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# Strangers and Foreigners: Trust and Attitudes toward Citizenship

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# Strangers and Foreigners: Trust and Attitudes toward Citizenship *

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**Abstract**

We analyze the relationship between natives' attitudes towards citizenship acquisition for foreigners and trust. Our hypothesis is that, in sub-Saharan Africa, the slave trade represents the deep factor behind contemporary attitudes toward citizenship, with more intense exposure to historical slave exports for an individual's ethnic group being associated with contemporary distrust for strangers, and in turn opposition to citizenship laws that favor the inclusion of foreigners. We find that individuals who are more trusting do show more positive attitudes towards the acquisition of citizenship at birth for children of foreigners, that these attitudes are also negatively related to the intensity of the slave trade, and that the underlying link between trust and the slave trade is confirmed. Alternative factors—conflict, kinship, and witchcraft beliefs—that, through trust, may affect attitudes toward citizenship, are not generating the same distinctive pattern of linkages emerging from the slave trade.

**JEL Classification:** J15, K37, N57, O15, Z13.

**Keywords**: Citizenship, Trust, Slave Trade, Migration, Ethnicity, Conflict, Kinship, Witchcraft.

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Paul, Ephesians 2:19, The Bible (ESV):
*"(...) you are no longer foreigners and strangers, but fellow citizens (...)."*

# 1 Introduction

The perception of foreigners as strangers, that is, unfamiliar people unworthy of trust, has been pervasive at least since biblical times. Indeed Paul, in the Ephesians, contrasts the condition of either with that of "fellow citizens". In this paper, we analyze the relationship between natives' attitudes toward citizenship acquisition for foreigners and trust. Since we interpret the latter as a proximate determinant of such attitudes, we also aim at establishing their underlying fundamental determinants.

The recent upsurge of migration and refugee flows has brought citizenship policy to center stage across the world. However, the issue has always been an especially charged one in sub-Saharan Africa, where the artificial post-colonial state borders and the intensity of war and famine have historically been associated with huge population movements, including internal migration and refugees flows (Herbst, 1977, 2000).

Our hypothesis is that, in sub-Saharan Africa, the legacy of the slave trade—one of the most significant forced displacement experiences in history—may represent the fundamental factor behind contemporary sentiments toward foreigners and their ability to access citizenship. Accordingly, the channel linking the slave trade to citizenship attitudes is the influence of the slave trade on trust: more intense exposure to slave exports may indeed have provoked a distrust of strangers that is reflected today in opposition to citizenship laws favoring the inclusion of foreigners. Thus, our hypothesis implies that, while trust is a proximate determinant of attitudes toward citizenship acquisition, in sub-Saharan Africa the slave trade represents its underlying deep determinant.

While the link between the slave trade and trust in sub-Saharan Africa has been established by Nunn and Wantchekon (2011), our main contribution is then two-fold: first, we present correlational evidence on the link between contemporary measures of trust and citizenship attitudes and, second, we establish the causal effect of the slave trade on citizenship attitudes, as channeled through trust.

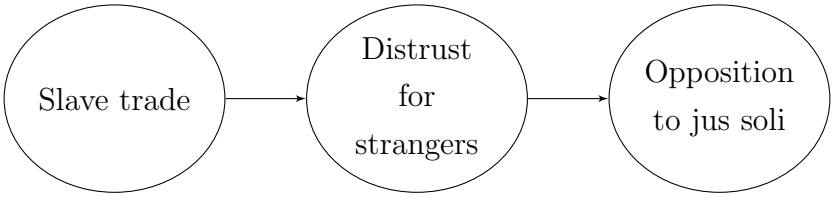


Figure 1: From the slave trade to opposition to jus soli

Figure 1 summarizes the links discussed above. Across sub-Saharan Africa, the slave trade contributed to the diffusion of contemporary distrust for strangers, which in turn determines opposition to inclusive citizenship laws such as a jus soli regime that automatically grants citizenship to the offspring of foreigners—as opposed to a jus sanguinis regime that attributes to the offspring the citizenship of the parents.

For our empirical investigation, we employ individual-level survey data from Afrobarometer that, only for Round 5, address respondents' attitudes towards citizenship acquisition for foreigners. In particular, we rely on a question asking for the respondent's opinion about the right to be a citizen for a person born in a country from non-citizen parents. We treat the responses as a proxy for attitudes toward birthright citizenship, i.e., citizenship acquisition at birth according to the jus soli legal tradition, which is by far the most salient issue as far as citizenship policy is concerned. Other related survey questions concern the right to be a citizen for a non-citizen who has lived and worked in the country, which proxies for attitudes toward naturalization, and the right of a person to hold dual citizenship.

We also take from Afrobarometer different measures of trust, by decreasing closedness of the relationship between respondents and their reference group, namely, relatives, neighbors, and other people. Data on the slave trade at the ethnicity level are from Nunn and Wantchekon (2011), from whom we also take a number of geographic and historical potential confounders. Ethnographic variables are taken from Murdock's (1967) Ethnographic Atlas.

Our findings first indicate that individuals who are more trusting toward other people do show more positive attitudes towards the acquisition of citizenship at birth through jus soli, thus confirming the role of trust as a proximate determinant of citizenship attitudes. The novel correlation between trust and citizenship attitudes that we uncover is confirmed across specifications including country fixed effects and an increasing number of controls (first geo-historical, and then also ethnographic ones) and under different computation methodologies for standard errors (clustered at the ethnicity level, two-way clustered at the ethnicity and district level, and adjusted for spatial autocorrelation). This key correlation—which motivates out subsequent analysis—is also robust to the inclusion of ethnicity fixed effects that should filter out any other ethnicity-specific factors.

By applying an analogous empirical strategy, we achieve our second and third results. Namely, attitudes toward citizenship are also negatively related to the intensity of slave exports for the ethnic group individuals belong to, which implies that the slave trade does represent their underlying deep determinant. Furthermore, the link between trust in other people and the slave trade established by Nunn and Wantchekon (2011) is confirmed within our sample, thus corroborating the hypothesis that the effect of the slave trade

on citizenship attitudes is indeed channeled through trust. The second and third results are corroborated by a battery of extensions and robustness checks. Consistent with our hypothesis, the effect of the other measures of trust—in relatives and neighbors—on jus soli attitudes is weaker, particularly for the former, consistent with the intuition that the degree of trust in closer groups of individuals should be less related to feelings toward foreigners. Likewise, the channels we uncover are also activated for other citizenship policy provisions involving naturalization and dual citizenship, albeit in an attenuated fashion.

In order to assess whether the correlational evidence so far produced for the influence of the slave trade on both citizenship attitudes and trust can be interpreted as causal, we pursue three different strategies. First, we test for selection on observables. Second, we instrument the slave trade with distance from the coast. Third, we focus on the movers in the sample as a source of identification of the persistent impact of the slave trade through the transmission of internal norms and beliefs. Our results consistently point to a causal impact of the slave trade on citizenship attitudes, as channeled through trust.

The last part of the paper is devoted to test alternative potential determinants—other than the slave trade—that, through trust, may also affect attitudes toward citizenship. Indeed the literature has suggested other determinants of trust whose influence may well reverberate on such attitudes. We test three alternative hypotheses, centered respectively on conflict, kin ties, and witchcraft beliefs. We uncover that none of them is able to generate the same distinctive pattern of linkages emerging for the slave trade.

The rest of the paper is organized as follows. Section 2 summarizes related literature. Section 3 contains background information on citizenship policy and the African slave trade. Section 4 describes the data and the empirical strategy. Section 5 shows our estimation results and Section 6 presents a number of strategies aimed at establishing their causality. Section 7 is devoted to the discussion of alternative potential determinants of citizenship attitudes. In Section 8 we derive our conclusions. An Appendix contains additional tables and figures.

# 2 Literature

This paper is related to several streams of the literature. The first, relatively small stream looks at citizenship policy and attitudes. Bertocchi and Strozzi (2010) assemble a dataset on citizenship laws across countries of the world and investigate their evolution in the post-war period, emphasizing the potential role of the perceived threat posed by immigrants. Bertocchi and Strozzi (2008) assess the influence of inclusive citizenship policies based on the jus principle for the decision to migrate in the context of the nineteenth century

mass migration from Europe to America. Imam and Kpodar (2019) show that jus soli laws, being more inclusive, tend to promote contemporary economic development. Herbst (1997, 2000) and Manby (2018, 2020) discuss the formation of citizenship laws in Africa. A closely related literature has looked at broader attitudes toward immigration. A positive impact of social trust on such attitudes is found by Herreros and Criado (2009) in the European context. Based on the same Afrobarometer data we use, Zhou (2018) shows how attitudes toward citizenship acquisition and trust are jointly affected by the presence of refugees. Others have looked at the relationship between immigration and natives' voting behavior (e.g., Voigtlander and Voth, 2012; Barone at al., 2016; Halla, Wagner, and Zweimuller, 2017; Dustmann, Vasiljeva, and Piil Damm, 2019; Tabellini, 2020) and at the political economy of enfranchisement of ethnic and racial minorities (e.g., Alesina, Glaeser, and Sacerdote, 2001; Cascio and Washington, 2014; Bertocchi and Dimico, 2017; Koukal, Schafer, and Eichenberger, 2021). Furthermore, by extending it to the issue of citizenship, we also contribute to the interdisciplinary literature on the effect of intergroup contact on attitudes, that builds on Allport (1954) and includes Bursztyn et al. (2021) among recent contributions.

The second stream we connect with is the large literature on trust. Classic contributions include Fukuyama (1995), Knack and Keefer (1997), Putnam (2000), and Guiso, Sapienza, and Zingales (2007). We are particularly indebted to Nunn and Wantchekon (2011), who establish how in sub-Saharan Africa trust is determined by the slave trade. Other studies that have linked trust to conflict (Rohner, Thoenig, and Zilibotti, 2013; Besley and Reynal-Querol, 2014), kinship (Enke, 2019; Moscona, Nunn, and Robinson, 2017), and witchcraft beliefs (Gershman, 2016) are also highly relevant for our search for alternative explanations, beside the slave trade, of the deep determinants of citizenship attitudes as channeled through trust.

This paper also contributes to a deeper understanding of the long-run consequences of the slave trade on African societies, following among others Nunn (2008), Nunn and Wantchekon (2011), Whatley (2014), Bertocchi and Dimico (2019), and Teso (2019) (see Bertocchi, 2016 and Nunn, 2017 for exhaustive surveys). Within the growing research body on the influence of historical legacies for many dimensions of African development, surveyed by Michalopoulos and Papaioannou (2020), many contributions lie at the intersection between the issues we address. This is the case, for instance, for the link between the slave trade and conflict (Fenske and Kala, 2015, 2017; Boxell, 2019; Boxell, Dalton, and Leung, 2019; Cherniwchan and Moreno-Cruz, 2019), the slave trade and witchcraft beliefs (Gershman, 2020), kin ties and conflict (Moscona, Nunn, and Robinson, 2020), and kin ties and institutions (Tedeschi, 2021).

