

The Trans-Atlantic Slave Trade and the Evolution of Mistrust in Africa: An Empirical Investigation

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ABSTRACT: Trust is increasingly perceived as having a significant effect on trade, public good provisions, conflict resolution, and even democratic consolidation. In this paper we investigate the historical determinants of trust within Africa, by testing for a long-term impact of the intensity of the slave trades on individuals' trust in others and trust in their government. We find that the number of slaves taken from an ethnic group during Africa's slave trade is negatively correlated with how much individuals of that ethnicity trust others today and in their trust of their governments. Using the historic distance between the geographic location of ethnic groups and the coast as an instrument for the number of slaves taken from that group, we find evidence that the relationship between slave exports on trust is causal.

Key words: Trust; trans-Atlantic slave trade; political participation; political violence.

JEL classification: F14, F23, L14, L33

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1. Introduction

Several studies have recently documented the importance of trust for economic development (e.g., Tabellini, 2008; Knack and Keefer, 1997; Fafchamps, 2006), for international trade (e.g. Greif, 1989; den Butter et al. 2003; Guiso et al. 2007a), and for political institutions (e.g. Warren, 1999; Putnam, 2000).

Given that trust is central to economic and political development, it is important to understand its determinants. An important dimension of the debate on determinants of trust is the role of historical factors. In this paper we consider the historical determinants of trust within Africa. Specifically, we test for a long-term impact of the intensity of the trans-Atlantic and Indian Ocean slave trades on the level interpersonal trust, and trust in local institutions. Early in the slave trade, slaves were taken primarily through state organized raids and warfare. However, data on the manner of enslavement towards the end of the trans-Atlantic slave trade suggest that by the end of the slave trade, the environment of pervasive insecurity created by the slave trade caused individuals to turn on others within their own communities. There are well documented example of friends and acquaintances selling each other slavery (Koelle, 1854; Hair, 1965), and even of family members selling relatives into slavery (Piot, 1996).

Informal evidence of the long-term effects of the slave trade can be found in the oral traditions that demonstrate a history and a culture of mistrust that can be traced back to the legacy of slave trade. In slave dealing areas in Nigeria, such as Badagry, some communities are considered living symbols of cruelty and wickedness because of the role their ancestors played in the slave trade. Other prominent slave trading communities such as Arochukwu in Eastern Nigeria are associated with deceit and trickery (Simpson, 2004, p. 42). In the same way, the Fon, whose ancestors were subjects of Dahomey Kingdom, one of the epicenters of the slave trade in West Africa, are associated with dishonesty. In Benin popular culture, untrustworthiness is defined as being capable of tricking one's friend or neighbor into slavery. This can be most clearly seen from the common Fon saying: "*Me elo na sa we du*", which translates to "This person will sell you and enjoy it". It is a saying that is used to describe someone who is deceitful. A Wolof saying "*Ki meun na la diaye, lekke sa ndiegue*" also has the same meaning, linking deceit directly to the selling of others into slavery. These examples illustrate the great extent to which the slave trade has permeated into much of African culture.

Despite these examples, we do not yet have empirical evidence of the long-term effects of the slave trades on interpersonal trust. In this paper, using survey data on individual's trust of others from the Afrobarometer, we test whether individuals belonging to an ethnic group that was heavily impacted by the slave trades in the past are less trusting of others today. Because of the richness of the Afrobarometer data we are able to test for the effect of the slave trade on different types of trust. Specifically, we examine the following measures of trust: (i) trust of those closest to you, such as neighbors, relatives, and others of the same ethnicity (ii) trust of those less well known to you, such as those from different ethnicities (iii) trust of political figures and leaders, such as local leaders, and leaders at the national level.

We find that the number of slaves taken from an ethnic group between 1400 and 1900 is negatively correlated with how much individuals in that group trust others. Perhaps surprisingly, we find that the slave trade has as strong an effect on the trust of others that are close to the respondent, such as others within the same ethnic group, relatives, and neighbors. This finding is consistent with the fact people were often tricked or kidnapped by others who were very close to them, such as family members and friends.

We find that the relationship between the slave trade and mistrust is also apparent in the trust of political figures. A history of slaving is negatively correlated with trust of governments, and this effect is stronger for local governments than for national governments. We find that this is true even controlling for individual's perception of how well the government is doing. This suggests that because of the culture of mistrust developed by the slave trade, ancestors of those heavily impacted by the slave trades remain highly suspicious of governments, and this mistrust is above and beyond any suspicion arising because of poor government performance. In other words, the legitimacy of democratic institutions is adversely affected by the legacy of the slave trade, and does not solely depend on how well they perform.

An alternative explanation for these findings is that more slaves were supplied by ethnic groups that initially had lower levels of trust, and these lower levels of trust persist today. In other words, causality runs from trust to the slave trade, and not from the slave trade to trust. We pursue a number of strategies to identify the direction of causality in our OLS estimates. One strategy is to use how far an ethnic group was from the coast during the slave trades as an instrument for the number of slaves taken from that ethnic group.

There is ample historical evidence suggesting that the instrument is relevant, but it is far less

clear that it satisfies the necessary exclusion restrictions. The most likely reason why the exclusion restriction may fail is that distance from the coast tends to be positively correlated income (see Rappaport and Sachs, 1999). In addition, studies have shown that an individual's income tends to be positively correlated with measured levels of trust (e.g., Alesina and La Ferrara, 2002). Therefore, through this income channel distance from the coast will be negatively correlated with income and negatively correlated with trust. As we will discuss in detail, this correlation is unable to explain our IV finding. In fact, this income channel will bias the IV estimate towards zero.

The IV results confirm our OLS estimates. According to the IV estimates the slave trades have a significant negative effect on trust within Africa.

We also perform a falsification exercise and examine the reduced form relationship between distance from the coast and trust within Africa and within Asia. Within Africa, we find a strong positive relationship between distance from the coast and trust. This is expected given our IV estimates. Places further from the coast had less slaves taken in the past, and therefore exhibit higher levels of trust today. We also examine this relationship outside of Africa, in Asia. The trust data are from the Asiabarometer. Our IV strategy relies on the assumption that the distance from the coast only affects trust through the slave trade. Therefore, if we examine the reduced form relationship between distance from the coast and trust outside of Africa, we expect to see no relationship if our exclusion restrictions are satisfied. Where there was no slave trade, there is no relationship between distance from the coast and trust. This is exactly what we find. Within Asia we estimate a statistically insignificant relationship between distance from the coast of the respondent and reported trust in the local government.

