditions that gave rise to such values are not present anymore. Our paper documents a similar phenomenon: the persistence of cultural beliefs despite a changing environment. However, instead of documenting this persistence over the course of centuries, we only look at the transmission of values from parents to children.

Finally, we contribute to the literature on social mobility. Here, research has focused on more direct determinants of mobility, mostly within the United States; for instance, colleges (Chetty et al. (2017)), neighborhoods (Chetty and Hendren (2016a) and Chetty and Hendren (2016b)), and inequality (Andrews and Leigh (2009)). In the cross-country setting, Alesina et al. (2016) show that countries that are more optimistic about social mobility have lower support for redistribution. There is also a negative correlation between inequality (Gini) and intergenerational mobility on the cross-country level (Corak (2013)). While our research isn't done on a cross-country level as all the individuals in our data set live in the United States, our data does comprise of second-generation immigrants. For this reason, our findings can potentially shed some light on the determinants of mobility both within a country (cultural traits) and between countries (level of democracy), though our focus is primarily on the former.

This paper is organized as follows. Section 2 introduces the data set and the main variables. Section 3 presents the main results and examines their robustness. Section 4 considers culture as a potential channel. Section 5 concludes.

## 2 Data

This section discusses the data sources and the most important variables used in the empirical analysis. A detailed description of all variables used throughout the paper can be found in Appendix B.

### 2.1 Data source: American Community Survey

The main data source used in Section 3 is the 2011-2015 American Community Survey (ACS) from the US Census Bureau. The Census Bureau selects a number of US households every month to participate in this survey (US Census Bureau (2017b)). The households the ACS considers for its sampling covered more than 98% of all US households and more than 92% of the total US population in 2011-2015 US Census Bureau (2017a). The Census Bureau

initially contacts selected households via mail, but in case of non-response this is followed up by phone call and a personal visit (US Census Bureau (2017b)). This ensures that the response rates are exceptionally high: 95.5% in the 2011-2015 period (US Census Bureau (2017c)).

Within the ACS data set, we restrict our attention to second-generation immigrants who were all born in the United States. These respondents have been exposed to the same environment and institutions, but they differ on what country their parents came from and when. Second-generation immigrants can only be identified in the ACS data if they live in the same household unit as their parents.

## 2.2 Main dependent variable: mobility

The main dependent variable is social mobility. This is measured as the percentage change in years of schooling relative to one’s parents. So if person  $i$  received  $e_i$  years of education, and their parents  $e_i^p$ , then the measure of mobility is defined as

$$m_i = \frac{e_i - e_i^p}{e_i^p}. \quad (1)$$

Parents’ education is measured as the average of the mother’s and father’s level of schooling. The average is used because the primary object of interest is the overall influence of both parents, which – in the absence of a more accurate weight on each of the parents – is arguably best captured by a simple average. The results, however, are not sensitive to alternative specifications of  $e_i^p$  such as using the maximum of the mother’s and father’s level of schooling.

## 2.3 Main independent variable: Polity2

The independent variable of interest is Polity2, a measure of democracy, in the parents’ country of origin. The Polity2 score is constructed by the Center for Systemic Peace, and it uses six component measures that record key qualities of executive recruitment, constraints on executive authority and political competition. The Polity2 data set is available from 1800 to 2015, so changes over time can be detected. This feature of the data set allows for the inclusion of country of origin fixed effects in some of the specifications. Polity2 is measured on a scale of -10 to +10, where -10 corresponds to a full autocracy and +10 to a full democracy.

For our application, we would like a measure of the quality of the institutions that an individual’s parents were exposed to in their origin countries. To achieve this, we calculate

the average Polity2 in the parents' country of origin prior to emigration. People whose parents emigrated before age 18 are excluded to ensure that the parents in the sample have a decent amount of exposure to origin country institutions.

## 2.4 Control variables

First of all, using the ACS data, we control for a variety of individual-level characteristics. These include age, gender, parents' income, parents' education, and parents' age.

Second, we control for a number of characteristics measured at the origin country-level. We have a set of geographical controls, which include absolute latitude, elevation, temperature, precipitation, soil suitability, and terrain roughness. We also control for four additional variables: GDP per capita, average years of schooling (ages 25-64), returns to education, and linguistic proximity. Similarly to Polity2, GDP per capita and schooling are measured at the time the parents were still in the origin country. The reasons for including these four variables will become apparent in Section 3 where the main results are discussed.

Further information on the variables used can be found in the Appendix B.

## 2.5 Sample restrictions

As mentioned at the beginning of this section, we restrict our attention to second-generation immigrants in the ACS. In addition, we also exclude any people who are younger than 23 years old. The reason is that we are looking at educational mobility, so we would like the sample to include only those individuals who can be expected to have finished their education with reasonable certainty. A final restriction is that all individuals whose parents emigrated before age 18 are excluded. This is because we are primarily interested in people whose parents had a decent amount of exposure to their origin country.

## 2.6 Data source: World Values Survey

For the analysis in Section 4 on the mechanisms behind our main finding, we turn to World Values Survey data. The World Values Survey (WVS) is a set of cross-national surveys conducted in almost 100 countries covering almost 90% of the world's population. The WVS data was collected in six waves, the first of which was 1981-1984. The surveys ask respondents about their beliefs, values, and motivations.

We use the entire longitudinal data set covering more than 300,000 individuals, and collected between 1981 and 2014 (corresponding to waves 1 through 6). Our variables of interest from the WVS are a set of questions measuring the respondent's values and beliefs

about issues that may affect social mobility. These include for instance a belief in whether hard work brings success or whether it is important to be rich or successful. These variables are discussed in more detail in Section 4, and the interested reader is directed to Appendix B for an even more thorough description of all variables used.

From the WVS data set, all available respondents’ answers are used. This is because in Section 4 the analysis is not limited to immigrants anymore. We also include standard demographic controls from the WVS such as gender, age, education, income as well as year and country fixed effects.

### 3 Main results

This section presents our main result: that people whose parents come from more democratic countries experience more upward mobility. We also corroborate this result with a placebo test and a variety of robustness checks.