Since we rely on the slave trade as a fundamental determinant of trust and attitudes

towards foreigners, as shaped by the process of historical economic development, our work is also linked to research on persistence of culture and social preferences, including among others Bisin and Verdier (2001), Alesina and Giuliano (2015), and Giavazzi, Petkov, and Schiantarelli (2019). Finally, this paper complements the literature on long-term development that distinguishes between proximate and fundamental factors, following Hall and Jones (1999), Acemoglu, Johnson, and Robinson (2002), and Galor and Ashraf (2013).

# 3 Historical and institutional background

## 3.1 Citizenship policy

Each country of the world has established laws that govern the attribution of citizenship (or nationality, which is commonly used synonymously). Citizenship is the legal institution that designates full membership in a nation, with a set of associated rights and duties that depend on a country's legislation. Rights typically include the voting franchise, permission to live and work in the country, the ability to travel in and out of the country without restrictions, legal protection in case of criminal charges, and the possibility to obtain a visa for a relative. Duties may involve compulsory voting, the military draft, and renunciation of the original citizenship in case of naturalization.

Citizenship can be acquired at birth, by naturalization, or by marriage.[1] The vast majority of individuals obtain citizenship of a country at birth.[2] The regulation of citizenship at birth, that crucially determines citizenship acquisition by second-generation immigrants, is embedded in the bodies of common and civil law. The former has traditionally applied the jus soli principle, according to which citizenship is attributed by birthplace: this implies that the child of an immigrant is a citizen, as long as she is born in the country of immigration of her parents. The latter has adhered to jus sanguinis, which attributes citizenship by descent, so that a child inherits citizenship from her parents, independently of where she is born. Despite being rooted in these principles, during the second half of the twentieth century in many countries citizenship laws have gone through a process of adaptation, in conjunction with global events such as the decolonization phase, the collapse of the socialist system, and the mounting pressure of international migration. Nevertheless, even though citizenship policy can be viewed as part of broader migration policy, contrary to other migration policy measures such as

[1] See Bertocchi and Strozzi (2010) for a classification and Aleinikoff and Klusmeyer (2000) and Amuedo-Dorantes, Kietzerow, and Pozo (2021) for an extended discussion of citizenship laws.

[2] In rarer circumstances, citizenship can also be obtained by way of a substantial investment or military merit.

quotas and visa requirements—that are typically adjusted to the business cycle and to the ideology of the government in power—citizenship laws reforms tend to be the outcome of long-term processes of adaptation often involving constitutional amendments.

In sub-Saharan Africa, post-war decolonization had a major impact on citizenship policy.[3] The vast majority of the African colonies of civil law metropolitan countries practicing jus sanguinis stuck to this principle after independence. On the other hand, many former British and Portuguese colonies ended up rejecting the jus soli tradition, to switch to an often strongly ethnically-tinged version of jus sanguinis, as a way to control more easily the formation of national entities. Not only were rules devised in order to exclude the descendants of Europeans, but some countries aimed to exclude from citizenship also those who could not claim an ancestral link to the land. Similar distrust has been applied to potential holders of dual citizenship, which has long been prohibited in most countries. Others enacted legislation aimed at strengthening racial or ethnic elements. For instance, Sierra Leone's 1961 Constitution established that citizenship is transmitted only by descent and only to children whose father and a grandfather were Sierra Leoneans of African descent. The 1964 Congolese Constitution, in the face of massive immigration from Rwanda, recognized citizenship only for persons whose parents were members of one of the tribes established within the territory by 1908, the starting year of Belgian colonization. In 1981 President Mobutu signed a new nationality law requiring an ancestral connection to the population residing in the territory as far back as 1885.

To these days, in several sub-Saharan African countries ethnic conflict lies at the roots of adaptation of citizenship legislation in favor of one ethnic group over others. The emphasis on ethnic identity is made more problematic in the face of the artificial state borders set by the European colonial powers during the 1884-5 Berlin conference that marked the end of the Scramble for Africa, which were not renegotiated after independence. An outcome of these citizenship policies is marginalization and de facto statelessness of significant strata of the population.

Another African characteristic, which makes citizenship policy even more salient, is a history of intense migration, starting with the significant flows incoming from Europe during empire. Large population movements also occurred as a result of the political and economic changes brought forth by colonization. Internal migration across African countries still absorbs a large share of today's flows, including forced migrants and refugees. Migration can challenge a country's stability, since it can question its territorial sovereignty, threaten its cultural identity, and impose an economic burden. For all these reasons, it heavily affects citizenship policy and the attitudes of citizens toward it.

[3]See Herbst (1997, 2000) and Manby (2018, 2020) for the history of citizenship policy in Africa.

As a result, in the past decades the predominant trend in the African continent has been to reduce automatic birth rights to citizenship as well as to make naturalization and dual citizenship harder, thus making citizenship laws less inclusive for foreigners.

Within our sample of 27 sub-Saharan African countries, according to the Bertocchi and Strozzi (2010) classification 18 apply citizenship laws at birth based on the jus sanguinis principle, while four apply jus soli and five a mixed regime.[4] In our empirical investigation, cross-country differences in citizenship laws are absorbed by country fixed effects, together with a plethora of other country-specific characteristics. On the other hand, the actual legal implementation of citizenship policy is complemented and reinforced by natives' sentiments towards foreigners, which can be even more deeply rooted in culture and history.[5] Thus, the Round 5 Afrobarometer data on individual attitudes toward citizenship acquisition offer a unique opportunity to investigate their correlates and underlying determinants.

## 3.2 The African slave trades

Through the centuries, the African continent experienced four distinct slave trades: the transatlantic, trans-Saharan, Red Sea, and Indian Ocean slave trades. The transatlantic slave trade was by far the most relevant in terms of volumes and duration: between 1529 and 1850, almost 12.5 million Africans were exported from Africa and forced to undertake the Middle Passage towards the New World (Eltis, 2008). Another six million slaves were exported within the other three slave trades.

The empirical examination of the effects of the African slave trades has been made possible by data collection by Nunn (2008), who constructs estimates of the number of slaves exported from each country in Africa between 1400 and 1900. The estimates are constructed by combining data on the total number of slaves shipped from all ports and regions of Africa with data on the slaves' ethnic identities. Using these data, Nunn (2008) finds a negative effect of the slave trade in shaping subsequent economic development. For the transatlantic and Indian Ocean slave trades, for which ethnicity data are sufficiently detailed, Nunn and Wantchekon (2011) disaggregate the country-level slave export figures to the ethnicity level and find a negative effect of the slave trade on the contemporary

[4]The sample is described in detail in the next section. Jus soli is applied in Guinea, Lesotho, Mauritius, and Niger, a mixed regime in Burkina Faso, Cameroon, Mozambique, South Africa, and Zambia.

[5]Indeed Henn and Robinson (2021) point to Africa's tradition of "cosmopolitanism", which includes a welcoming predisposition to strangers, as a crucial factor of success in a globalized world. In support of their claim, they show that 20 out of 31 African languages (that is, 65 percent) have the same words for stranger/foreigner and guest, while the same is true for only one non-African language (Hawaiian) out of 91 (1 percent). However, it should be noticed that, based on their data, the word for stranger coincides with that for foreigner much more often in Africa than elsewhere (13 times out 31, or 42 percent, against 18 out of 91, or 20 percent).

level of trust. As suggested by historical accounts, during the early stages of the slave trade individuals sold into slavery were almost exclusively prisoners of war. This justifies feelings of mistrust of those outside an individual's ethnic group. However, in subsequent phases, slaves were being taken in a variety of ways, and sold by slave traders that were not only European but also African. For instance, people may have been kidnapped, or forced into slavery after being convicted of witchcraft, adultery, theft, or murder. A large number of individuals were sold or tricked into slavery by relatives or friends, thus increasing distrust even within their own communities. As an effect, the legacy of the slave trade affects not only trust in unknown people, but also in neighbors or even relatives.[6]

# 4 Data and empirical strategy

## 4.1 Afrobarometer data

Data on attitudes towards citizenship acquisition and the level of trust are available at the individual level from the Afrobarometer surveys. Data are geocoded at the village and town level.[7] Afrobarometer measures economic conditions and the political atmosphere in African countries through national sample surveys on the attitudes of citizens towards democracy, markets, civil society, and other aspects of development.[8] The fifth round surveys, completed in 2013, cover the following 29 sub-Saharan African countries: Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Ghana, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Senegal, Sierra Leone, South Africa, Swaziland, Togo, Tanzania, Uganda, Zambia, and Zimbabwe. We exclude from our sample Cape Verde and Swaziland, for which ethnicity-level information to be matched with Afrobarometer is missing. Thus, our sample includes 27 countries.

Only in Round 5, Afrobarometer specifically surveys respondents' attitudes towards citizenship granting. It does so by asking respondents if people in any specific situation have, according to their opinion, the right to be citizens. We focus on the question asking about the right to be citizen for a person born in a country with two non-citizen parents, that can be likened to the acceptance of birthright citizenship rights according to a jus soli regime. The respondents can choose to answer either Yes, No, or Don't know. We code a

[6]We refer to Bertocchi (2016), Nunn (2017), and Michalopoulos and Papaioannou (2020) for surveys of the economics literature on the African slave trades.

[7]See www.afrobarometer.org and BenYishay et al. (2017).

[8]The questionnaire is in the local language but is standardized to facilitate comparison between the covered countries. Samples usually include either 1,200 or 2,400 cases. The sampling universe normally includes all citizens aged 18 and older.

binary variable that takes value one when the answer is Yes and zero when the answer is No. Figure A1 in the Appendix shows the geographical distribution of jus soli attitudes for the countries in the sample (Panel A). As explained by the legend, the shades reflect five intervals for the country-average values of the variable, with darker shades being associated with a more favourable attitude. Attitudes toward related citizenship policy provisions can be proxied by respondents' answers to questions concerning the right to be citizen for a non-citizen person who has lived and worked in the country—corresponding to the right to naturalization—and the right of a person to hold dual citizenship.