The empirical results of this paper document the historic determinants of trust. The evidence here provides general support for the view expressed in Fukuyama (1995) and Putnam (2000) that trust originates from shared values that arise from cultural heritage. Also in line with these views, Tabellini (2005) finds that levels of education and the extent of democracy in the 18th century are important determinants of current levels of interpersonal trust in Europe. As well, Guiso et al. (2007c) empirically link differences in social capital within Italy to whether the city was independent in the 11th to 14th centuries.

Like these studies we document a long-term historic determinant of a culture of trust or mistrust. This does not mean that short term determinants are also not important. In fact there is evidence that non-historic determinants of trust, such as current experiences, information flows,

organization membership, and risk-sharing relationships, are also important (e.g., Fisman and Khanna, 1999; Shapiro, 1987). For example, in a recent paper, Alesina and La Ferrara (2002) use data from US localities to identify three individual-specific factors that reduce trust: (1) a recent history of traumatic experiences (2) membership in minority groups that feel discriminated against (e.g. black and to a less extent, women), (3) low education and income. Although these short-term determinants of trust are not the focus of this paper, our results do provide additional evidence of the importance of these non-historic factors. We discuss this in more detail in the body of the paper.

Our results also provide empirical support that complements anthropological studies that argue that the memories of the slave trade have been preserved through oral traditions, rituals, and historical imaginations in contemporary Africa. For example, Shaw (2004, p. 3) argues that the slave trade is made vividly present in Sierra Leone to the point where, money and commodities are linked to an invisible city of “witches whose affluence was built on the theft of human lives”. As well, Simpson (2004, p. 4) provides numerous narratives illustrating the way in which the experiences of the trans-Atlantic slave trade in Ghana, Benin and Nigeria have come to be incorporated into the cultural repertoires of the people, and have been transferred through oral tradition.

2. Historical Background and Theoretical Framework

A. Historical Background

Historic account suggest that early in the slave trade, those sold into slavery were almost exclusively prisoners of war. Because raids often involved villages raiding other villages, this form of slave procurement often caused relations between villages to turn hostile, even if these villages had previously formed federations or other ties (see for example Inikori, 2000). There are numerous historical accounts, documenting this detrimental effect of the slave trade (see Hubbell, 2001; Azevedo, 1982; and Klein, 2001). Heightened conflict between communities over a period of three to four hundred years may have resulted in increased mistrust of those outside of one’s ethnic group.

However, data on the manner of enslavement in the 19th century suggests that by the end of the slave trade, slaves were being taken in a wide variety of different ways. Table 1 reports information

of the manner of enslavement for a sample of slaves from Free Town, Sierra Leone. The slaves were interviewed by Sigismund Koelle during the 1840s.

Table 1. The Method of Enslavement of Koelle’s Informants

Manner of Enslavement	Percentage
Taken in a war	24.3%
Kidnapped or seized	40.3%
Through a judicial process	16.0%
Sold/tricked by a relative, friend, etc.	19.4%

Notes: The data are from Sigismund Koelle’s Linguistic Inventory. The sample consists of 144 informants interviewed by Koelle for which their means of enslavement is known.

In the sample, the most common manner of enslavement was kidnappings, with just under 40% of the slaves in the sample being taken in this manner. The next most common manner of enslavement was the capture of slaves during wars, with 25% of the slaves captured in this manner. Amazingly, almost 20% of the slaves were sold by relatives or friends. These slaves were sold by family members, or they were tricked into slavery by acquaintances and supposed friends. The survey by Koelle (1854) documents numerous accounts of individuals being sold into slavery by family members, relatives, and “supposed friends”. One of the more notable accounts is of a slave that was sold into slavery after being “enticed on board of a Portuguese vessel” by “a treacherous friend”. The most extreme example of this manner of enslavement is probably the Kabre of Northern Togo, who during the nineteenth century developed the custom of selling their own kin into slavery (Piot, 1996).

The final category reported in the table is for slaves that entered slavery through the judicial process. The slaves in the sample convicted of witchcraft, adultery, theft, and murder; 16% of the slaves in the sample entered slavery in this way.

One explanation for why individuals turned on others within their community is that this was caused by the general environment of insecurity that arose because of the increased conflict between communities at the time. Because of this insecurity, individuals required weapons, which could be obtained from Europeans, to defend themselves. The slaves needed to trade with the Europeans were often obtained through local kidnappings and violence (Mahadi, 1992; Hawthorne, 1999). Europeans and slave traders also played a role in promoting this internal conflict. Slave

merchants and raiders formed strategic alliances with key groups inside villages and states in order to extract slaves (see the accounts of Barry, 1992; Inikori, 2003; and Klein, 2003).

Akyeampong (2001) provides a remarkable example of a drumming group that was tricked into slavery in Atorkor (Ghana) in the 1850s. The chief of Whuti, who was also a slave trader, was jealous of the leader of a group of drummers, because the leader of the drummers fancied the chief's wife. The chief then arranged with a slave merchant named Dokutsu, who had contact with European slave traders, for the entire group of 40 drummers to be sold into slavery. It was arranged with the Europeans that the group of drummers would be tricked on board the slave ship. The drummers were told that the Europeans on board the ship were interested in their drums and would like to hear them perform. The drummers were served rum on board the ship and became drunk. Before they were able to realize what was happening the ship had sailed off, headed for the New World.

Walter Hawthorne, in his book *Planting Rice and Harvesting Slaves*, writes of the Beafares of the Guineau Bissau region of Africa. Hawthorne documents the decentralized and interpersonal nature of slave capture in the region, writing that "the Atlantic slave trade was insidious because its effects penetrated deep into the social fabric of the Upper Guinea Coast—beyond the level of the state and to the level of the village and household . . . Hence, in many areas, the slave trade pitted neighbor against neighbor. . . ." (pp. 106–107).

Hawthorne also provides a particularly telling example, which is taken from Almada (1984). Households located near ports were able to profit from the slave trade by 'tricking' unsuspecting strangers and then selling them to merchants. Almada writes that "these Beafares are so smart, that if a yokel arrives from the interior, they pretend that they want to give him shelter, and they receive him into their homes. After a few days have passed, they persuade him that they have friends on the ships, and that they would like to take him and have a party. But when they go to the ships, they sell him. In this way they trick many yokels." (Hawthorne, 2003, p. 106; Almada, 1984, p. 117).