#### 3.1 Democracy and mobility

The main specification of interest is of the form

$$m_{isct} = \alpha PT2_{ct} + X_{isct}\beta + \gamma_s + \delta_c + \epsilon_{isct}, \quad (2)$$

where  $m_{isct}$  is the mobility (as defined in (1)) of person  $i$  in state  $s$  whose parents came from country  $c$  in year  $t$ ,  $PT2_{ct}$  is Polity2,  $X_{isct}$  are individual- and country-level controls,  $\gamma_s$  are state fixed effects,  $\delta_c$  are origin country fixed effects, and  $\epsilon_{isct}$  is the error term clustered at the origin country-level. A number of variations of Equation 2 are estimated and discussed below. The key parameter of interest is  $\alpha$ , which measures the extent to which people with parents from more democratic countries experience different mobility.

Table 1 summarizes the key results of the paper. All specifications include the basic individual-level controls discussed in Section 2.4 as well as year and state fixed effects. Column (1) shows the raw correlation between Polity2 and mobility while conditioning for these basic controls. In Column (2) we add geographic controls, and while Polity2 appears positively related to mobility it is insignificant. This is because some key control variables are missing here. In Column (3), we control for GDP per capita and schooling. These are both key variables controlling for mechanical catch-up effects. In particular, one would expect that poorer countries generally have a less human capital-intensive economy, so education levels are lower. But when people from these countries emigrate to the US, their children

Table 1: Main results

	<i>Dependent variable:</i>								
	Mobility								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Polity2 (TA)	0.079 (0.048)	0.061 (0.056)	0.067*** (0.026)	0.093*** (0.028)	0.083*** (0.031)	0.150*** (0.037)	0.097*** (0.046)	0.169*** (0.050)	0.177*** (0.074)
Log GDP p.c. (TA)			-1.084*** (0.246)	-0.441** (0.172)	-0.407** (0.174)	0.077 (0.111)	-0.163 (0.173)	0.481* (0.277)	1.552* (0.893)
Avg. schooling (TA)			-0.123 (0.132)	0.077 (0.146)	0.188 (0.152)	0.111 (0.160)	0.152 (0.169)	0.227 (0.249)	0.140 (0.236)
Income/edu. corr.				-4.081*** (1.317)	-4.344*** (1.522)	-4.442*** (1.404)	-1.902 (1.973)		
Linguistic proximity				-3.336*** (1.034)	-3.198*** (1.225)	-5.879*** (1.406)	-5.492*** (1.803)		
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographical controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Continent FE	No	No	No	No	Yes	No	No	No	No
Country FE	No	No	No	No	No	Yes	Yes	Yes	Yes
Country × Entry year FE	No	No	No	No	No	No	Yes	No	Yes
Restricted sample	No	No	No	No	No	No	No	Yes	Yes
Observations	26,630	25,766	22,777	19,368	19,368	19,368	19,368	16,882	16,882
R <sup>2</sup>	0.390	0.421	0.398	0.389	0.390	0.398	0.447	0.403	0.438
Adjusted R <sup>2</sup>	0.389	0.419	0.397	0.387	0.387	0.393	0.391	0.399	0.394

Note:

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01  
This table establishes a positive relationship between parental exposure to democracy (as measured by Polity2) and social mobility. Individual controls include gender, age, parental income, parental age, and parental education. Geographical controls include origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness. The restricted sample refers to the set of individuals for whom both parents come from the same country. "TA" refers to time-adjusted variables: variables that correspond to the time period when the respondent's parents were still in the origin country. Robust standard errors are clustered at the origin country level.



will to some extent catch up with local levels of education. And this gives people from poorer countries higher mobility relative to their parents. Thus these two variables are capturing convergence to local levels of schooling. And once this is accounted for, Polity2 is an important predictor of mobility.

In Column (4), we add two other important controls: income/education correlation and linguistic proximity.<sup>5</sup> Income/education correlation is a variable constructed from the World Values Survey and it measures the correlation between income and education within a country. As expected, the tighter this correlation is, the less mobility the children of emigrants experience. The logic behind this is as follows: in countries where education is not correlated with income, high-ability people may simply not need to become educated to have a high income. So many high-ability people from such countries will have low levels of education. But once they move to a country like the US, where correlation between income and education is tighter, their kids (who inherit some of that high ability) will be better off investing more in education. The other new control variable in Column (4), linguistic proximity, has an expected negative sign as well. Linguistic proximity here proxies for the level of integration of one's parents. Higher proximity means a child's parents are likely to be more integrated into US society, and more integration means that the parents are likely to be already successful in US society leaving less of a scope for upward mobility for their children.

Importantly, the coefficient on Polity2 remains highly significant in Column (4). Also note that the magnitude of the coefficient is actually growing, not decreasing, as more controls are added to the specification. This suggests that selection on unobservables is not a serious issue.

In Column (5), we add continent fixed effects and the results do not appreciably change. In Column (6), we finally include country of origin fixed effects. This allows us to identify the effect of Polity2 on mobility by focusing on people whose parents emigrated from the same country but whose parents are of different age and were thus potentially exposed to different institutions during the first 18 years of their lives: the effect is strong and significant. In Column (7), we add country/entry year fixed effects. This attempts to control for cohort effects. For instance, it could be that immigrants from Germany in the 1960s were selected on a different dimension than immigrants in the 1970s, and this could be driving the results. Column (7) shows that this is not the case: even after the inclusion of entry year fixed effects,

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<sup>5</sup>Linguistic proximity is measured by the variables constructed in Melitz and Toubal (2014). These variables measure linguistic proximity by (i) the distance in nodes in the linguistic tree between two languages, and (ii) the overlap in basic vocabulary between two languages. The results are robust to both of these measures. The results shown throughout this paper use the second measure. We would like to thank Farid Toubal for pointing us to these data sets.

the result remains.

Finally, Columns (8) and (9) reproduce the results from Columns (6) and (7), respectively, in a restricted sample. The sample is restricted to include only those respondents for whom both parents have the same country of origin. This is because the full sample includes people who may have two parents from two different countries. In these cases, we averaged the Polity2 the mother and father were exposed to. But this could lead to measurement error. In Columns (8) and (9), I attempt to reduce this measurement error by focusing on the more clearly measured parent pairs. And indeed, the coefficients increase indicating that the original specifications could have suffered from attenuation bias due to measurement error.