The Afrobarometer surveys also inquire respondents about various measures of interpersonal trust which, in the fifth round, are captured by three variables: trust in other people you know, trust in neighbors, and trust in relatives.[9] For each trust measure, we code a categorical variable that takes four values (from 0 to 3), corresponding to the following answers: Not at all, Just a little, Somewhat, or A lot. Figure A1 (Panels B-D) shows the geographical distribution of trust in others, neighbors, and relatives for the countries in the sample. As revealed by the intervals reported in the legend for the country-average values of each variable, as expected trust in others tends to be lower than trust in neighbors, which is in turn lower than trust in relatives.

Afrobarometer also collects information on other individual characteristics such as age, gender, religion, education, urban location, living conditions, and employment status. Some of these variables can proxy for information about income, which is not collected by the surveys. Lastly, using the Afrobarometer district level of aggregation,[10] we compute information on the share of the population that belongs to the same ethnicity of the respondent.

## 4.2 Slave exports data

Data on historical slave exports are taken from Nunn and Wantchekon (2011), who construct ethnicity-level estimates based on the country-level slave export figures from Nunn (2008). Out of the four slave trades, only the transatlantic and the Indian Ocean ones have ethnicity data detailed enough to construct reliable estimates of the number of slaves taken from each ethnicity. In estimating the number of slaves taken from each ethnic group, Nunn and Wantchekon (2011) match the ethnic identities in the historical records to the ethnic classification in the Afrobarometer surveys, by linking the original ethnic groups to the classification constructed and mapped by Murdock (1959). The baseline measure of the slave trade for the remainder of the analysis is the natural log of

[9]The first variable, concerning trust in other people you know, was not present in the 2005 Round 3 used by Nunn and Wantchekon (2011).

[10]A district is the level of disaggregation finer than a region/province and coarser than a village/town.

one plus slave exports, normalized by land area. This provides a measure that is normalized by the size of the ethnic groups and uses a denominator that is precisely measured and available for all ethnic groups in the sample.

Maps of the intensity of the transatlantic and Indian Ocean slave trades, taken from Nunn and Wantchekon (2011), are shown in Figure A2. The maps show the boundaries of the territories occupied by the ethnic groups categorized and mapped by Murdock (1959).[11]

## 4.3 Additional geo-historical data

From Nunn and Wantchekon (2011) we also take a number of geo-historical controls that they collect from a variety of sources. They include various ethnicity-level measures of the influence of colonial rule, such as the number of Christian missions established during the colonial period and two binary variables respectively reflecting a contact with the routes of the European explorers and the colonial railway network. They also include a measure of the malaria ecology as a proxy of the initial disease environment, which according to Acemoglu, Johnson, and Robinson (2001) contributed to determine settlement patterns, and, in order to capture the initial level of prosperity, a binary variable capturing the presence of a city in 1400 on the land inhabited by each ethnic group.

## 4.4 Ethnographic data

We rely on Murdock (1967) for a variety of ethnographic controls. Again following closely Nunn and Wantchekon (2011), in the main analysis we include pre-colonial settlement patterns and the number of jurisdictional hierarchies beyond the local community. For extensions of the main analysis, we add four variables describing family structure and descent systems that, according to Enke (2019), measure kinship tightness. Accordingly, from the corresponding categorical variables in Murdock (1967)—domestic organization, transfer of residence at marriage, descent type, and community marriage organization—we define four binary variables that respectively capture the presence of extended (rather than nuclear) families, post-marital coresidence, unilinear (rather than bilateral) descent, and localized clans.

Additional variables to be employed in Section 7 to assess alternative explanations of jus soli attitudes shall be discussed as they are introduced. Description, sources, and

[11] As explained in detail by Nunn (2008), because ethnicities tends to be much smaller than countries, the mapping of ethnicities into modern borders generally is not problematic. In instances where an ethnicity is located in more than one country, the ethnicity is mapped into the multiple countries using land area as weights.

summary statistics for each variable are detailed in the Appendix (Tables A1 and A2).

### 4.5 Empirical strategy

In order to investigate the long-term impact of the slave trade, through trust, on jus soli attitudes, we estimate variants of the following empirical models:

$$JusSoli_{i,e,d,c} = \alpha_c + \beta Trust_{i,e,d,c} + Controls'\Gamma + e_{i,e,d,c} \quad (1)$$

$$JusSoli_{i,e,d,c} = \alpha_c + \beta SlaveTrade_e + Controls'\Gamma + e_{i,e,d,c} \quad (2)$$

$$Trust_{i,e,d,c} = \alpha_c + \beta SlaveTrade_e + Controls'\Gamma + e_{i,e,d,c} \quad (3)$$

where Equation (1) captures the proximate association between trust and jus soli attitudes, Equation (2) the reduced-form role of the slave trade as a deep determinant of the latter, and Equation (3) the channel of transmission represented by the effect of the slave trade on trust. The variables $JusSoli_{i,e,d,c}$ and $Trust_{i,e,d,c}$ are indexed by individual $i$, ethnic group $e$, Afrobarometer district $d$, and country $c$, while $SlaveTrade_e$ is measured at the ethnicity level. We include country fixed effects $\alpha_c$ to control for country-specific institutional and policy factors (e.g., actual citizenship laws and migration policies).

The models also control for a large set of potential confounders at various levels of disaggregation including, at the ethnicity level, geo-historical (Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400) and ethnographic (settlement patterns and jurisdictional hierarchies beyond the local community) variables. Variants of the models shall also control for individual-level characteristics (age, age squared, gender, religion, education, urban location, living conditions, and employment status) and the district-level share of the population belonging to the same ethnicity of the respondent. The errors $e_{i,e,d,c}$ shall be computed using a variety of methodologies, to be illustrated in the following.

## 5 Estimation results

We begin by estimating the relationship between the level of trust and citizenship attitudes toward granting birthright citizenship through the application of the jus soli principle to second-generations immigrants, as expressed by Equation (1). We start with the measure of trust in others, that is, the measure that should more closely capture attitudes toward foreigners. In Table 1, Model 1 presents a parsimonious specification that

Table 1: Jus soli attitudes and trust in others

| | Jus Soli | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Trust in Others | 0.024 | 0.028 | 0.026 |
| | [0.004]*** | [0.004]*** | [0.004]*** |
| | (0.004)*** | (0.004)*** | (0.004)*** |
| | {0.004}*** | {0.004}*** | {0.004}*** |
| Country Fixed Effects | Yes | Yes | Yes |
| Geo-Historical Controls | No | Yes | Yes |
| Ethnographic Controls | No | No | Yes |
| Adj. R-squared | 0.058 | 0.060 | 0.058 |
| Sample Mean | 0.570 | 0.571 | 0.563 |
| Observations | 35689 | 32656 | 29682 |
| Ethnicities | 272 | 195 | 168 |
| Districts | 1726 | 1680 | 1645 |
| Oster $\delta$ | 28.014 | 15.434 | 10.108 |

*Note:* OLS estimates. The dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Trust in Others is a categorical variable measuring trust in other people. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for clustering at the ethnicity level in squared brackets and for two-way clustering at the ethnicity and district levels in parentheses. Conley (1999) standard errors adjusted for spatial autocorrelation in curly brackets. *** p<0.01, ** p<0.05, * p<0.1.

only adds country fixed effects to the focal regressor. In Models 2 and 3 we sequentially add ethnicity-level geo-historical and ethnographic controls. Despite the associated loss of observations, a positive correlation with stable size and high statistical significance for the coefficients is confirmed in all specifications, offering support for our hypothesis that trust is a reliable proximate determinant of jus soli attitudes, with more trusting individuals showing a more open attitudes toward the integration of foreigners. With reference to the full specification in Model 3, a one standard deviation increase in trust produces an average increase of 2.6 percentage points, or of 4.6 percent, in the dependent variable, relative to its sample mean (0.563 in the estimated sample, as reported in the table).

To account for the fact that ethnicity-level controls are constant at such level, causing serial correlation within ethnic groups, we first compute robust standard errors by clustering at the ethnicity level (in squared brackets). Furthermore, to account also for the Afrobarometer sampling design, we compute robust standard errors by two-way clustering at the ethnicity and Afrobarometer district levels (in parentheses). Lastly, we report Conley (1999) standard errors adjusted for spatial dependence for a window of 300 km (in curly brackets). The three methodologies produce nearly identical standard errors.

Table 2: Jus soli attitudes and the slave trade

| | Jus Soli | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Slave Trade | -0.024 | -0.026 | -0.023 |
| | [0.011]** | [0.011]** | [0.009]** |
| | (0.011)** | (0.011)** | (0.009)** |
| | {0.009}*** | {0.009}*** | {0.010}** |
| Country Fixed Effects | Yes | Yes | Yes |
| Geo-Historical Controls | No | Yes | Yes |
| Ethnographic Controls | No | No | Yes |
| Adj. R-squared | 0.059 | 0.059 | 0.057 |
| Sample Mean | 0.571 | 0.571 | 0.563 |
| Observations | 32823 | 32823 | 29828 |
| Ethnicities | 195 | 195 | 168 |
| Districts | 1680 | 1680 | 1645 |
| Oster $\delta$ | 1.718 | 1.635 | 1.036 |

*Note:* OLS estimates. The dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for clustering at the ethnicity level in squared brackets and for two-way clustering at the ethnicity and district levels in parentheses. Conley (1999) standard errors adjusted for spatial autocorrelation in curly brackets. *** p<0.01, ** p<0.05, * p<0.1.

One concern with the regression results in Table 1 is that other ethnicity-specific factors may be correlated with jus soli attitudes and trust as well. In order to filter them out, in Table A3 we run variants with ethnicity fixed effects. Since ethnicity-level variables are absorbed by the fixed effects, in Model 1 we only control for trust and ethnicity fixed effects, while in Model 2 we also reinsert country fixed effects. The smaller coefficient size suggests that the effect of trust on jus soli attitudes is somewhat attenuated as the bias is reduced, but previous results are confirmed, pointing to a robust correlation between attitudes toward citizenship for foreigners and trust in others.

Next, we turn to Equation (2) and test the hypothesis that the slave trade can be identified as a fundamental determinant of jus soli attitudes. Table 2 shows that indeed the intensity of slave exports exerts a negative effect on jus soli attitudes, suggesting that individuals belonging to ethnic groups that were more exposed to the slave trade are more opposed to jus soli for foreigners. This is true across all specifications and computation methodologies for standard errors. In the fully controlled Model 3, the effect of a one standard deviation increase in our measure of the slave trade produces an average decrease in trust of 4.1 percent, relative to its sample mean.