During the Atlantic trade, even Africans that worked for the Europeans as boatmen, deckhands, and translators were not immune to the insecurity and predatory atmosphere that existed during the slave trade. African mariners and traders were often enslaved directly by the Europeans or by other Africans (Akyeampong, 2001, pp. 8–9). Akyeampong (2001) quotes Bolster (1997) who writes that the "African mariners in the slave trade exhibited the nervous detachment of men

simultaneously smug about their own favored positions and constantly leery of their European employers' potential duplicity or of other Africans' revenge".

The fact that slaves were often taken or tricked into slavery by others within the same community or ethnic group suggests that the slave trade may not only have affected the trust towards those outside of one's community, but it may have also affected the evolution of trust of those closest to you, such as friends, neighbors, and relatives. As well, because historically it was often the case that chiefs were also slave merchants and traders, or they were forced to sell their own people into slavery, the slave trade may have also resulted in an evolution of mistrust of political figures, particularly local leaders.

B. Theoretical Framework

As discussed in the previous section, some of the methods of enslavement, such as trickery and kidnapping, required the complicity of relatives and neighbors and this may have led an erosion of interpersonal trust in local communities. These, as well as other methods of enslavement such as warfare and the use of the traditional judicial process, may have led to a breakdown of rule of law and to the deterioration of the legitimacy of local state institutions. Mistrust generated by stories of personal betrayal and community breakdown have been transmitted through family histories, and religious and cultural practices. As discussed in Nunn (2007), raids, warfare, and civil conflict during the slave trade also prevented state institutions from playing a meaningful role in combating the deterioration of social cohesion and trust in local communities.

This historical process can easily be modeled using a variety of models of cultural evolution, such as those developed in Boyd and Richerson (1984), Bisin and Verdier (2000, 2001), Tabellini (2008) and Guiso, Sapienza and Zingales (2007). Guiso et al. present a model in which parents transmit to children priors on how trustworthy others are. They derive equilibrium behavior that exhibit status quo bias in which communities are stuck in low levels of trust across generations. In particular, a tragic event or series of tragic events that lowers the return to trusting can have long term and permanent effects on the level of trust in a society.

Tabellini (2008) also provides a theoretical framework that explain the combined effect of the past legacy of low cooperation (mistrust) and institutions on current level of trust. In his model, individuals inherit norms of cooperation from their parents and make political choices (through voting) that determine the quality of institutions (e.g., rule of law). He shows that transmission

of norms of cooperation strengthens or weakens institutional quality. As a result, when there is a negative shock to internal norm of cooperation, not only will the next generation be less trusting, but it will also choose weaker institutions, and the lower trust and weaker institutions persists in future generations.

3. Data Sources and Description

A. Afrobarometer Data

Data on the trust of individuals in Africa today are from the Afrobarometer surveys. The Afrobarometer is an independent and non-partisan research project conducted by CDD, IDASA and MSU. Implemented by national partners, Afrobarometer measures economic conditions and the political atmosphere in African countries. The questionnaire is standardized to facilitate comparison between the covered countries. The surveys are based on interviews conducted in the local languages of a random sample of between 1,200 and 2,400 people per country. The Afrobarometer, as of 2005, covers the following 18 countries: Benin, Botswana, Cape Verde, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, Zimbabwe. In 2008, a round of surveys are being conducted in these countries as well as in Liberia and Burkina Faso.

Because of data limitations, only 17 of the 18 Afrobarometer countries are in our analysis. For Cape Verde Islands, the ethnicity of the respondent is not recorded. In total, there is a potential sample of 23,093 respondents. Of these respondents, 5,876 either (i) listed 'other' as their ethnicity (ii) listed their ethnicity as their country (iii) were an ethnicity that is not an indigenous Africa ethnicity, or (iv) listed an indigenous ethnicity that could not yet be matched to the slave trade data. This leaves a potential sample of 17,217 respondents.

Our analysis considers various measures of interpersonal and political trust. The Afrobarometer asks respondents how much they trust relatives, neighbors, those from their own ethnic group or tribe, and those from other ethnic groups. The exact wording of each question is shown in Table 2. For the question about other ethnic groups, the question is specific to the country. For example respondents from Kenya are asked how much they trust "Kenyans from other ethnic groups".

The respondents can choose to answer either (i) not at all, (ii) just a little, (iii) somewhat, or (iv) a lot. They also have the option of answering that they do not know. The distribution of responses for

Table 2. Overview of the Trust of Others.

Response	How much do you trust each of the following types of people:							
	Your relatives?		Your neighbors?		People from your own ethnic group or tribe?		<People> from other ethnic groups?	
Not at all	1,410	7%	2,724	13%	2,811	14%	4,476	22%
Just a little	3,713	18%	5,792	28%	6,318	31%	7,281	36%
Somewhat	5,168	25%	6,316	31%	6,109	30%	5,263	26%
A lot	10,337	50%	5,758	28%	5,274	26%	3,291	16%
Total	20,628	100%	20,590	100%	20,512	100%	20,311	100%

Table 3. Overview of the Trust of the Government.

Response	How much do you trust each of the following:							
	The president?		The ruling party?		Parliament?		Your elected local government council?	
Not at all	3,203	15%	4,225	20%	3,531	17%	3,991	20%
Just a little	4,029	19%	4,422	21%	4,830	24%	4,869	24%
Somewhat	4,279	20%	4,687	23%	5,425	27%	5,321	26%
A lot	9,511	45%	7,340	36%	6,406	32%	6,033	30%
Total	21,022	100%	20,674	100%	20,192	100%	20,214	100%

each question are summarized in Table 2. A number of characteristics of the responses are notable. First, as expected, the level of trust of individuals closer to the respondent, such as relatives, is higher than those further from the respondent, such as individual's from other ethnic groups. However, a non-negligible number of respondents still report that they do not trust their relatives at all. This shows relatively low levels of trust even of individuals closest to the respondents.

Table 3 reports similar figures for survey questions that ask about the respondent's trust in various parts of the local and national government. The table reports respondents' responses to questions of how much they trust the president, the ruling party, parliament, and their locally elected government council. Perhaps surprisingly, individual's appear to show the highest reported levels of trust in the president and the lowest reported levels of trust in the local council.