The interpretation of these coefficients is as follows. For instance, the coefficient of 0.097 in Column (7) suggests that people with parents from Switzerland (with a Polity2 of 10) would experience  $(10 - 4) \times 0.097 = 58$  percentage points higher mobility than people with parents from Russia (with a Polity2 of 4).

### 3.2 Placebo test

To further corroborate the main result established above, we now show that this result is not the artifact of a spurious correlation between Polity2 and mobility. In particular, recall that the measure of Polity2 used in Section 3 is the average Polity2 a respondent’s parents were exposed to in the origin country prior to emigration. This specification therefore implies that the origin country’s Polity2 matters because the parents were exposed to it. It should then not be the case that the origin country’s Polity2 after the parents have emigrated has any effect on mobility. This is indeed shown to be the case in Table 2. Columns (1)-(2) in this table correspond to Columns (6)-(7) in Table 1, which are the preferred specifications. They include origin country and origin country by entry year fixed effects, respectively. It appears that the placebo measure of Polity2, which is the average Polity2 in the country of origin between the year the parents left and the date of the interview, has no significant effect on mobility.

While the coefficients in Columns (1)-(2) are insignificant, their magnitude is still somewhat sizable. This could be due to autocorrelation between the placebo and “exposed to” measures of Polity2. Columns (3)-(4), therefore, control for the original measure of Polity2 (the one parents were actually exposed to). The placebo measure is still insignificant and now its magnitude drops considerably as well. Meanwhile, the original measure of Polity2 largely retains its magnitude and significance. These results suggest that the effects identified in Section 3 are not merely due to some spurious correlation between institutions and

Table 2: Placebo tests

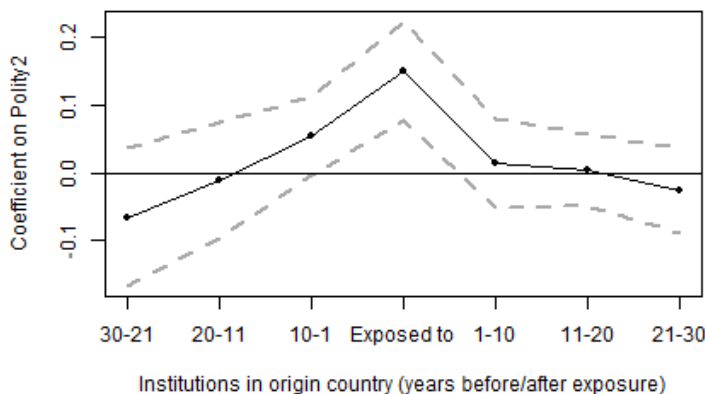
	<i>Dependent variable:</i>			
	Educational mobility (%)			
	(1)	(2)	(3)	(4)
Polity2 (exposed to)			0.147*** (0.034)	0.087** (0.038)
Polity2 (placebo)	0.061 (0.044)	0.069 (0.045)	0.011 (0.022)	0.024 (0.042)
Country FE	Yes	Yes	Yes	Yes
Country $\times$ Entry year FE	No	Yes	No	Yes
Observations	19,363	19,363	19,361	19,361
R <sup>2</sup>	0.397	0.447	0.398	0.447
Adjusted R <sup>2</sup>	0.391	0.391	0.393	0.391

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

This table shows that Polity2 only matters for mobility if it is measured in the period when the respondent’s parents were still in the origin country (“exposed to”), and not after they left (“placebo”). All specifications include individual controls (gender, age, parental income, parental age, and parental education), and geographical controls (origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness). Robust standard errors are clustered at the origin country level.

Figure 1: Placebo test in various time periods



mobility: what matters is the institutions the respondents' parents were actually exposed to.

Figure 1 visually illustrates this point. On the  $y$ -axis, it shows the coefficient on Polity2 when estimating a regression akin to Column (1) of Table 2. The  $x$ -axis corresponds to the different points in time where Polity2 is measured. From left to right these values refer to: Polity2 measured 21-30 years before birth, 11-20 years before birth, 1-10 years before birth, during the parents' presence in the origin country ("exposed to" measure), 1-10 years after emigration, 11-20 years after emigration, and 21-30 years after emigration. The dashed line correspond to 95% confidence intervals. It is apparent from the figure that Polity2 mostly has a significant effect of large magnitude when the respondent's parents were actually exposed to it.

### 3.3 Robustness

The results established above indicate that the institutions a respondent's parents were exposed to are a strong predictor of social mobility. However, a variety of concerns may arise with the analysis. This section attempts to address these.

#### 3.3.1 Alternative explanations

While many important controls were included in the specifications of Table 1, one may still wonder whether there are some alternative explanations that can be driving the results through their potential correlation with Polity2. In Table A.1 we examine a variety of such alternatives. In particular, we reestimate Column (5) of Table 1 in Table A.1, and we add

a new alternative variable in each column. Column (6) presents the horse race between all alternative explanations considered. The specification estimated is therefore the one with all the controls and continent fixed effects. The reason this specification is chosen is because the variables considered in Table A.1 are all measured at the country level, so the country fixed effects specifications would greatly reduce variation in them.

Table A.1 Column (1) reproduces Table 1 Column (5). In Column (2) we look at the Gini coefficient of the origin country. There is evidence that a higher Gini (meaning more inequality) can lead to lower social mobility in the origin country.<sup>6</sup> Origin country Gini doesn't seem to have an effect for immigrants though. In Column (3), we include ancestry-adjusted predicted diversity as constructed by Ashraf and Galor (2013). This variable is significantly positively associated with upward mobility. This finding is consistent with Galor and Klemp (2017), which establishes that social stratification is higher in countries with more diversity. This can mean that there is little sorting of individuals by ability in these societies, so potentially many higher ability individuals may be trapped in low socioeconomic status. But when these individuals emigrate to a country like the United States, they are not constrained by these limitations anymore and thus experience high upward mobility. In Column (4), we look at the ancestry-adjusted time since the Neolithic revolution. This is not a significant predictor of mobility, and it is *a priori* unclear how it could affect mobility in this setting. In Column (5), we consider HDI, whose negative (but insignificant effect) can be interpreted similarly to that of GDP: a mechanical catch-up. Finally, in Column (8) we consider all variables.