As a third and last step, to investigate the channel running from the slave trade to

Table 3: Trust in others and the slave trade

| | Trust in Others | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Slave Trade | -0.111 | -0.107 | -0.102 |
| | [0.027]*** | [0.026]*** | [0.024]*** |
| | (0.026)*** | (0.025)*** | (0.023)*** |
| | {0.023}*** | {0.022}*** | {0.020}*** |
| Country Fixed Effects | Yes | Yes | Yes |
| Geo-Historical Controls | No | Yes | Yes |
| Ethnographic Controls | No | No | Yes |
| Adj. R-squared | 0.097 | 0.100 | 0.107 |
| Sample Mean | 1.338 | 1.338 | 1.344 |
| Observations | 33692 | 33692 | 30580 |
| Ethnicities | 195 | 195 | 168 |
| Districts | 1680 | 1680 | 1646 |
| Oster $\delta$ | 1.547 | 1.366 | 1.017 |

*Note:* OLS estimates. The dependent variable is a categorical measuring trust in other people. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for clustering at the ethnicity level in squared brackets and for two-way clustering at the ethnicity and district levels in parentheses. Conley (1999) standard errors adjusted for spatial autocorrelation in curly brackets. *** p<0.01, ** p<0.05, * p<0.1.

contemporary jus soli attitudes, Table 3 reports estimates of Equation (3) confirming that trust is negatively related to the slave trade, as already established by Nunn and Wantchekon (2011). Again, this result holds across specifications and clustering methodologies. In Model 3, the effect of a one standard deviation increase in the slave trade produces an average decrease of almost 8 percent in trust, relative to its sample mean. This finding corroborates our hypothesis that the effect of the slave trade on citizenship attitudes is indeed channeled through trust.

In the following, we shall perform a number of robustness checks and extensions, using as a benchmark the fully specified models with two-way clustered standard errors at the ethnicity and district levels (Models 3 in Tables 1-3).[12]

**Trust as mediator of the effect of the slave trade** Taken together, Tables 1-3 do support our hypothesis that the slave trade represents the deep factor behind contemporary attitudes toward citizenship, with the persistent influence of the slave trade on trust representing the channel linking the slave trade to citizenship attitudes. Thus, these findings suggest a role of trust as a proximate factors that mediates the reduced-form re-

[12]As in Tables 1-3, results remain very similar in more parsimonious specifications which we do not report for brevity.

lationship between the slave trade and attitudes toward citizenship. The mediating role of trust is illustrated in Table A4 where, for ease of comparison, Models 1 and 2 merely replicate the fully controlled models where trust and jus soli attitudes are regressed on the slave trade (i.e., Models 3 from Tables 3 and 2). In the last model we run a horse race between the slave trade and trust as determinants of jus soli attitudes, which reveals a reduction in the reduced-form influence of the slave trade on jus soli attitudes once the mediating effect of trust is controlled for, since the coefficient on the slave trade becomes smaller and less significant.

**Individual-level controls** In Table A5, we present variants where we also control for individual-level covariates (Models 1, 3, and 5) and, in a further specification, also for the contemporary district-level share of the population that belongs to the same ethnicity of the respondent (Models 2, 4, and 6). Previous results are largely confirmed, despite a loss of significance for the coefficient on the slave trade in the regressions where jus soli is the dependent variable. However, we prefer to continue with the previous benchmarks that exclude these additional variables since, according to Angrist and Pischke (2009), they represent "bad controls", even more so in our long-term perspective.

**The spatial distribution of slave exports** One potential concern with our results is that, even though the slave trade affected a large portion of the African continent, they may be driven by its spatial distribution. In order to assure that our findings do not depend on a broad comparison between those individuals belonging to ethnicities that were affected by the slave trade and those that were not, in Table A6 we perform a robustness check by dividing individuals in two sub-samples. The estimates show an even stronger effect of trust on jus soli attitudes over the slave trade sample (Model 1) while the effect is considerably reduced over the sample that was not affected by the slave trade (Model 4), suggesting that the underlying variation in the intensity of slave exports is an important driver of the association between jus soli attitudes and trust. In Models 2 and 3, which are again restricted to the slave trade sample, the coefficients on the slave trade remain similar to those reported in Tables 2 and 3.

**Alternative measures of trust** As a further robustness check, we probe whether previous results extend to trust in neighbors and relatives. In Table A7, Models 1 and 2 show that, as expected, the influence of trust in neighbors and relatives on jus soli attitudes is still positive, but the size of the coefficients and, for the latter, its significance, are reduced. The next two models confirm the impact of the slave trade on both measures of trust.[13]

[13]In an unreported set of regressions, we also consider 10 additional measures of trust in other institutions, namely leaders, parliament, electoral commission, tax department, local government council, ruling party, opposition parties, police, army, and courts of law. They are all related positively to jus soli

**Alternative citizenship policy provisions** Table A8 extends our analysis to dependent variables capturing attitudes toward naturalization and dual citizenship and, again predictably, confirms for both a positive albeit attenuated influence of trust in others, as well as a negative but lesser impact of the slave trade, both in terms of size and significance.

# 6 The causal effect of the slave trade

In this section, we pursue several strategies in order to assess whether the correlations we documented so far—particularly those between the slave trade and citizenship attitudes and trust—are causal. First, we test for the likelihood that our estimates are biased by unobserved heterogeneities across groups. Second, to account for bias due to omitted variables and reverse causality, we instrument the slave trade with measures of distance from the coast. Third, we zoom in on the behavior of movers in the sample as a source of identification.

## 6.1 Selection on observables

Despite the large number of covariates we employ to control for observable factors, our estimates may still be biased by unobservable ones that may be correlated with our focal variables. In order to gauge this possibility, we rely on the method provided by Oster (2019) that, building on Altonji, Elder, and Taber (2005), assesses how large the bias due to unobservables should be, in comparison to that due to observables, in order to explain away the estimated effect. The ratio between the two components of the bias is denoted as $\delta$. We report the values of $\delta$ that ensure a zero value for the $\beta$ coefficient of each model. Even though our main concern is to establish the absence of such bias as far as the impact of the slave trade is concerned, that is with reference to the results in Tables 2 and 3, we report results for also for Table 1, where the main regressor is trust.[14] For all models, the value of $\delta$ is reassuringly greater than one, which implies a limited impact of unobservables.

Table 4: Instrumenting the slave trade

| | Jus Soli | Trust in Others |
|---|---|---|
| | (1) | (2) |
| Slave Trade | -0.014 | -0.164*** |
| | (0.026) | (0.060) |
| Country Fixed Effects | Yes | Yes |
| Geo-Historical Controls | Yes | Yes |
| Ethnographic Controls | Yes | Yes |
| Adj. R-squared | 0.003 | 0.011 |
| Sample Mean | 0.563 | 1.344 |
| Observations | 29828 | 30580 |
| Ethnicities | 168 | 168 |
| Districts | 1645 | 1646 |
| F Test | 25.189 | 24.949 |
| | Slave Trade | |
| Sea Distance | -0.002*** | -0.002*** |
| | (0.0003) | (0.0003) |

*Note:* IV estimates. In Model 1 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. In Model 2 the dependent variable is a categorical measuring trust in other people. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Sea Distance measures distance from the coast for the ethnicity. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

## 6.2 Instrumenting the slave trade

OLS estimates may also be biased because of measurement error, omitted variables, or reverse causality. Thus, again with a focus on the impact of the slave trade, in Table 4 we estimate 2SLS models using distance from the coast to instrument for it, both for jus soli attitudes and trust in others as dependent variables (i.e., Table 4 represents the 2SLS analogue of the fully controlled OLS in Model 3 of Tables 2 and 3). According to Nunn and Wantchekon (2011)—who propose historical distance from the coast of an ethnic group as an instrument for the slave trade in regressions where trust is the dependent variable—the exogeneity of the instrument is warranted by the unique history of sub-Saharan Africa since, before the slave trade, Africans were not engaged in overseas external trade. Thus, distance from the coast should be independent on measures of openness, among which

attitudes (even though the coefficient is not statistically significant for local government council, army, and courts of law) and negatively to the slave trade (albeit with a not statistically significant coefficient for opposition parties).

[14] As suggested by Oster (2019), we select a value for $R^2$ *max* (i.e., the value of the $R^2$ when controlling for both observables and unobservables) equal to 1.3 times the value of the $R^2$ for each specification in the tables.

migration and perception of foreigners. The first-stage regressions and the F-test are reassuring. In Model 1, the coefficient is smaller than the corresponding OLS, pointing to a moderate upward bias in the latter, whereas its loss of significance that can be attributed to the inefficiency associated with 2SLS. In Model 2, the coefficient remains highly significant and is about 50 percent larger than the OLS. Overall, the OLS results are therefore confirmed.

## 6.3 Movers as a source of identification

Our final strategy is to assess how much of the impact of the slave trade depends on the external environment where an individual lives rather than on her internal system of social norms. For migrants, the indirect influence of the slave trade through the current environment should be filtered away, allowing us to identify its portable legacy as embodied in social norms. The epidemiological approach based on the behavior of migrants has been applied to outcomes related to the labor market (Ichino and Maggi, 2000), financial decisions (Guiso, Sapienza, and Zingales, 2004), the position of women in society (Fernandez, 2007; Fernandez and Fogli, 2009), living arrangements (Giuliano, 2007), and family formation (Bertocchi and Dimico, 2020). In a context similar to ours, the same intuition has been developed by Nunn and Wantchekon (2011) and Michalopoulos, Putterman, and Weil (2019), who rely on the movers in the sample to identify the portable component of ancestral influence on current outcomes.[15] Tedeschi (2018) operationalizes the same intuition by constructing a movers sample, consisting in individuals who are no longer living in the ancestral homeland of the ethnic group they belong to, for whom the indirect effect of the external environment should therefore be reduced.

We follow Tedeschi (2018) in focusing on a sample of movers. They are defined as individuals no longer living in their ancestral homeland, even though they may have not moved during their lifetime, and represent 56 percent of our full sample (Table A2).[16] When in Table A9 we compare individual characteristics of movers and non-movers, they look remarkably similar, despite predictable differences such as movers' slightly lower age, higher education, better living conditions, and higher chance to live in an urban area and with a smaller share of people of the same ethnicity. Historical and ethnographic

[15] In order to distinguish movers in the sample, in addition to the ethnicity-based measure of slave exports Nunn and Wantchekon (2011) construct a measure based on current location. The larger size of the coefficient on the ethnicity-based measure, when the two are entered together in a regression for trust, reveals that much of the effect of the slave trade is due to the transmission of internal norms. Michalopoulos, Putterman, and Weil (2019) classify individuals living inside or outside their ancestral homeland according to the distance between their current location and the homeland associated with their ethnic group and add a mover dummy to their regressions to account for such distance.

[16] Only about 7 percent of our sample of movers currently live outside the borders of the country containing their ancestral homeland.

characteristics are also comparable.