B. Tribe Level Slave Export Data

Construction of tribe level slave export figures relies on country-level slave export estimates from Nunn (2008). The country level slave export figures were constructed by combining data on the total number of slaves shipped from all ports and regions of Africa with data on the ethnic origins of slaves shipped from Africa. The estimates constructed in Nunn (2008) cover all four of Africa's slave trades - the trans-Atlantic, Indian Ocean, Red Sea, and trans-Saharan - and the period from 1400 to 1900.

The country-level slave export estimates are disaggregated into ethnicity level estimates using the same ethnicity samples that were used in Nunn (2008). For only two of the four slave trades – the Atlantic and Indian Ocean slave trades – is the ethnicity data detailed enough to construct estimates of the number of slaves taken of each ethnicity during these slave trades. For the trans-Atlantic slave trade, a sample of over 80,000 slaves exists for which their ethnic identity is known. This sample comes from 54 different samples with 229 ethnic designations reported. For the Indian Ocean slave trade, a sample of over 21,000 slaves is available, with 80 different ethnicities reported. These data are described in detail in Nunn (2008).

Because the ethnicity data for the Red Sea and trans-Saharan slave trade are not sufficient to construct ethnicity level estimates of the slaves shipped during these slave trades, we are forced to restrict our analysis to sub-Saharan countries that were affected primarily by the trans-Atlantic and Indian Ocean slave trades. Since the trans-Atlantic slave trade was by far the largest of the slave trades, the omission of the Red-Sea and trans-Saharan slave trades will not likely have a large impact. As well, in Nunn (2008) it is shown that the impact of the slave trades as a whole is driven almost solely by the trans-Atlantic slave trade.

An important part of the construction of the ethnicity level slave export figures relies on the correct aggregation and matching of different ethnicity names to a common classification scheme. Using a variety of different sources, all ethnicities reported in the primary and secondary sources are matched to the classification scheme constructed and mapped by George Peter Murdock (1959). The authors of the secondary sources, from which the data were taken, generally also provide a detailed analysis of the meaning and locations of the ethnicities recorded in the historic records. In many of the publications, the authors created maps showing the locations of the ethnic groups recorded in the documents. This helped significantly in mapping the different ethnic designations into a common ethnicity classification. Further details about these mappings are in Nunn (2008).

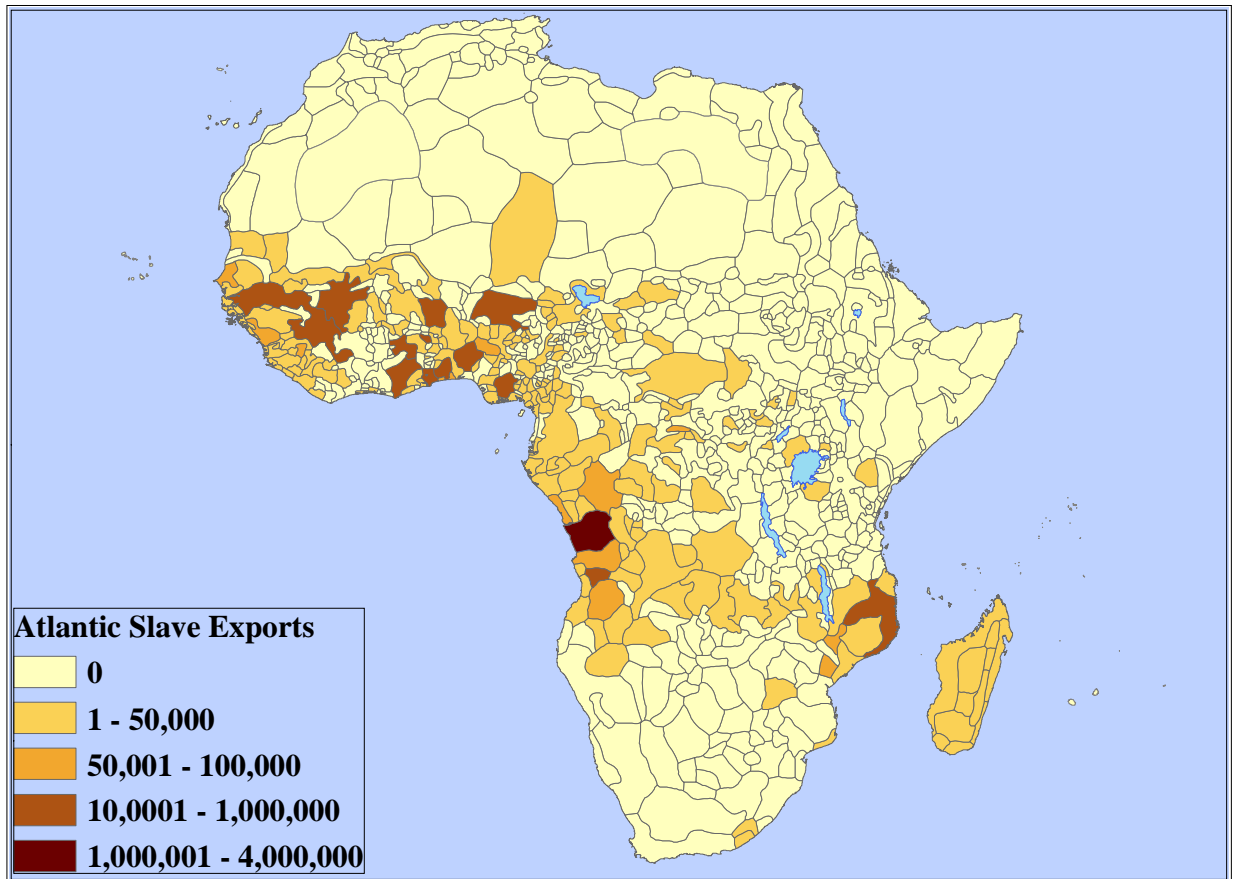


Figure 1. Ethnicities Shipped During the trans-Atlantic Slave Trade.

Maps of the intensity of the trans-Atlantic and Indian Ocean slave trades are shown in Figures 1 and 2. The maps show the boundaries of the ethnic groups categorized and mapped by Murdock (1959). The shade of each polygon indicates the estimated number of slaves of that ethnicity taken during the relevant slave trade between 1400 and 1900. As shown, the trans-Atlantic slave trade impacted much of the African continent. Slaves were taken from not only West Africa and West-Central Africa, but also Eastern Africa as well. The much smaller Indian Ocean slave trade was confined primarily to Eastern Africa. The patterns of slaving observed in the data and illustrated in the maps, are consistent with the qualitative evidence on the sources of slaves taken during the trans-Atlantic and Indian Ocean slave trades.