The most noteworthy result in Table A.1 is the stability of the coefficient of Polity2, especially in Column (6). The coefficient barely changes throughout, and in fact it increases in the horse race specification. This further indicates that selection on unobservables is seemingly not an issue in this specification.

### 3.3.2 Different subsamples

Whenever one has a data set including people or areas from different countries, it is interesting to ask whether the results are a global phenomenon, or they are identified from a couple of countries or regions of the world. For this reason, in Table A.2 a variety of countries and regions are dropped from the dataset, and then the model with country-entry year fixed effects from Column (7) of Table 1 is re-estimated on this restricted data set.

In Column (1), all respondents whose parents' country of origin is Mexico are dropped. This is roughly half of the sample, but reassuringly the results still hold. In Column (2),

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<sup>6</sup>See e.g. Owen and Weil (1998), Hassler et al. (2007), Andrews and Leigh (2009), Corak (2013).

the second biggest country in the sample is dropped: the Philippines. And in Column (3), Mexico and the Philippines are both dropped. In the remaining columns, each World Bank region is dropped one by one. From left to right, these are: East Asia and the Pacific, Europe and Central Asia, Latin American and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa. The results are robust to these exclusions.

### 3.3.3 Selection

When it comes to observing the behavior or economic outcomes of migrants, selection is always a potential issue. In our case, it can be expected that only the most ambitious people come from democratic countries, while the immigrant pool from autocratic countries is more diluted. Although it's *a priori* unclear how this would affect the results because the dependent variable is the mobility of these immigrants' offspring, not the actual economic outcomes of the migrants themselves, it is still worthwhile to examine the severity of selection in the sample.

In order to that, Table A.3 examines the parents in the sample, and shows if their characteristics (namely education, income, and age) vary by the Polity2 of their origin countries. Columns 1, 3, 5 show the results with origin country fixed effects, while Columns 2, 6, 8 show them with origin country by entry year fixed effects. It is clear from the table that Polity2 is not significantly correlated with migrants' relative education, income, or age. Relative education is education measured relative to the average years of schooling in the origin country when the parent was 18 years old: this measures whether migrants from more or less democratic countries were systematically more or less educated relative to the population average in the home country.

### 3.3.4 Different educational standards

A concern with the measure of mobility used thus far is that it may not take into account the fact that parents completed their education in a different time period than the children. As average schooling (in years) in the US increased more than two-fold from 1900 to 2000 (Lee and Lee (2016)), it may be necessary to express the parents' and children's schooling relative to the mean at the time they were in school.

To address this issue, Table A.4 reproduces Table 1, but the measure of mobility changes. In particular, education is expressed relative to the average years of schooling in the relevant country when the parent and child were, respectively, 18 years old. Mobility is then the percent change in education relative to the mean. This attempts to measure mobility in one's position within the education distribution. As apparent from Table A.4, the results

are robust to this alternative measure.

### 3.3.5 Sample composition

As explained in Section 2.1, second-generation immigrants in the ACS sample can only be identified if they live in the same household as their parents. This means that the sample may be composed of a peculiar group of people, and the results may not be valid for the population at large. While to the best of our knowledge, there is no data available on what age people tend to leave their parents' households, US Bureau of Labor Statistics (2014) shows that in the US 21.4% of young adults live with their parents at age 27, which includes those who previously moved out (e.g. for college) but returned. It is hard to make generalizations about the young adults who still live with their parents at age 27: while they tend to have somewhat lower wages and employment rates, young adults who move back after a period of moving out are also more likely to have a Bachelor's degree and a higher parental household income (US Bureau of Labor Statistics (2014)). There appears to be thus both positive and negative selection on socioeconomic status.

To assuage concerns about the potential peculiarities of the ACS sample, Table A.6 shows that the main results with country fixed effects (corresponding to Column (6) of Table 1) hold even if we only consider people of age 23 in Column (2), people of age 23-24 in Column (3), and so on. Column (1) reproduces the result from Table 1 for the full sample. This shows not only that the results hold in age groups where living with parents is still more commonplace, but also that the size of the coefficient on Polity2 is remarkably stable across various age groups. And while this analysis cannot completely rule out that the ACS sample is not representative of the general population, its results are encouraging and are hinting at the fact that the results are not driven by the sample's peculiarities.

## 4 Mechanism

The results in Section 3 show that second-generation immigrants with parents from more democratic countries are more upwardly mobile on average. This section asks why this might be the case.

### 4.1 Potential channels

Past institutions in their home countries are something that second-generation immigrants themselves were never exposed to. The only common link between these institutions and

the second-generation immigrants themselves is their parents who were exposed to the institutions. Therefore, any channel via which past institutions can affect second-generation immigrants has to go through the parents.

There can only be three types of channels: omitted variable bias, selection, and culture. First, it is possible that past institutions are correlated with some country-specific variable such as GDP per capita or inequality, which may give rise to omitted variable bias and make it appear that institutions correlate with mobility. However, the preferred specifications in Section 3 all include origin country fixed effects, which will, by definition, control for any time invariant country-specific characteristics. Country-specific characteristics that vary over time with institutions are harder to control for, but the preferred specifications in Section 3 do control for time-varying measures of GDP per capita and average schooling levels to mitigate this concern. In addition, the inclusion of origin country by entry year fixed effects in e.g. Column (7) of Table 1 further alleviates this concern.