Table 5 replicates Tables 1-3, separately for the movers and non-movers in the sample. In our strategy, movers serve the purpose of identification of the effects of the slave trade, through internal norms, on our two contemporary outcomes of interest, namely trust and citizenship attitudes. Nevertheless, we also keep track of how the proximate relationship between citizenship attitudes and trust varies across samples. For movers, in Models 1, 4 and 7 we enter previous controls including country fixed effects. To tighten our identification strategy, in Models 2, 5 and 8 we replace the latter with fixed effects for the ethnicity of destination, that is, rather than their own ancestral homeland, these fixed effects capture the ethnicity whose historical homeland coincides with the area where movers currently live. Adding these fixed effects should eliminate all potential local confounders, including time-invariant characteristics of the geographic, economic, institutional, and cultural environment where they reside. Comparing each pair of regressions for movers (i.e., the regression with country fixed effects and the regression with ethnicity of destination fixed effects) confirms that our results substantially hold after applying the second, more stringent strategy, despite a decrease in size and significance of the coefficients on the slave trade (Models 5 and 8). In Models 3, 6 and 9 we apply an even more demanding strategy by including both country and ethnicity of destination fixed effects, and again our results hold (in Model 6 the significance level of the coefficient on the slave trade falls below 10 percent but, with a $p$ value equal to 0.111, it remains not too far from conventional levels of significance).

Furthermore, comparing movers and non-movers reveals that the proximate relationship between jus soli and trust hardly differs across the two samples, while we do detect a sharp difference in the influence of the slave trade on jus soli, which vanishes for non-movers. Turning to the influence of the slave trade on trust, the larger coefficient size for non-movers may reflect both its internal and external effect which, however, cannot be disentangled. Taken together, these results can be interpreted as follows. It is through movers that the deep influence of the slave trade on sentiments toward foreigners manifests itself, and this occurs through their internal system of norms as shaped by the slave trade. In other words, for non-movers the legacy of the slave trade for trust is stronger, but does not project itself on jus soli attitudes.

Table 5: Movers and non-movers

| | Movers | | | | | | | | | Non-Movers | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jus Soli | | | | | | Trust in Others | | | Jus Soli | | Trust in Others |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Trust in Others | 0.026*** | 0.026*** | 0.024*** | | | | | | | 0.026*** | | |
| | (0.005) | (0.006) | (0.006) | | | | | | | (0.006) | | |
| Slave Trade | | | | -0.027*** | -0.019* | -0.013 | -0.081*** | -0.044*** | -0.038** | | -0.008 | -0.129*** |
| | | | | (0.008) | (0.010) | (0.008) | (0.023) | (0.014) | (0.015) | | (0.015) | (0.040) |
| Country Fixed Effects | Yes | No | Yes | Yes | No | Yes | Yes | No | Yes | Yes | Yes | Yes |
| Ethnicity of Destination Fixed Effects | No | Yes | Yes | No | Yes | Yes | No | Yes | Yes | No | No | No |
| Geo-Historical Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.070 | 0.091 | 0.098 | 0.069 | 0.090 | 0.097 | 0.114 | 0.154 | 0.158 | 0.054 | 0.052 | 0.109 |
| Sample Mean | 0.566 | 0.566 | 0.566 | 0.566 | 0.566 | 0.566 | 1.353 | 1.353 | 1.353 | 0.559 | 0.560 | 1.333 |
| Observations | 16142 | 16130 | 16130 | 16224 | 16212 | 16212 | 16583 | 16571 | 16571 | 13540 | 13604 | 13997 |
| Ethnicities | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 142 | 142 | 142 |
| Districts | 1399 | 1390 | 1390 | 1399 | 1390 | 1390 | 1400 | 1391 | 1391 | 882 | 883 | 882 |

*Note:* OLS estimates. In Models 1-6, 10 and 11 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. In Models 7-9 and 12 the dependent variable is a categorical measuring trust in other people. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

# 7 Alternative explanations

The last part of the paper is devoted to investigating whether other factors—other than the slave trade—can represent alternative deep determinants, through trust, of attitudes toward citizenship. Indeed several other determinants of trust have been established by the literature, and one may wonder whether they can also contribute to shape citizenship sentiments. We test this conjecture for historical conflict, kinship tightness, and witchcraft beliefs, to conclude that it is not warranted by the data.

## 7.1 Historical conflict

Another potential determinant of trust, that has received attention particularly within Africa, is conflict. Indeed, historical rivalries involving violence may reverberate on beliefs and feelings and affect a willingness to trust. Rohner, Thoenig, and Zilibotti (2013) use contemporary measures of fighting events and, by exploiting variations in both their spatial and ethnic intensity, show that more intense fighting decreases trust in Uganda. Besley and Reynal-Querol (2014) employ historical data from Brecke's (1999) Conflict Catalog and establish a negative effect of conflict on trust across African countries.

In principle, through the channel of trust, historical conflict may also be correlated with attitudes toward foreigners and the laws that regulate access to citizenship. To test whether this is the case, we also rely on the Conflict Catalog, which consists of a listing of all recorded violent conflicts that meet the magnitude 1.5 or higher criterion (i.e., 32 or more deaths per year).[17] Crucially for us, for conflicts occurring in Africa the ethnic groups involved, often in the form of historical kingdoms, are also recorded. Thus, we are able to match them with the ethnicities in Murdock (1959).[18] While data are collected by Brecke (1999) from 1400 AD to 1998, in order to avoid endogeneity issues we consider conflicts occurring up until 1912.[19] We obtain a listing of 68 ethnic groups, out of the 272 in the sample, that went through conflicts, corresponding to 40 percent of the individuals in the sample. The main measure that we employ is the number of years in conflict in the period 1443-1912. On average, each individual in our sample is associated, through the ethnic group of origin, with 3.7 years in conflict over a range of 0-47 (Table A2).

Table 6 shows that, consistent with the literature, within our sub-Saharan African sample the intensity of historical conflict is negatively associated with trust (Model 1).

[17] According to the Richardson (1960) scale, the value of the magnitude is the base-ten log of the number of people who died (the base-ten log of 31.62 is 1.5). Multi-year conflicts are defined by consecutive years in which the death threshold is surpassed.

[18] When ambiguities arose, we cross-check a variety of other sources of information.

[19] Actually, none of the conflicts recorded after 1912 is associated with an ethnicity in Murdock (1959).

Table 6: Historical conflict

| | Trust in Others | | Jus Soli | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Historical Conflict | -0.009*** | -0.006** | 0.001 | 0.003** |
| | (0.002) | (0.003) | (0.001) | (0.001) |
| Slave Trade | | -0.070*** | | -0.039*** |
| | | (0.026) | | (0.013) |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.106 | 0.107 | 0.057 | 0.058 |
| Sample Mean | 1.344 | 1.344 | 0.563 | 0.563 |
| Observations | 30580 | 30580 | 29828 | 29828 |
| Ethnicities | 168 | 168 | 168 | 168 |
| Districts | 1646 | 1646 | 1645 | 1645 |

*Note:* OLS estimates. In Models 1 and 2 the dependent variable is a categorical measuring trust in other people. In Models 3 and 4 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Historical Conflict is the number of years in conflict in 1443-1912. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

However, we find no significant association between historical conflict and jus soli attitudes (Model 3). When we include the slave trade among the regressors (Models 2 and 4, respectively), the negative influence of conflict on trust is confirmed, while contrary to intuition a positive association emerges for jus soli. Thus, even though we assess that they concur to determine trust, historical conflict cannot be proposed as an alternative to the slave trade as a deep determinant of attitudes toward citizenship.[20]

## 7.2 Kinship tightness

Next, we turn to family ties and kinship tightness as an alternative determinant of citizenship attitudes. The negative relationship between generalized trust and family ties is well documented in the literature (e.g., Alesina and Giuliano, 2014). Over data covering several countries located in different continents, Enke (2019) shows that kinship tightness—captured by an index reflecting various components of family ties—is posi-

[20]Model 2 suggests that the slave trade mediates to some extent the impact of historical conflict on trust. This is consistent with findings according to which more conflict—due to climate shocks—increased slave exports in pre-colonial Africa (Fenske and Kala, 2015; Boxell, 2019). To be noticed that other contributions point instead to reverse causality, with the slave trade increasing conflict propensities (Boxell, Dalton, and Leung, 2019), or to the role of a third factor affecting both slave exports and conflict (such as maize in Cherniwchan and Moreno-Cruz, 2019).

tively correlated with trust in family and neighbors and negatively correlated with trust in other groups.[21] A potential link between kinship tightness and attitudes toward foreigners could be justified by the fact that tighter communities tend to be more averse to strangers, including foreigners attempting to gain citizenship. If the correlation between kinship tightness and jus soli attitudes is the one we conjecture, we should expect kinship tightness to negatively affect trust in others as well as jus soli attitudes.

As in Enke (2019), we measure kinship tightness as an index consisting in the unweighted average of four binary variables coded from the Ethnographic Atlas, after restricting the sample to those ethnic groups for which at least three of the four variables are available. Two of them, the presence of extended families and post-marital coresidence, jointly capture family structure, while the other two, the nature of descent and the presence of localized clans, jointly capture descent systems. Kinship tightness is positively associated with the presence of extended rather than nuclear families, post-marital coresidence with a spouse's group, unilinear rather than bilateral descent systems, and the diffusion of segmented communities such as clans. Overall, as revealed by the summary statistics in Table A2, sub-Saharan Africa displays a high degree of tightness in all four dimensions.

In Table 7, we find that over our sub-Saharan African sample kinship tightness is actually associated positively with trust in others, rather than negatively as in the world sample in Enke (2019) (see Models 1 and 2, with the slave trade added as a control in the latter).[22] This discrepancy can be attributed to the fact that he captures between-country, rather than within-country variation as we do. Furthermore, within sub-Saharan Africa, kinship tightness is not associated with jus soli attitudes (its coefficient in Models 3 and 4, where again the slave trade is added in the latter, is actually negative, which seems at odds with the positive coefficient in the regression for trust). Thus, across sub-Saharan Africa, family ties as captured by kinship tightness cannot be proposed as an alternative to the slave trade as fundamental determinants of citizenship attitudes, since they are unable to generate the same distinctive pattern of linkages emerging from the slave trade.[23]

[21] The focus in Enke (2019) is actually on how kinship tightness increases the trust gradient, i.e., the difference between in-group and out-group trust. Relatedly, Moscona, Nunn, and Robinson (2017) find that within Africa segmentary lineage organization is associated with a larger gap between trust in relatives compared to nonrelatives, which is driven by lower trust in nonrelatives.

[22] As explained by Enke (2019), the unweighted average of the four components closely corresponds to the results of a principal component analysis. Similar results obtain using the first principal component as an alternative regressor.