Figure 3 shows a map of the 17 countries included in our analysis. These countries are shaded in a dark brown color. The two additional countries that will be surveyed in the 2008 round of the Afrobarometer, and which will be included in future analysis, are indicated by a light brown color.

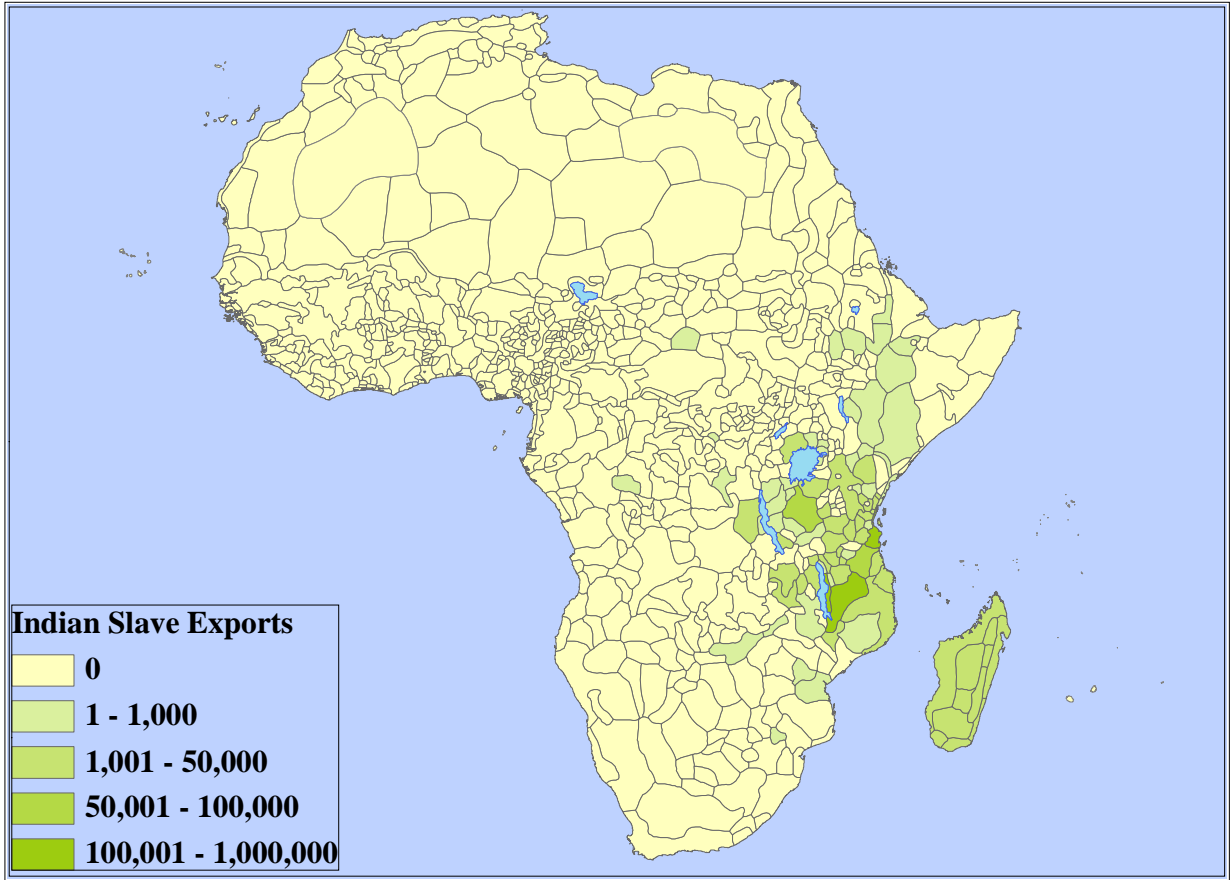


Figure 2. Ethnicities Shipped During the Indian Ocean Slave Trade.



Figure 3. Countries Included in the 2005 and 2008 Rounds of the Afrobarometer Surveys.

4. Empirical Results

A. OLS Estimates

We begin our analysis by examining the relationship between an ethnic group's past slave exports and its current level of intra-group trust. To examine this relationship, we estimate the following equation:

$$\text{trust}_{i,e,d,c} = \alpha_c + \beta \text{slave exports}_e + X'_{i,e,d,c} \delta + X'_{e,d} \gamma + \varepsilon_{i,e,d,c} \quad (1)$$

where i indexes individuals, e ethnic groups, d districts and c countries. The variable trust denotes one of the measures of trust described above. As we have seen the respondents choose between (i) not at all, (ii) just a little, (iii) somewhat, and (iv) a lot. Based on the respondents' answers, we calculate a value of trust which takes on the value of 0, 1, 2, or 3, where 0 corresponds to the response "not at all" and 3 to the response "a lot".¹

$X_{i,e,d,c}$ denotes a vector of individual level characteristics that are included as control variables. The individual level control variables included are: an indicator variable for the respondent's sex, the respondent's age and age squared, an interaction between the gender fixed effect and age and age squared, fixed effects for the respondents' perceived income relative to others, fixed effects for the educational attainment of the respondent, an indicator variable for whether the respondent lives in an urban or rural area, and 20 religion fixed effects. The income fixed effects are based on the respondent's view regarding their living condition relative to others: (i) much worse, (ii) worse, (iii) same, (iv) better, or (v) much better. The education fixed effects are for the following categories: (i) no formal schooling, (ii) informal schooling only, (iii) some primary schooling, (iv) primary school completed, (v) some secondary school/high school, (vi) secondary school completed/high school, (vii) post-secondary qualifications, but no university, (viii) some university, (ix) university completed, and (x) post-graduate.

$X_{d,e}$ denotes a vector of district-ethnicity level characteristics. We include measures of ethnic fractionalization at the district level,² and a measure of the share of the district's population that is the same ethnicity of the respondent.

Our coefficient of interest is β , the estimated relationship between the slave exports of an individual's ethnic group and the individual's measure of trust today. Because our variable of interest,

¹These are the numeric values used for each response in the original Afrobarometer surveys.

²This variable actually only varies at the district level.