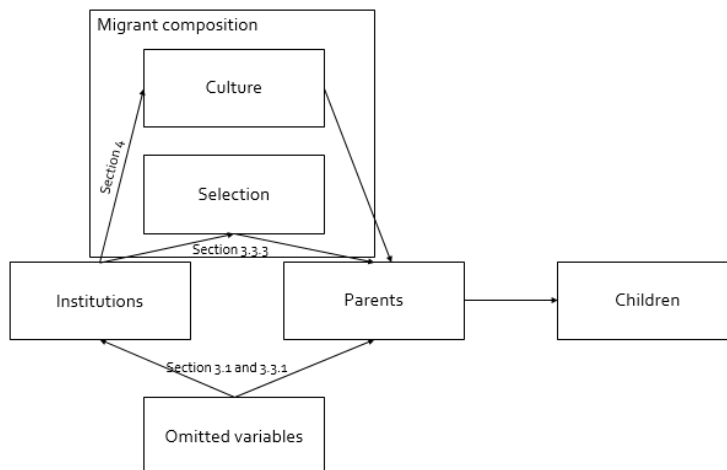
Second, aside from omitted variable bias, another channel that could potentially explain these results is selection: that is, if the parents of second-generation immigrants systematically differ from each other according to the past institutions they were exposed to. For instance, it could be that immigrants from more autocratic countries were on average richer and more educated because due to financial constraints poorer people couldn't emigrate. Then, the scope for mobility for the children of these parents would be diminished, because the parents are already of high status. This reduced mobility would then be correlated with democracy. In Section 3.3.3, however, we saw that the parents of the second-generation immigrants do not differ based on their level of education, income, or age. This indicates that there was no strong selection into emigration by Polity2 in this sample. Furthermore, some specifications in Section 3 (e.g. Column (7) of Table 1) include origin country by entry year fixed effects, which attempts to control for the fact that immigrants in different time periods may differ systematically from each other. This is discussed in more detail in Section 3.

Therefore, while it is impossible to completely assuage concerns about omitted variable bias and selection, it appears that these two phenomena are not strong factors behind the results we observed in Section 3. It is therefore interesting to examine a third potential explanation for the results: that people who were exposed to more democratic institutions perhaps developed different values and beliefs, which they then transmitted to their children.

Figure 2 illustrates these three potential channels schematically. In fact, as it is visible in the figure, culture and selection really represent the same relationship: they both alter the make-up of the set of migrants on some dimension. But by selection, we refer to more traditional explanatory variables of individual-level economic outcomes such as education, income, or ability. As mentioned above, Section 3.3.3 addresses these factors. By culture we



Figure 2: Potential channels



refer to personal values and beliefs that could be both shaped by institutions and intergenerationally transmitted.

## 4.2 The effect of democracy on beliefs and values

Having concluded that there may be a significant role for cultural beliefs and values in explaining the relationship between past institutions and mobility, let us examine whether such a link indeed exists. The focus of this section is to see whether there is indeed a significant correlation between culture and democracy that could potentially be a mediating factor for the results established in Section 3.

To begin with, let us examine whether past institutions may potentially shape such values and beliefs that can presumably affect social mobility. To do this, consider models of the form

$$b_{ict} = \alpha PT2_{ct} + X_{ict}\beta + \delta_c + \epsilon_{ict}, \quad (3)$$

where  $b_{ict}$  is some belief or value of person  $i$  in country  $c$  who is of age  $t$ ,  $PT2_{ct}$  is the Polity2 in country  $c$  at a given point in time that depends on age  $t$ ,  $X_{ict}$  are control variables,  $\delta_c$  are country fixed effects, and  $\epsilon_{ict}$  is the error term clustered at the country level.

To be consistent with Section 3, Polity2 is the average Polity2 an individual was exposed to during the first 27 years of their lives. In Section 3 we considered Polity2 before emigration, and 27 is the mean age of emigration in that sample.

The goal here is to establish a link between democracy and culture in general and across the world. For this reason, let us turn to the World Values Survey (WVS) data, and look

at the entire data set, not just immigrants. Table 3 summarizes the findings for a variety of beliefs and values that could presumably be predictive of social mobility. Each column corresponds to a different cultural trait, so the dependent variable  $b_{ict}$  varies by column.

Table 3: The association between culture and democracy

	<i>Dependent variable:</i>							
	Meritocracy (1)	Parents (2)	Rich (3)	Success (4)	Inequality (5)	Competition (6)	Wealth (7)	Control (8)
Polity2 (0-27)	0.017*** (0.003)	0.004*** (0.001)	0.006*** (0.002)	0.005*** (0.002)	0.002 (0.003)	0.006*** (0.002)	0.006** (0.003)	0.025*** (0.002)
Observations	196,726	230,562	132,972	132,656	245,590	223,002	191,278	243,391
R <sup>2</sup>	0.082	0.218	0.230	0.180	0.103	0.062	0.065	0.119
Adjusted R <sup>2</sup>	0.081	0.218	0.230	0.180	0.103	0.061	0.065	0.118

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

This table establishes a positive relationship between early life (ages 0-27) exposure to democracy and a variety of cultural traits that may be conducive to social mobility. All columns control for gender, age, education, and income. All columns include country and year fixed effects.

The first observation to be noted from Table 3 is that democracy is significantly positively associated with a variety of cultural beliefs and values that may be conducive to social mobility. In Column (1) we see that attitudes towards meritocracy, measured by the belief in the fact that hard work brings success as opposed to luck and connections, is strongly positively associated with exposure to democracy. The subsequent columns can be interpreted similarly, and they are estimated for the following cultural traits: Column (2) is whether making one’s parents proud is an important life goal, (3) is whether being rich is important, (4) is whether being successful is important, (5) is whether inequality is desirable, (6) is whether competition is good, (7) is agreement with the statement that wealth can grow so that there’s enough for everyone (instead of wealth accumulation being at the expense of others), and (8) is how much choice/control one has over how one’s life turns out.<sup>7</sup> With the exception of Column (5), all these statements are significantly positively associated with exposure to democracy. Column (5) itself may also have a placebo-like interpretation: it shows that democracy is not just spuriously correlated with all kinds of cultural traits due to the large sample size.

### 4.3 Culture and mobility

We have so far seen that while omitted variable bias and selection have seemingly little role to play in mediating the democracy-mobility relationship, culture is a potentially important channel. Ideally, one would now like to directly regress social mobility on the parents’

<sup>7</sup>A detailed description of each dependent variable can be found in Appendix B.1.

cultural beliefs to see whether culture is indeed a mediating factor. The biggest challenge of this research, however, is that the data set in which we observe social mobility (ACS) and the data set in which we observe cultural values at an individual level (WVS) are separate. In other words, we do not observe the cultural beliefs and values of the respondents in the ACS sample; and we do not observe social mobility for respondents in the WVS sample.