[23] If entered one at a time, extended family and localized clans are never significantly associated either with trust or jus soli; post-marital coresidence shows a positive effect on trust—only when entered together with the slave trade—and no effect on jus soli; and unilateral descent shows a negative effect on trust and no effect on jus soli. Similar results obtain when they are entered together as separate

Table 7: Kinship tightness

| | Trust in Others | | Jus Soli | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Kinship Tightness | 0.206* | 0.231* | -0.065 | -0.059 |
| | (0.115) | (0.119) | (0.062) | (0.062) |
| Slave Trade | | -0.071*** | | -0.016 |
| | | (0.019) | | (0.010) |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.112 | 0.114 | 0.058 | 0.058 |
| Sample Mean | 1.339 | 1.339 | 0.559 | 0.559 |
| Observations | 26218 | 26218 | 25597 | 25597 |
| Ethnicities | 136 | 136 | 136 | 136 |
| Districts | 1541 | 1541 | 1539 | 1539 |

*Note:* OLS estimates. In Models 1 and 2 the dependent variable is a categorical measuring trust in other people. In Models 3 and 4 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Kinship Tightness is an index composed of extended family, post-marital residence, unilateral lineages, and segmented communities. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

## 7.3 Witchcraft beliefs

Witchcraft beliefs have been proposed as a fundamental determinant of trust by Gershman (2016). We use the same Pew data he used on witchcraft beliefs (even though they involve a significant loss in the number of observations). Through the channel of trust, witchcraft beliefs may turn out to be correlated with negative attitudes toward foreigners. Indeed, according to Gershman (2016), believing in witchcraft as an explanation for all kinds of misfortunes is often associated with aggressiveness, hostility, fear of mobility, and a culture of suspicion—which cannot be conducive to welcoming strangers.

In Table 9 we test the potential role of witchcraft beliefs as the channel linking trust to jus soli attitudes keeping in mind that, despite being deeply entrenched, they are both collected from contemporary surveys. Consistent with Gershman (2016), our estimates do replicate for witchcraft beliefs the negative association with trust in others that we obtain for the slave trade (Models 1 and 2). However, no significant correlation emerges between witchcraft beliefs and jus soli attitudes, even though the sign of the coefficient is, as we conjectured, negative (Models 3 and 4). Both conclusions hold whether or not

variables. Results are omitted for brevity.

Table 8: Witchcraft beliefs

| | Trust in Others | | Jus Soli | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Witchcraft Beliefs | -0.392** | -0.368** | -0.014 | -0.004 |
| | (0.187) | (0.179) | (0.091) | (0.087) |
| Slave Trade | | -0.080*** | | -0.033** |
| | | (0.029) | | (0.015) |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.099 | 0.102 | 0.036 | 0.038 |
| Sample Mean | 1.307 | 1.307 | 0.594 | 0.594 |
| Observations | 16938 | 16938 | 16482 | 16482 |
| Ethnicities | 142 | 142 | 142 | 142 |
| Districts | 975 | 975 | 974 | 974 |

*Note:* OLS estimates. In Models 1 and 2 the dependent variable is a categorical measuring trust in other people. In Models 3 and 4 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Witchcraft Beliefs is the fraction of believers in witchcraft. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

we include the slave trade among the regressors (Models 2 and 4).[24] Therefore, even though we can confirm that they concur to determine trust, witchcraft beliefs cannot be proposed as an alternative to the slave trade as a deep determinant of attitudes toward citizenship.

To sum up, none of the alternative determinants of trust is able to generate the same distinctive pattern of linkages between trust and attitudes toward citizenship emerging from the slave trade. Similar conclusions follow from a set regressions where all variables are entered together (Table A10). While the slave trade always preserves its consistently negative influence both on trust and jus soli attitudes, this is not the case for either historical conflict, kinship tightness, or witchcraft beliefs.

[24]Model 2 suggests a complex relationship between the slave trade and witchcraft beliefs. Gershman (2020) indeed finds that representatives of ethnic groups which were more heavily exposed to the slave trade are more likely to believe in witchcraft. Since the slave trade represented for many Africans the first contact with foreigners, and it was perceived as a form of witchcraft practiced by European traders, witchcraft beliefs may actually represent another channel, complementary to trust, through which the slave trade negatively affects contemporary attitudes toward jus soli.

# 8 Conclusion

The empirical evidence we produced in this paper establishes that in sub-Saharan Africa attitudes toward citizenship acquisition for foreigners do reflect the persistent legacy of the slave trade. The channel of transmission is the distrust of strangers determined by the legacy of the slave trade. In particular, individuals who are more trusting show more positive attitudes towards the acquisition of citizenship at birth through the application of the jus soli principle for children of foreigners. In turn, these individuals' ethnic groups are those that were relatively less exposed to historical slave exports. Alternative theories of trust determination, based on conflict, kinship tightness, and witchcraft beliefs, are unable to reproduce the same distinctive pattern of linkages emerging with the slave trade.

As argued by Herbst (1997), in multiethnic societies like those prevailing in Africa, liberal citizenship policies can help build a common national identity. On the other hand, restrictive attitudes can imply the alienation of whole communities of migrants and refugees, whose size reflects yet unresolved historical repercussions of the establishment of artificial country borders and the exacerbation of ethnic conflict that occurred during the colonization period. Our findings add to this perspective the recognition that attitudes toward citizenship acquisition are actually even more deeply shaped by the experience of the slave trade, that predates the colonization period by centuries. To the extent to which individual attitudes, as reflected by the survey information on which we base our analysis, reflect and ultimately shape actual policies and regulation, the implications of our findings are that historical legacies will keep exerting their influence on sentiments toward foreigners, migration policies, and citizenship laws for the years to come.

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Table A1: Data Description

| Variable | Description | Source |
|---|---|---|
| Jus Soli Attitudes | Binary Variable for Being Favorable to Jus Soli | Afrobarometer |
| Naturalization Attitudes | Binary Variable for Being Favorable to Naturalization | Afrobarometer |
| Dual Citizenship Attitudes | Binary Variable for Being Favorable to Dual Citizenship | Afrobarometer |
| Trust in Others | Categorical Variable for Level of Trust in Others | Afrobarometer |
| Trust in Neighbors | Categorical Variable for Level of Trust in Neighbors | Afrobarometer |
| Trust in Relatives | Categorical Variable for Level of Trust in Relatives | Afrobarometer |
| Slave Trade | Log (One plus Transatlantic and Indian Slave Exports/ Ethnic Land Area) | Nunn and Wantchekon (2011) |
| Christian Missions | Number of Christian Missions | Nunn and Wantchekon (2011) |
| Colonial Routes | Binary Variable for Location on a Colonial Route | Nunn and Wantchekon (2011) |
| Colonial Railway | Binary Variable for Location on a Colonial Railway | Nunn and Wantchekon (2011) |
| Malaria Ecology | Average Malaria Presence | Nunn and Wantchekon (2011) |
| Cities in 1400 | Binary Variable for Cities with over 20,000 Inhabitants in 1400 | Nunn and Wantchekon (2011) |
| Settlement Patterns | Categorical Variable for Pre-Colonial Settlement Patterns (V30) | Murdock (1967) |
| Jurisdictional Hierarchies | Number of Jurisdictional Political Hierarchies beyond the Local Community (V33) | Murdock (1967) |
| Extended Family | Binary Variable for Extended Family Coded from Domestic Organization (V8) | Murdock (1967) |
| Post-Marital Coresidence | Binary Variable for Post-Marital Coresidence Coded from Transfer of Residence at Marriage (V11) | Murdock (1967) |
| Unilinear Descent | Binary Variable for Unilinear Descent Coded from Descent Major Type (V43) | Murdock (1967) |
| Localized Clans | Binary Variable for Localized Clans Coded from Community Marriage Organization (V15) | Murdock (1967) |
| Slave Trade Sample | Binary Variable for Ethnicities with Positive Trade Exports | Nunn and Wantchekon (2011) |
| Sea Distance | Centroid Distance from the Coast of the Ethnic Group | Nunn and Wantchekon (2011) |
| Mover | Binary Variable for Individual Not Living in Ethnic Homeland | Murdock (1967), Afrobarometer |
| Historical Conflict | Number of Years in Conflict for the Ethnic Group | Brecke (1999) |
| Kinship Tightness | Index Composed as Average of Extended Family, Post-Marital Coresidence, Unilateral Descent, and Localized Clans | Murdock (1967), Enke (2019) |
| Witchcraft Beliefs | Fraction of Believers in Witchcraft | Pew Forum on Religion and Public Life |
| Age | Years of Age | Afrobarometer |
| Gender | Binary Variable for Male | Afrobarometer |
| Religion | Categorical Variable for Religious Affiliation | Afrobarometer |
| Education | Categorical Variable for Education Attainment | Afrobarometer |
| Urban Location | Binary Variable for Living in Urban Area | Afrobarometer |
| Living Conditions | Categorical Variable for Relative Living Conditions | Afrobarometer |
| Employment Status | Categorical Variable for Employment Status | Afrobarometer |
| Same Ethnicity Share | Share of the Population that Belongs to the Same Ethnicity | Afrobarometer |