Table 4. Estimates of the Determinants of Intra-Group Trust.

	Dep Var: Index of intra-group trust					
	OLS			Ordered Logit		
	(1)	(2)	(3)	(4)	(5)	(6)
slave exports (millions)	-.708*** (.112)			-1.43*** (.232)		
exports/area		-.016*** (.005)			-.032*** (.010)	
ln (exports/area)			-.154*** (.033)			-.317*** (.068)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number observations	19,421	19,421	19,421	19,421	19,421	19,421
Number ethnicities	183	183	183	183	183	183
R-squared	0.14	0.14	0.14	0.06	0.06	0.06

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, indicator variable for male and its interaction with age and age squared, 5 income fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

slave exports, only varies at the ethnicity level, we cluster all standard errors at the ethnicity level, allowing for non-independence of observations within ethnic groups.

Estimates of equation (1) with intra-ethnic group trust used as the dependent variable are reported in Table 4. In the first three column, we report OLS estimates of (1) with the full set of controls included in the estimating equation. To save space, we do not report the estimated coefficients and standard errors for all of the control variables. The coefficients of the individual level control variables are generally consistent with the findings from previous studies, such as Alesina and La Ferrara (2002). We find that trust is increasing (but at a decreasing rate) in age, increasing in income, and is higher for males than for females. These results are consistent with previous finding. However, we also find that trust is generally decreasing in an individual's level of education. This finding is opposite to Alesina and La Ferrara's finding that trust is increasing in the education of the respondent. We also find that urban areas are less trusting than rural areas.

As far as we know this relationship has not been considered previously. We find none of the district-ethnicity level control variables to be robustly significant.

As reported, the estimated coefficients for slave exports are negative and statistically significant. In column 1, we include the number of slaves taken from an ethnic group as our measure of the impact of the slave trade on an ethnic group. As reported, the coefficient β is negative and statistically significant. This result is consistent with the slave trades adversely affecting individuals' trust of others from their own ethnic group.

An issue with this measure is that it does not account for differences in the sizes of ethnic groups. In the second column, we use an alternative measure that normalizes the number of slaves taken by the size of the land inhabited by the ethnic group during the 19th century.³ As shown the results are similar with this alternative measure. In the third column, take the natural log of the variable from column 2. We do this because the distribution of the measure from column 2 is highly left skewed with a small number of outliers with large values. As reported, the results are similar when this third measure of slave exports is used.

In columns 4–6 of the table, we report the estimate from an ordered Logit model rather than OLS. The OLS estimates assign number values to each response. The ordered logit estimates relax this assumption. The table reports coefficient estimates. Because, these are difficult to interpret, in Table 5 we report marginal effects. Each of the three columns of the table reports the estimates using the three different measures of the impact of the slave trade on an ethnic group. The four entries in a column reports four marginal effects. The first is the marginal effect of the slave export measure on the probability that the respondent would choose “not at all”, when asked whether they trust others of the same ethnicity. As shown, for all measures of slave exports, if an individual's ancestors were heavily impacted by the slave trade, then he or she is more likely to answer “Not at all” or “Just a little” when asked whether they trust co-ethnics, and less likely to answer “Somewhat” or “A lot”.

Because the results are qualitatively identical if equation (1) is estimated using OLS or an ordered logit model, for the remainder of the paper we report OLS estimates. All of the results that we report are robust to using an ordered logit estimation.

An important issue when examining the effects of the slave trades on interpersonal trust in Africa is whether the effects of the slave trades on trust can be disentangled from the effects of the

³This data is from Murdock (1959).

Table 5. Marginal Effects of the Ordered Logit Estimates.

Response to trust of own ethnic group question:	<u>Marginal effects, dP_i/dx:</u>		
	exports (millions)	exports/area	ln exports/area
	(1)	(2)	(3)
Not at all	.143*** (.023)	.003*** (.001)	.032*** (.007)
Just a little	.206*** (.036)	.005*** (.002)	.046*** (.010)
Somewhat	-.093*** (.017)	-.002*** (.0007)	-.021*** (.005)
A lot	-.256*** (.043)	-.006*** (.002)	-.057*** (.012)
Individual controls	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes
Number observations	19,421	19,421	19,421
Number ethnicities	183	183	183
Pseudo R-squared	0.06	0.06	0.06

Marginal effects are reported evaluated at the means. In the estimating equations the unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, indicator variable for male and its interaction with age and age squared, 5 income fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

slave trade on the formation of institutions, which in turn affects trust. Because the slave trade is expected to lead to the deterioration of both institutions and trust, and because trust and good domestic institutions likely reinforce one another, it is extremely difficult to disentangle these two factors. Individuals will trust others more when the rule of law is strong. In this environment, even though people may not be inherently trusting of others, a strong legal system will affect behaviors, which will in turn affect individuals' expectations and trust.

We pursue a number of strategies to try to begin to disentangle the direct trust effect from the trust-through-institutions effect of the slave trades. One strategy is to include country level fixed effects in our estimating equation. This strategy follows Tabellini (2007). If within a country formal institutions are held constant, then country fixed effects will capture differences in the institutional environment faced by individuals. All estimates reported have included country fixed effects. Therefore, to the extent that Tabellini's argument is persuasive, we have already controlled for many institutional differences faced by respondents.

The difference in the estimated slave export coefficient β without and with country fixed effects provides some evidence of how much of the estimated coefficients from Table 4 is working through the 'trust-through-institutions' channel. The estimated coefficients without and with country fixed effects are reported in Table 6. The tables reports estimates for the three other measures of how much respondents trust others. As shown, the estimates do not decrease when fixed effects are included in the estimating equation. Instead, the estimated coefficients increase (although the difference is not statistically significant).

a. Trust in Governments

We also consider the relationship between a history of the slave trade and respondents' levels of trust in various levels of the government: president, the ruling political party, and parliament. The advantage of these trust measures is that within each country the respondents are being asked about their trust of an individual or group that is the same across respondents. This is unlike the questions about inter-personal trust, where for each respondent the group of neighbors, relatives, and co-ethnics being asked about is different for each individual. The actual trustworthiness of the individuals or groups being asked about may be determined in part by the institutional and legal environment. When respondents are asked about national level political groups, the trustworthiness of the object is arguably being held more constant.

Table 6. OLS Estimates of the Determinants of the Trust of Others.