As an attempt to circumvent this challenge, we use the democracy-culture relationship established in Table 3 to predict the cultural values of ACS respondents. In particular, given a respondent's level of time-adjusted Polity2 (i.e. the average Polity2 the respondent's parents were exposed prior to emigration), we form a fitted value for each cultural trait using the coefficients from Table 3.

As Table A.5 shows, a number of these predicted cultural values are indeed significantly positively related to social mobility. The first such trait is belief in meritocracy, which has a significant positive relationship with mobility as seen in Column (1) of Table A.5. Column (4) shows that placing a large importance on success is another trait that predicts mobility well. Both of these traits survive a horse race between all traits in Column (7) as well, though the interpretation of this column is tricky due to the possibility of high multicollinearity between the predicted traits, which are all linear functions of Polity2.

This discussion concludes Section 4. As we have seen, the evidence suggests that culture may be an important channel mediating the democracy-mobility relationship. Of course, it must be emphasized that we do not claim to have established rock-solid causality in this section. The results are merely suggestive of causality, as is most often the case in the cultural economics literature.

## 5 Conclusion

This paper has looked at the influence of democratic institutions on individual's social mobility. Section 3 tackled this topic by showing that in a sample of second-generation immigrants, the institutions that these immigrants' parents were exposed to prior to emigration in their origin countries have a strong significant effect on educational mobility. Crucially, this finding is established with the addition of origin country fixed effects, and thus focusing on within-country variation in democracy over time. This allows us to control for all time-invariant country-specific characteristics. Placebo tests and a variety of robustness checks support these findings, and appear to rule out omitted variable bias and selection as the main drivers behind them.

Instead, Section 4 provides suggestive evidence that culture is an important channel for

our findings. A set of cultural traits, especially belief in meritocracy and a conviction that success is important in life, are shown to be positively associated with exposure to democracy as well as with social mobility.

These results show that the type of institutions prevalent in a country can have strong effects on individuals' beliefs and values, that these effects can affect real economic outcomes, and that these effects can be persistent and can linger on long after the institutions that instilled them are gone or are largely irrelevant to the individual due to emigration.

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# A Tables and Figures

Table A.1: Alternative explanations

	<i>Dependent variable:</i>					
	Educational mobility (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Polity2 (TA)	0.083*** (0.031)	0.094*** (0.029)	0.075*** (0.029)	0.086*** (0.030)	0.087*** (0.031)	0.099*** (0.026)
Gini		0.028 (0.031)				0.012 (0.030)
Predicted diversity (AA)			14.165** (6.484)			17.583*** (5.405)
Neolithic revolution (AA)				-0.029 (0.122)		-0.155 (0.113)
HDI					-2.707 (3.010)	-3.312 (2.866)
Observations	19,368	19,029	19,368	19,368	19,368	19,029
R <sup>2</sup>	0.390	0.393	0.390	0.390	0.390	0.394
Adjusted R <sup>2</sup>	0.387	0.390	0.388	0.387	0.387	0.391

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

This table shows that Polity2 remains significant even after the inclusion of a variety of other variables. All specifications include individual controls (gender, age, parental income, parental age, and parental education), and geographical controls (origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness). Robust standard errors are clustered at the origin country level.



Table A.2: Subsample robustness

	<i>Dependent variable:</i>								
	No MEX (1)	No PHL (2)	No MEX/PHL (3)	No EAP (4)	No ECA (5)	No LAC (6)	No MENA (7)	No SAS (8)	No SSA (9)
Polity2 (TA)	0.091*** (0.024)	0.154*** (0.034)	0.110*** (0.025)	0.150*** (0.035)	0.150*** (0.039)	0.082** (0.037)	0.154*** (0.034)	0.157*** (0.040)	0.156*** (0.038)
Country × Entry year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,381	16,956	7,982	15,097	18,187	7,822	18,534	17,443	19,169
R <sup>2</sup>	0.413	0.403	0.431	0.386	0.401	0.411	0.402	0.402	0.399
Adjusted R <sup>2</sup>	0.403	0.397	0.419	0.380	0.397	0.400	0.397	0.397	0.394

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
This table shows that the main result holds in a variety of subsample as well. All specifications include individual controls (gender, age, parental income, parental age, and parental education), and geographical controls (origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness). Robust standard errors are clustered at the origin country level.

Table A.3: Examining selection

	<i>Dependent variable:</i>					
	Relative edu.		Income		Age	
	(1)	(2)	(3)	(4)	(5)	(6)
Polity2	-0.149 (0.275)	-0.151 (0.241)	113.162 (201.458)	507.561 (434.210)	-0.130 (0.383)	-0.024 (0.226)
Age	0.174*** (0.052)	0.180*** (0.058)	2,277.847*** (568.734)	2,104.972*** (602.588)		
Age sq.			-21.012*** (4.535)	-21.910*** (5.056)		
Sex	0.491 (1.353)	-0.001 (0.831)	-28,193.490*** (3,860.879)	-29,550.720*** (5,000.742)	-3.669*** (0.370)	-4.430*** (0.193)
Education			1,981.906*** (417.363)	1,853.447*** (437.384)		
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Country $\times$ Entry year FE	No	Yes	No	Yes	No	Yes
Observations	47,950	47,950	52,910	52,910	52,910	52,910
R <sup>2</sup>	0.470	0.882	0.180	0.309	0.123	0.604
Adjusted R <sup>2</sup>	0.468	0.874	0.177	0.254	0.120	0.573

*Note:*

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01

This table shows that in the sample considered there was little to no migratory selection on education, income, or age by the Polity2 of the origin country. Robust standard errors are clustered at the origin country level.