Table A2: Descriptive Statistics

| | Observations | Mean | SD | Min | Max |
|---|---|---|---|---|---|
| Jus Soli Attitudes | 40621 | 0.577 | 0.494 | 0.000 | 1.000 |
| Naturalization Attitudes | 40010 | 0.640 | 0.480 | 0.000 | 1.000 |
| Dual Citizenship Attitudes | 39345 | 0.333 | 0.471 | 0.000 | 1.000 |
| Trust in Others | 41676 | 1.336 | 1.007 | 0.000 | 3.000 |
| Trust in Neighbors | 41790 | 1.788 | 1.011 | 0.000 | 3.000 |
| Trust in Relatives | 41769 | 2.413 | 0.885 | 0.000 | 3.000 |
| Slave Trade | 33882 | 0.603 | 0.976 | 0.000 | 3.774 |
| Christian Missions | 33882 | 0.0002 | 0.0004 | 0.000 | 0.003 |
| Colonial Routes | 34345 | 0.480 | 0.500 | 0.000 | 1.000 |
| Colonial Railway | 34345 | 0.399 | 0.490 | 0.000 | 1.000 |
| Malaria Ecology | 34345 | 13.634 | 9.943 | 0.000 | 34.640 |
| Cities in 1400 | 34345 | 0.132 | 0.339 | 0.000 | 1.000 |
| Settlement Patterns | 31211 | 6.255 | 1.231 | 1.000 | 8.000 |
| Jurisdictional Hierarchies | 33084 | 2.616 | 1.139 | 0.000 | 4.000 |
| Extended Family | 30797 | 0.967 | 0.180 | 0.000 | 1.000 |
| Post-Marital Coresidence | 30669 | 0.968 | 0.177 | 0.000 | 1.000 |
| Unilinear Descent | 30801 | 0.993 | 0.084 | 0.000 | 1.000 |
| Localized Clans | 28048 | 0.663 | 0.473 | 0.000 | 1.000 |
| Slave Trade Sample | 33882 | 0.716 | 0.451 | 0.000 | 1.000 |
| Sea Distance | 34345 | 429.004 | 305.008 | 1.250 | 1252.683 |
| Mover | 37047 | 0.556 | 0.497 | 0.000 | 1.000 |
| Historical Conflict | 41930 | 4.589 | 9.246 | 0.000 | 47.000 |
| Kinship Tightness | 30658 | 0.906 | 0.147 | 0.250 | 1.000 |
| Witchcraft Beliefs | 22725 | 0.578 | 0.214 | 0.164 | 1.000 |
| Age | 41525 | 37.084 | 14.509 | 18.000 | 105.000 |
| Gender | 41930 | 0.500 | 0.500 | 0.000 | 1.000 |
| Religion | 40775 | 21.518 | 91.131 | 0.000 | 1262.000 |
| Education | 41637 | 3.138 | 2.031 | 0.000 | 8.000 |
| Urban Location | 41287 | 0.363 | 0.481 | 0.000 | 1.000 |
| Living Conditions | 40622 | 2.862 | 0.994 | 1.000 | 5.000 |
| Employment Status | 41787 | 1.164 | 1.147 | 0.000 | 3.000 |
| Same Ethnicity Share | 41930 | 0.605 | 0.331 | 0.004 | 1.000 |

Table A3: Jus soli attitudes and trust in others with ethnicity fixed effects

| | Jus Soli | |
|---|---|---|
| | (1) | (2) |
| Trust in Others | 0.021 | 0.022 |
| | [0.004]*** | [0.004]*** |
| | (0.004)*** | (0.004)*** |
| Ethnicity Fixed Effects | Yes | Yes |
| Country Fixed Effects | No | Yes |
| Adj. R-squared | 0.068 | 0.079 |
| Sample Mean | 0.570 | 0.570 |
| Observations | 35683 | 35683 |
| Ethnicities | 266 | 266 |
| Districts | 1726 | 1726 |

*Note:* OLS estimates. The dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Trust in Others is a categorical variable measuring trust in other people. Robust standard errors adjusted for clustering at the ethnicity level in squared brackets and for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A4: Trust as mediator of the effect of the slave trade

| | Trust in Others | Jus Soli | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Slave Trade | -0.102*** | -0.023** | -0.020** |
| | (0.023) | (0.009) | (0.009) |
| Trust in Others | | | 0.025*** |
| | | | (0.004) |
| Country Fixed Effects | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes |
| Adj. R-squared | 0.107 | 0.057 | 0.059 |
| Sample Mean | 1.344 | 0.563 | 0.563 |
| Observations | 30580 | 29828 | 29682 |
| Ethnicities | 168 | 168 | 168 |
| Districts | 1646 | 1645 | 1645 |

*Note:* OLS estimates. In Model 1 the dependent variable is a categorical measuring trust in other people. In Models 2 and 3 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A5: Adding individual-level controls

| | Jus Soli | | | | Trust in Others | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Trust in Others | 0.027*** | 0.027*** | | | | |
| | (0.004) | (0.004) | | | | |
| Slave Trade | | | -0.014 | -0.012 | -0.086*** | -0.089*** |
| | | | (0.010) | (0.010) | (0.020) | (0.021) |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.065 | 0.065 | 0.063 | 0.063 | 0.129 | 0.129 |
| Sample Mean | 0.565 | 0.565 | 0.566 | 0.566 | 1.355 | 1.355 |
| Observations | 27292 | 27292 | 27407 | 27407 | 28076 | 28076 |
| Ethnicities | 168 | 168 | 168 | 168 | 168 | 168 |
| Districts | 1590 | 1590 | 1590 | 1590 | 1591 | 1591 |

*Note:* OLS estimates. In Models 1-4 the dependent variable is a categorical measuring trust in other people. In Models 5 and 6 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Individual controls include: age, age squared, gender, religion, education, urban location, living conditions, and employment status. Models 2, 4 and 6 also control for the district-level share of the population that belongs to the same ethnicity of the respondent. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A6: Sub-samples with and without the slave trade

| | Slave Trade Sample | | | No Slave Trade Sample |
|---|---|---|---|---|
| | Jus Soli | | Trust in Others | Jus Soli |
| | (1) | (2) | (3) | (4) |
| Trust in Others | 0.027*** | | | 0.018** |
| | (0.005) | | | (0.008) |
| Slave Trade | | -0.023** | -0.111*** | |
| | | (0.011) | (0.027) | |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.066 | 0.065 | 0.112 | 0.047 |
| Sample Mean | 0.550 | 0.551 | 1.330 | 0.594 |
| Observations | 21138 | 21247 | 21822 | 8544 |
| Ethnicities | 96 | 96 | 96 | 72 |
| Districts | 1308 | 1308 | 1311 | 833 |

*Note:* OLS estimates. In Models 1, 2 and 4 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. In Model 3 the dependent variable is a categorical measuring trust in other people. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A7: Alternative measures of trust

| | Jus Soli | | Trust in Neighbors | Trust in Relatives |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Trust in Neighbors | 0.018*** | | | |
| | (0.004) | | | |
| Trust in Relatives | | 0.010* | | |
| | | (0.005) | | |
| Slave Trade | | | -0.129*** | -0.047*** |
| | | | (0.022) | (0.017) |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.057 | 0.057 | 0.176 | 0.172 |
| Sample Mean | 0.563 | 0.563 | 1.806 | 2.408 |
| Observations | 29751 | 29734 | 30662 | 30643 |
| Ethnicities | 168 | 168 | 168 | 168 |
| Districts | 1645 | 1645 | 1646 | 1646 |

*Note:* OLS estimates. In Models 1 and 2 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. In Model 3 the dependent variable is a categorical measuring trust in neighbors. In Model 4 the dependent variable is a categorical measuring trust in relatives. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A8: Alternative citizenship laws provisions

| | Naturalization | | Dual Citizenship | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Trust in Others | 0.010** | | 0.011** | |
| | (0.005) | | (0.005) | |
| Slave Trade | | -0.005 | | -0.009 |
| | | (0.010) | | (0.012) |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.037 | 0.037 | 0.068 | 0.067 |
| Sample Mean | 0.626 | 0.626 | 0.334 | 0.334 |
| Observations | 29307 | 29436 | 28827 | 28954 |
| Ethnicities | 168 | 168 | 168 | 168 |
| Districts | 1644 | 1644 | 1645 | 1645 |

*Note:* OLS estimates. In Models 1 and 2 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a non-citizen person who has lived and worked in the country, and zero otherwise. In Models 3 and 4 the dependent variable is a binary taking value one if a respondent is in favor of the right to of a person to hold dual citizenship. Trust in Others is a categorical measuring trust in other people. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

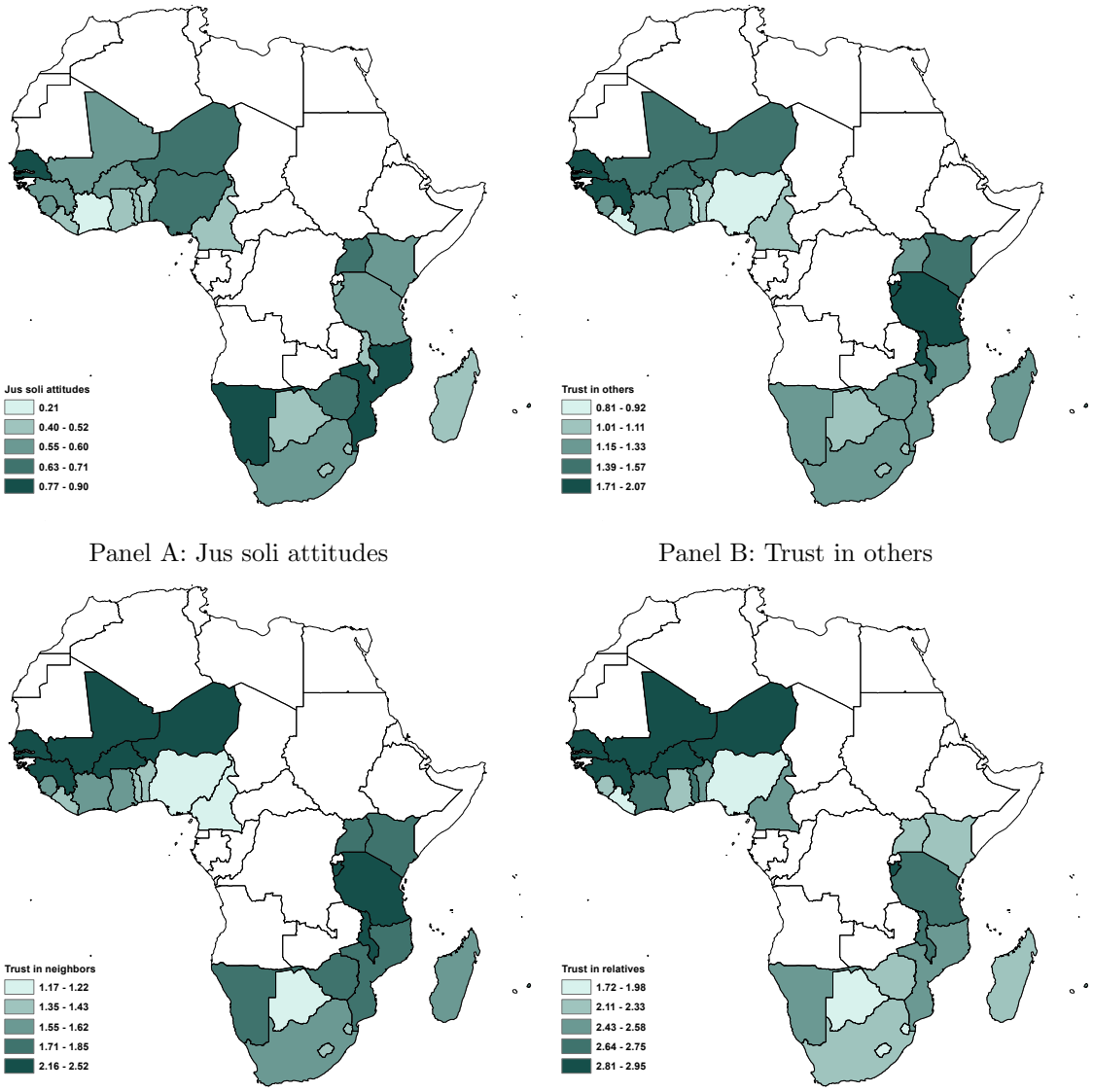
Table A9: Descriptive Statistics - Movers and non-movers