	Inter-group trust		Trust of neighbors		Trust of relatives	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln normalized slave exports	-.078** (.031)	-.101*** (.029)	-.131*** (.031)	-.168*** (.035)	-.126*** (.034)	-.139*** (.036)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Number observations	19,247	19,247	19,493	19,493	19,523	19,523
Number ethnicities	183	183	183	183	183	183
R-squared	0.07	0.11	0.11	0.15	0.08	0.13

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 'living conditions' fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

The OLS estimates for these measures of trust in the government are reported in Table 7. As shown, without or with country fixed effects, an individual's trust of the president, the ruling party, and parliament is negatively correlated with the number of slave exported from the respondent's ethnic group during the slave trade.

The table reports estimates without and with country fixed effects. Including country fixed effects tends to decrease the estimated slave trade effect β by about 30%. Therefore, according to this at least 30% of the relationship between the past slave trade and current mistrust in government may arise because the slave trade adversely affect the development of domestic institutions and governance. Nunn (2008) describes the empirical and historic evidence that supports this adverse effect of the slave trade.

We next turn to the political process at the local level. As discussed, the Afrobarometer also asks respondents about their trust and satisfaction with their locally elected government council. Table 8 reports estimates of (1) using this trust measure as the dependent variable. In the first two columns, the dependent variable is an individual's opinion of the performance of their local government councilor. Individual's were asked the following question whether they approve or disapprove of the way your local elected government councillor has performed his/her job over

Table 7. OLS Estimates of the Determinants of the Trust of the Government.

	Trust president		Trust ruling party		Trust parliament	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln normalized slave exports	-.190*** (.063)	-.135*** (.046)	-.201*** (.057)	-.128*** (.036)	-.183*** (.055)	-.119*** (.035)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Number observations	18,998	18,998	18,675	18,675	18,258	18,258
Number ethnicities	183	183	183	183	183	183
R-squared	0.11	0.22	0.10	0.19	0.09	0.18

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 'living conditions' fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

the past 12 months. Respondents then chose between the following responses: (i) strongly (ii) disapprove, (iii) approve, or (iv) strongly approve. The responses are coded to created a variable that takes on the values 1 to 4, where strongly disapprove is coded as 1 and strongly approve is coded as 4.

In the first column, the dependent variable is the constructed measure of how much each respondent approves of the job done by his or her local government councillor. The estimates show that an individual's approval is adversely affected by a history of past slave exports. This may be because, as reviewed in Section A and as discussed in Nunn (2008), the slave trade resulted in a deterioration of local political structures and networks, which are important for well functioning local politics today. Because the variation in the perceived performance of the local councilor may capture differences in local political institutions, in columns 3 and 4 we re-estimate equation (1) controlling for each individual's approval of the performance of their local government councilor. As a baseline estimate, in column 2 we estimate (1) with trust in local council as the dependent variable. Then in columns 3 we include our constructed measure of the individual's perceived performance of the local councilor. As shown, the estimated relationship between slave exports

Table 8. OLS Estimates of the Determinants of the Trust of Local Government, Controlling for Perceived Performance.

	Performance of	Trust in locally elected council		
	local council	(2)	(3)	(4)
	(1)			
Ln normalized slave exports	-.088*** (.019)	-.128*** (.024)	-.090*** (.020)	-.090*** (.021)
Performance measure			.442*** (.016)	
Performance fixed effects	n/a	No	No	Yes
Individual controls	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Number observations	17,156	17,156	17,156	17,156
Number ethnicities	182	182	182	182
R-squared	0.12	0.19	0.31	0.31

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, indicator variable for male and its interaction with age and age squared, 5 income fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

and trust remains negative and statistically significant, although the magnitude decreases by about 30%. In column 3, we include indicator variables constructed based on the respondents answer to the approval of the local council question. Even controlling for respondents' answer in this more flexible manner, we still estimate a negative and statistically significant relationship between slave exports and trust.

The fall in the magnitude of the coefficients is approximately consistent with the estimated indirect effect of the slave trade on trust through worse political performance. For example, consider the specification with country fixed effects. The indirect effect of slave exports is: $= -.088 \times .442 = -.039$. The magnitude of this effect which is very close to the observed decline

Table 9. OLS Estimates of the Determinants of Trust in Politicians, Controlling for the Provision of Public Goods.

	Political Trust			
	Local Council	President	Ruling Party	Parliament
	(1)	(2)	(3)	(4)
Ln normalized slave exports	-.151*** (.024)	-.142*** (.054)	-.140*** (.041)	-.119*** (.041)
Village level public goods indicators	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Number observations	14,299	14,901	14,663	14,325
Number clusters	159	159	160	160
R-squared	0.19	0.22	0.20	0.19

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 'living conditions' fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

in the magnitude of the slave trade coefficient (.038) when performance is also controlled for. This provides a rough estimate of the magnitudes of the direct effect of slave exports on trust, and the indirect of slave exports through political performance on trust.

The last test that we perform is to control for the existence of public goods in each village. The Afrobarometer survey records for each respondent whether electricity, piped water, sewage, a health clinic, and a school are available in his or her village. Using this information we construct five indicator variables, one for each public good, that each equals one if the respondent's village has access to the relevant public good. We include these as control variables in our estimating equation in an attempt to control for the quality of government services provided to the respondent. The results are reported in column 1 of Table 9. As shown, after controlling for these indicator variables we still find a significant negative relationship between slave exports and trust in the local government. In columns 2 to 4, we estimate the same regressions with the other measures of trust in government as the dependent variable. As shown, the results are similar if respondents' trust these other levels of government are also considered.

B. IV Estimates

To this point we have identified a relationship between individuals' reported levels of trust in others and in the government and the number of slaves from the individual's ethnic group that were shipped overseas during the trans-Atlantic and Indian Ocean slave trades. In this section we turn to the issue of causality.

There are two leading explanations for the relationships we have found. One is that ethnic groups that were inherently less trusting were more likely to be taken during the slave trades. Today these groups continue to be less trusting. As a result, we observe a negative relationship between slave exports in the past and trust today. The known history of the slave trades do not provide strong support for this explanation. The historic accounts that we have reviewed seem to suggest that individuals who were inherently more trusting appear to have been *more* likely to be kidnapped or tricked into slavery, not less likely. (Remember the examples from Koelle and the story of the drumming group from Anlo, Ghana.) This issue is discussed in detail in Nunn (2008).