Table A.4: Main results with alternative measure of mobility

	<i>Dependent variable:</i>								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Polity2 (TA)	0.023** (0.011)	0.021*** (0.008)	0.018*** (0.007)	0.022*** (0.007)	0.022*** (0.009)	0.037*** (0.011)	0.029*** (0.009)	0.048*** (0.011)	0.057*** (0.012)
Log GDP (TA)			-0.221*** (0.063)	-0.077* (0.046)	-0.086* (0.044)	-0.010 (0.017)	-0.056* (0.033)	0.049 (0.077)	0.192 (0.288)
Avg. schooling (TA)			0.109*** (0.032)	0.127*** (0.036)	0.156*** (0.035)	0.127*** (0.035)	0.144*** (0.042)	0.140* (0.072)	0.123 (0.082)
Returns to education				-1.024*** (0.338)	-0.942*** (0.365)	-1.378*** (0.390)	-1.075* (0.567)	(0.000)	(0.000)
Linguistic proximity				-0.953*** (0.249)	-0.849*** (0.294)	-1.407*** (0.331)	-1.414*** (0.449)	(0.000)	(0.000)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographical controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Continental FE	No	No	No	No	Yes	No	No	No	No
Country FE	No	No	No	No	No	Yes	Yes	Yes	Yes
Country × Entry year FE	No	No	No	No	No	No	Yes	No	Yes
Restricted sample	No	No	No	No	No	No	No	Yes	Yes
Observations	24,343	23,533	22,777	19,368	19,368	19,368	19,368	16,882	16,882
R <sup>2</sup>	0.312	0.345	0.356	0.372	0.374	0.382	0.442	0.386	0.433
Adjusted R <sup>2</sup>	0.310	0.343	0.354	0.370	0.371	0.376	0.385	0.382	0.389

*Note:*

This table reestimates the main results from Table 1 with an alternative measure of mobility. In particular, the education of the parents and the child are calculated relative to the average years of schooling in the relevant country at the time when the parents and the children were, respectively, 18 years old. Then mobility is calculated as the percent change in this measure of relative education. This is meant to explicitly control for the fact that average years of schooling have been increasing over time, and thus attempts to measure mobility in one's position within the education distribution. Individual controls include gender, age, parental income, parental age, and parental education. Geographical controls include origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness. The restricted sample refers to the set of individuals for whom both parents come from the same country. "TA" refers to time-adjusted variables; variables that correspond to the time period when the respondent's parents were still in the origin country. Robust standard errors are clustered at the origin country level.

\*p<0.1; \*\* p<0.05; \*\*\* p<0.01

Table A.5: Predicted values and beliefs and mobility

	<i>Dependent variable:</i>						
	Educational mobility (%)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Meritocracy	0.338* (0.185)						0.710** (0.312)
Parents		-0.518 (0.784)					-0.093 (0.775)
Rich			-0.168 (0.300)				-0.811** (0.381)
Success				0.788** (0.347)			1.216** (0.502)
Competition					0.044 (0.239)		0.783 (0.491)
Control						-0.148 (0.280)	-0.078 (0.268)
Continent FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,356	19,368	17,703	17,703	19,368	19,368	17,703
R <sup>2</sup>	0.389	0.389	0.390	0.390	0.389	0.389	0.391
Adjusted R <sup>2</sup>	0.387	0.386	0.387	0.388	0.386	0.386	0.388

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

This table shows that predicted cultural beliefs and values are significant predictors of social mobility suggesting that they are a potential channel. All specifications include individual controls (gender, age, parental income, parental age, and parental education), geographical controls (origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness), and continent fixed effects. Robust standard errors are clustered at the origin country level.

Table A.6: Sensitivity to considering different age groups

	<i>Dependent variable:</i>						
	Full	23	Educational mobility (%)		23-26	23-27	23-28
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Polity2 (TA)	0.150*** (0.031)	0.140*** (0.031)	0.138*** (0.041)	0.143*** (0.036)	0.146*** (0.037)	0.147*** (0.035)	0.154*** (0.037)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,554	2,973	5,498	7,554	9,285	10,688	11,958
R <sup>2</sup>	0.398	0.407	0.417	0.414	0.410	0.405	0.403
Adjusted R <sup>2</sup>	0.393	0.377	0.399	0.401	0.399	0.395	0.395

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

This table shows that the results hold in the youngest of the age groups considered in the analysis. This supports the notion that the ACS sample is not biased due to the fact that second-generation immigrants can only be identified if they live in their parental household (see Section 3.3.5). All specifications include individual controls (gender, age, parental income, parental age, and parental education), geographical controls (origin country absolute latitude, average elevation, temperature, precipitation, soil suitability, and terrain ruggedness), and country fixed effects. Robust standard errors are clustered at the origin country level.

## B Variable definitions and sources

### B.1 Outcome variables

**Educational mobility (% change in years of schooling).** This variable is the percent change in years of schooling of the respondent relative to their parents' average years of schooling. This variable is constructed from the American Community Survey (ACS) data set. For further explanation, see Section 2.2.

**Relative educational mobility (% change in relative schooling).** To construct this variable, I express the respondent's years of schooling relative to the mean years of schooling in the US when the respondent was 18 years old, and the parents' years of schooling relative to the mean years of schooling in the origin country when the parents were 18 years old. Then I calculate relative educational mobility as the percentage difference in this relative schooling ratio between the respondent and the parents' average. The source for the respondents' and their parents' years of education is the ACS, the source for mean years of schooling by country and year is Lee and Lee (2016).

**Meritocracy.** Answer (on a 1-10 scale) to the question “*How would you place your views on this scale?*”, where 1 is “*Hard work doesn't generally bring success – it's more a matter of luck and connections*” and 10 is “*In the long run, hard work usually brings a better life*”. The source is the World Values Survey (WVS). Note that the statements corresponding to the values of 1 and

10 mentioned above are flipped relative to the WVS to make the interpretation of the coefficients more intuitive.

**Parents.** Answer (on a 1-4 scale) to whether the respondent agrees with the following statement: “*One of my main goals in life has been to make my parents proud*”. A score of 1 indicates the respondent “strongly disagrees” with the statement, while a score of 4 indicates “strong agreement”. The source is the World Values Survey (WVS). Note that the levels of agreement corresponding to the values of 1 and 4 mentioned above are flipped relative to the WVS to make the interpretation of the coefficients more intuitive.

**Rich.** Answer (on a 1-6 scale) to whether the respondent thinks the following statement applies to them: “*It is important to this person to be rich; to have a lot of money and expensive things*”. A score of 1 indicates the person described in the statement is “not at all” like the respondent, while a score of 6 indicates that the person described is “very much” like the respondent. The source is the World Values Survey (WVS). Note that the levels of agreement corresponding to the values of 1 and 6 mentioned above are flipped relative to the WVS to make the interpretation of the coefficients more intuitive.