| | Movers | | | Non-Movers | | |
|---|---|---|---|---|---|---|
| | Observations | Mean | SD | Observations | Mean | SD |
| Jus Soli Attitudes | 20006 | 0.570 | 0.495 | 15878 | 0.569 | 0.495 |
| Naturalization Attitudes | 19725 | 0.643 | 0.479 | 15603 | 0.624 | 0.484 |
| Dual Citizenship Attitudes | 19415 | 0.326 | 0.469 | 15357 | 0.336 | 0.472 |
| Trust in Others | 20469 | 1.345 | 1.015 | 16359 | 1.332 | 1.022 |
| Trust in Neighbors | 20524 | 1.797 | 1.018 | 16407 | 1.790 | 1.019 |
| Trust in Relatives | 20492 | 2.435 | 0.878 | 16419 | 2.396 | 0.898 |
| Slave Trade | 18581 | 0.560 | 0.912 | 15301 | 0.656 | 1.047 |
| Christian Missions | 18581 | 0.0002 | 0.0003 | 15301 | 0.0002 | 0.0004 |
| Colonial Routes | 19044 | 0.484 | 0.500 | 15301 | 0.475 | 0.499 |
| Colonial Railway | 19044 | 0.439 | 0.496 | 15301 | 0.350 | 0.477 |
| Malaria Ecology | 19044 | 13.632 | 9.830 | 15301 | 13.636 | 10.082 |
| Cities in 1400 | 19044 | 0.134 | 0.341 | 15301 | 0.130 | 0.336 |
| Settlement Patterns | 17138 | 6.282 | 1.250 | 14073 | 6.222 | 1.207 |
| Jurisdictional Hierarchies | 18279 | 2.592 | 1.151 | 14805 | 2.645 | 1.123 |
| Extended Family | 16073 | 0.965 | 0.183 | 14724 | 0.968 | 0.175 |
| Post-Marital Coresidence | 15968 | 0.978 | 0.146 | 14701 | 0.956 | 0.204 |
| Unilinear Descent | 16016 | 0.988 | 0.107 | 14785 | 0.998 | 0.046 |
| Localized Clans | 14526 | 0.647 | 0.478 | 13522 | 0.681 | 0.466 |
| Slave Trade Sample | 18581 | 0.685 | 0.464 | 15301 | 0.753 | 0.431 |
| Sea Distance | 19044 | 443.102 | 306.717 | 15301 | 411.457 | 301.959 |
| Mover | 20588 | 1.000 | 0.000 | 16459 | 0.000 | 0.000 |
| Historical Conflict | 20588 | 4.644 | 8.619 | 16459 | 5.881 | 10.815 |
| Kinship Tightness | 15957 | 0.906 | 0.145 | 14701 | 0.907 | 0.149 |
| Witchcraft Beliefs | 10743 | 0.579 | 0.213 | 9636 | 0.552 | 0.214 |
| Age | 20393 | 36.586 | 14.226 | 16288 | 36.967 | 14.560 |
| Gender | 20588 | 0.499 | 0.500 | 16459 | 0.500 | 0.500 |
| Religion | 20004 | 23.008 | 96.962 | 16067 | 16.814 | 68.581 |
| Education | 20448 | 3.085 | 2.061 | 16369 | 2.952 | 1.988 |
| Urban Location | 20194 | 0.385 | 0.486 | 16254 | 0.293 | 0.455 |
| Living Conditions | 19908 | 2.876 | 0.985 | 15952 | 2.777 | 1.008 |
| Employment Status | 20528 | 1.106 | 1.138 | 16390 | 1.154 | 1.117 |
| Same Ethnicity Share | 20588 | 0.477 | 0.341 | 16459 | 0.771 | 0.228 |

Table A10: Alternative determinants

| | Trust in Others | | Jus Soli | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Historical Conflict | -0.001 | 0.002 | 0.001 | 0.002 |
| | (0.004) | (0.004) | (0.002) | (0.002) |
| Kinship Tightness | 0.369** | 0.415** | -0.113 | -0.089 |
| | (0.186) | (0.191) | (0.079) | (0.074) |
| Witchcraft Beliefs | -0.270 | -0.277 | -0.064 | -0.067 |
| | (0.203) | (0.203) | (0.121) | (0.117) |
| Slave Trade | | -0.079** | | -0.039** |
| | | (0.038) | | (0.018) |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Geo-Historical Controls | Yes | Yes | Yes | Yes |
| Ethnographic Controls | Yes | Yes | Yes | Yes |
| Adj. R-squared | 0.108 | 0.110 | 0.032 | 0.034 |
| Sample Mean | 1.308 | 1.308 | 0.598 | 0.598 |
| Observations | 14986 | 14986 | 14590 | 14590 |
| Ethnicities | 118 | 118 | 118 | 118 |
| Districts | 915 | 915 | 913 | 913 |

*Note:* OLS estimates. In Models 1 and 2 the dependent variable is a categorical measuring trust in other people. In Models 3 and 4 the dependent variable is a binary taking value one if a respondent is in favor of the right to be a citizen for a person born in a country with two non-citizen parents, and zero otherwise. Historical Conflict is the number of years in conflict in 1443-1912. Kinship Tightness is an index composed of extended family, post-marital residence, unilateral lineages, and segmented communities. Witchcraft Beliefs is the fraction of believers in witchcraft. Slave Trade is the natural log of one plus slave exports normalized by land area. Geo-historical controls include: Christian missions, colonial routes, colonial railway, malaria ecology, and cities in 1400. Ethnographic controls include: settlement patterns and jurisdictional hierarchies beyond the local community. Robust standard errors adjusted for two-way clustering at the ethnicity and district levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1.



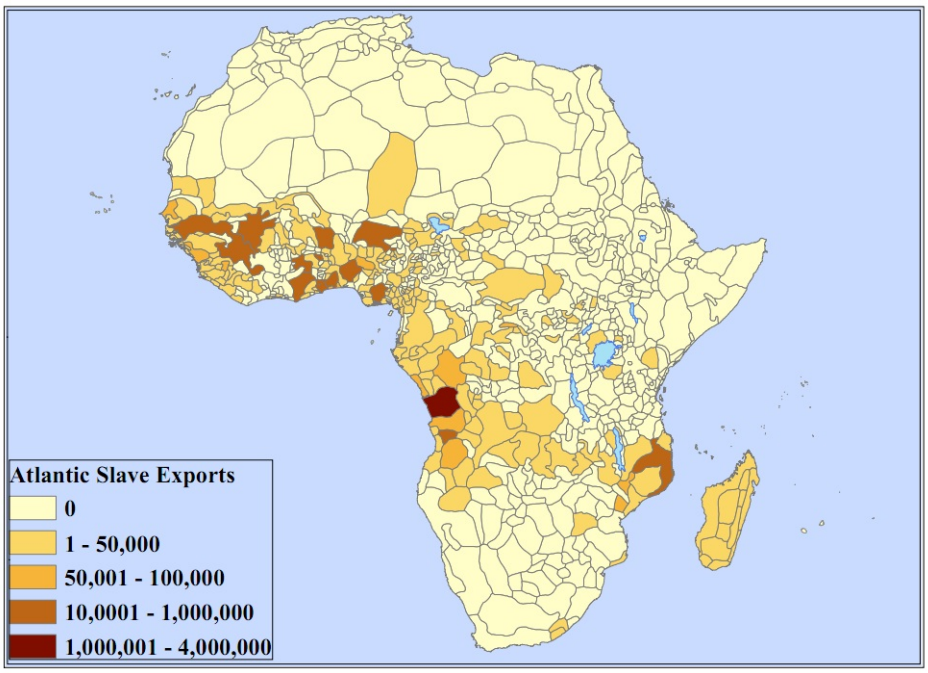

Panel A: Jus soli attitudes

Panel B: Trust in others

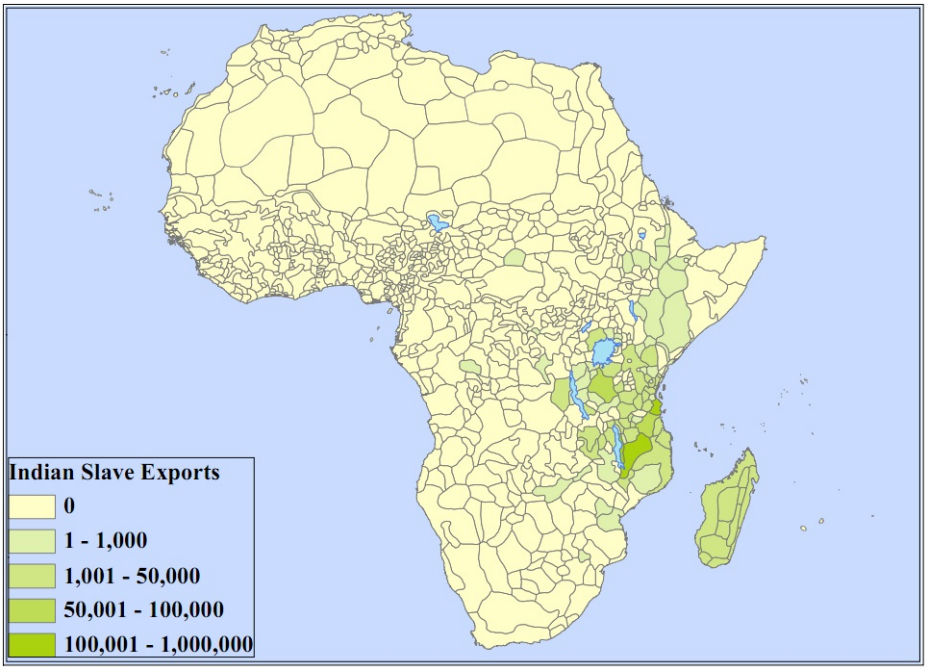
Panel C: Trust in neighbors

Panel D: Trust in relatives

Figure A1: The geographical distribution of jus soli attitudes and trust, by country
Source: Afrobarometer, Round 5.




Panel A: Transatlantic slave trade




Panel B: Indian Ocean slave trade

Figure A2: The geographical distribution of the transatlantic and Indian Ocean slave trades, by ethnicity
Source: Nunn and Wantchekon (2011).