**Success.** Answer (on a 1-6 scale) to whether the respondent thinks the following statement applies to them: “*Being very successful is important to this person; to have people recognize one’s achievements*”. A score of 1 indicates the person described in the statement is “not at all” like the respondent, while a score of 6 indicates that the person described is “very much” like the respondent. The source is the World Values Survey (WVS). Note that the levels of agreement corresponding to the values of 1 and 6 mentioned above are flipped relative to the WVS to make the interpretation of the coefficients more intuitive.

**Inequality.** Answer (on a 1-10 scale) to the question “*How would you place your views on this scale?*”, where 1 is “*Incomes should be made more equal*” and 10 is “*We need larger income differences as incentives for individual effort*”. The source is the World Values Survey (WVS).

**Competition.** Answer (on a 1-10 scale) to the question “*How would you place your views on this scale?*”, where 1 is “*Competition is harmful. It brings out the worst in people*” and 10 is “*Competition is good. It stimulates people to work hard and develop new ideas*”. The source is the World Values Survey (WVS). Note that the statements corresponding to the values of 1 and 10 mentioned above are flipped relative to the WVS to make the interpretation of the coefficients more intuitive.

**Wealth.** Answer (on a 1-10 scale) to the question “*How would you place your views on this scale?*”,

where 1 is “*People can only get rich at the expense of others*” and 10 is “*Wealth can grow so there’s enough for everyone*”. The source is the World Values Survey (WVS).

**Control.** Answer (on a 1-10 scale) to the question “*How much freedom of choice and control do you feel you have over the way your life turns out*”, where 1 is “*No choice at all*” and 10 is “*A great deal of choice*”. The source is the World Values Survey (WVS).

## B.2 Explanatory variables

**Polity2 (measure of democracy).** The Polity2 variable comes from the Polity IV data set, and it is a measure of democracy in a given country. For a more detailed explanation, see Section 2.3. Polity2 is available on an annual basis from 1800 to 2015 for a large number of countries. The variable ranges from -10 (representing a full autocracy) to +10 (full democracy). My aim with the Polity2 variable is to construct a measure of the institutions a respondent’s parents were exposed to before emigration to the US. For each respondent in the ACS data set, I observe both parents’ country of origin, year of birth, and year of emigration to the US. Using this information and the Polity2 data set, we can calculate for each parent the average Polity2 score during the first 18 years of life (recall that people whose parents emigrated prior to age 18 are excluded from the analysis). Finally, we take the average of this measure between the respondent’s mother and father.

**GDP per capita in origin country.** This is the real expenditure-side GDP per capita at chained PPPs (in 2011 USD) from the Penn World Tables 9.0. Similarly to the Polity2 variable, I calculate for each parent the average real GDP per capita during the first 18 years of life. This is meant to measure how well-off a country the parents came from. This variable is also averaged between the respondent’s mother and father. Finally, this variable is always logged.

**Average schooling in origin country.** This is the average years of schooling in the origin country in a given year from Lee and Lee (2016). Like Polity2 and GDP per capita, this is calculated for both parents as the average during the first 18 years of life. The parents’ values are then averaged.

**Income/education correlation in origin country.** This is constructed for a set of countries using World Values Survey (waves 1-6). Within each country, we run individual-level regressions of income on education, age, age squared, gender, employment status, and type of occupation. This variable is the coefficient on education from these regressions. It is meant to capture how important formal education is for earnings in a given country. In the context of my analysis, we average the income/education correlation in the origin country for the respondent’s mother and father.

**Linguistic proximity in origin country.** This is taken from Melitz and Toubal (2014). They

have two variables, which measure linguistic proximity by (i) the distance in nodes in the linguistic tree between two languages, and (ii) the overlap in basic vocabulary between two languages. The results are robust to both of these measures. The results shown throughout this paper use the second measure. We look at the linguistic proximity between the parents' origin countries and the US. We then average this value for the mother and the father.

**Absolute latitude of origin country.** This is the absolute value of the latitude of a country's approximate geodesic centroid from the CIA World Factbook. It is averaged for mother and father. This is taken from the data set accompanying Ashraf and Galor (2013).

**Elevation in origin country.** This is the average elevation over grid cells within a country. It is averaged for mother and father. This is taken from the data set accompanying Ashraf and Galor (2013).

**Temperature in origin country.** This is the mean of the average monthly temperature in degrees Celsius from 1961 to 1990. This is calculated across grid cells and then aggregated to the country level. It is averaged for mother and father. This is taken from the data set accompanying Ashraf and Galor (2013).

**Precipitation in origin country.** This is the mean of the average monthly precipitation in millimeters from 1961 to 1990. This is calculated across grid cells and then aggregated to the country level. It is averaged for mother and father. This is taken from the data set accompanying Ashraf and Galor (2013).

**Soil suitability in origin country.** This is a measure of soil suitability for agriculture based on soil carbon density and soil pH. It is obtained by averaging over grid cells in a country. It is averaged for mother and father. This is taken from the data set accompanying Ashraf and Galor (2013).

**Terrain roughness in origin country.** This is calculated using geospatial surface undulation data. It is obtained by averaging over grid cells in a country. It is averaged for mother and father. This is taken from the data set accompanying Ashraf and Galor (2013).

**Gender.** This is the gender of the respondent from the ACS and the WVS depending on the data set used.

**Age.** This is the age of the respondent from the ACS and the WVS depending on the data set used.



**Parental income.** This is the total real income of the mother and the father (used as two separate control variables) from the ACS, measured in 2015 dollars. This is total person's income (variable PINCP) adjusted to 2015 dollars (using variable ADJINC).

**Parental age.** This is the age of the mother and the father from the ACS, used as two separate control variables.

**Parental education.** This is the average years of schooling of the mother and the father from the ACS. It is averaged across parents and used as one control variable.

**Level of education.** This is used as a control variable in the WVS analysis in Section 4. It is the highest educational level the respondent attained on a 1-8 scale ranging from inadequately completed elementary education to university degree-holder.

**Level of income.** This is used as a control variable in the WVS analysis in Section 4. It is the level of income of the respondent measured on a 1-11 scale corresponding to country-specific ranges.