Although we feel that this explanation for the relationships shown in the previous section is not highly compelling, if it is correct, then this is also a very interesting finding. The evidence would then show that historically transmitted cultural traits, like an individual's level of trust, can persist for centuries in very different economic and social environments. It provides evidence about the persistence of a culture of mistrust.

A second explanation, which we find more plausible, is that ethnic groups that were the most severely exposed to the slave trades became less trusting of others inside and outside of their communities and families. The historical evidence reviewed in Section A indicates that this is a plausible explanation. In this section, we try and distinguish between these two competing hypothesis. Specifically, we try and identify whether the slave trade had a causal impact on trust.

For identification of the causal effect of the slave trade on trust we use instrumental variables (IV). We use the historic distance of each ethnic group from the coast as an instrument for the number of slave of that ethnicity taken during the trades. Using the ethnicity map from Murdock (1959) and ARCGIS software, we first calculate the average distance of the ethnicity from the coast.

The history of Africa's slave trades leave little doubt that the instrument is relevant. Places closer to the coast had more slaves taken. The critical issue is then whether the instrument satisfies the exclusion restriction. Specifically, the question is whether an ethnic group's historic distance from the coast is correlated with any other factors (other than the slave trade) which may have

affected how trusting the ethnic group is today.

We expect that the historic distance of an individual's ethnicity from the coast will be positively correlated with the individual's current distance from the coast, and there are many reasons why an individual's current distance from the coast may be correlated with trust. The most obvious channel works through income. As shown in Rappaport and Sachs (2003) locations further from the coast tend to have lower per capita income levels. Studies also find that individuals with higher income have higher measures of reported trust (e.g., Alesina and La Ferrara, 2002; Guiso, Sapienza, and Zingales, 2007). Therefore, through this income channel individuals further from the coast will tend to have lower levels of trust. We find this violation of our exclusion restriction the most likely candidate. We consider this violation in detail below in the context of our IV estimates.

As shown in Table 10, the IV estimates also show a negative and statistically significant relationship between slave exports and trust today. It is useful to think about how the potential violation of the exclusion restriction discussed above will affect the estimates. Given the negative IV estimate of the effect of the slave trade on trust, the concern is that this may be driven by the fact that individuals living further from the coast (who also had ancestors that were less affected by the slave trades), are today *more* trusting. A violation of the exclusion restriction in this direction would result in an IV estimate showing a negative relationship between the slave trade and trust even if one does not exist. However, as discussed, the evidence reviewed above suggests that the income channel discussed suggests that people living further from the coast tend to be poorer and *less* trusting, not more trusting. Therefore, this violation of the exclusion restriction will tend to bias the IV estimate towards zero, rather than inflating its magnitude.

An empirical check of the validity of the exclusion restrictions are reported in Table 11. The table reports the reduced form relationship between the distance from the coast and trust of the locally elected government council. The first four columns report this using the Afrobarometer sample. As shown, there is a strong positive relationship between an ethnic groups historic distance from the coast and their stated level of trust today. According to the point estimates, an increase in the distance measure of 1,000 kilometers increases the trust measure by about .40, which is a significant amount.

In columns 5 to 8, we estimate the same reduced form relationship between distance from the coast and trust using data from the 2003 Asiabarometer. The sample includes the following countries: Japan, South Korea, China, Malaysia, Thailand, Vietnam, Myanmar, India, Sri Lanka, and

Table 10. IV Estimates of the Effect of the Slave Trade on Trust.

	Intra-group	Relatives	Neighbors	Local council
	(1)	(2)	(3)	(4)
Second Stage. Dep var: Trust measure				
Ln normalized slave exports	-.268*** (.085)	-.234*** (0.56)	-.277*** (.064)	-.230*** (.049)
R-squared	0.13	0.12	0.15	0.18
First Stage. Dep var: Ln normalized slave exports				
Historic distance of ethnic group from coast	-.0014*** (.0003)	-.0014*** (.0003)	-.0014*** (.0003)	-.0014*** (.0003)
Individual controls	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Number observations	19,421	19,523	19,493	18,255
Number ethnicities	183	183	183	182
<i>F</i> -statistic	15.87	15.64	15.88	19.23
<i>R</i> -squared	0.68	0.68	0.68	0.69

IV estimates are reported. The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 'living conditions' fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

Table 11. Reduced Form Relationship between Distance from the Coast and Trust in Africa and Asia.

	Trust of Local Government Council							
	Africa				Asia			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Distance from the coast	.0004*** (.00016)	.0004*** (.00013)	.0004*** (.00009)	.0003*** (.00008)	-.0001 (.00009)	-.0002*** (.00007)	.00006 (.00008)	.00006 (.00007)
Individual controls	No	Yes	No	Yes	No	Yes	No	Yes
Country fixed effects	No	No	Yes	Yes	No	No	Yes	Yes
Number observations	20,215	19,864	20,215	19,864	5,409	5,409	5,409	5,409
Number clusters	183	183	183	183	57	57	57	57
R-squared	0.01	0.09	0.16	0.17	0.01	0.12	0.19	0.22

A unit of observation is an individual. The dependent variable in the Asia sample is the respondent's answer to the question: "How much do you trust your local government?". The categories for the answers are the same in the Asiabarometer as in the Afrobarometer. The dependent variable was also constructed in the same manner in both samples. Distance from the coast is measured in kilometers. Standard errors are clustered at the ethnicity level in the Africa regressions and at the location level in the Asia regressions. The individual controls are for age, age squared, an indicator variable for male and its interaction with age and age squared, education fixed effects, and religion fixed effects. *** indicate significance at the 1% levels.

Uzbekistan. In the data, a broadly defined location is given for each respondent. For each location, we calculate the minimum distance to the coast. It is important to note that this distance measure is slightly different than the distance measure used for the Africa sample. In the Asia data it is a measure of the distance from the current location of the respondent to the coast, but in the Africa data it is a measure of the historic distance of the respondent's ethnic group. However, because one concern is that the historic distance may be correlated with the current distance, this is still a meaningful measure to consider. A second difference is that in the Asiabarometer the question is: "How much do you trust your local government?", which is a slight differences in the wording in the Afrobarometer: "How much do you trust your locally elected government council?". The available answers for the two questions are the same, and we construct our dependent variable in the same manner. As well, the same set of control variables is included in both sets of estimates.

The results show no relationship between the distance from the coast and trust in the Asia sample. This result is highly suggestive. In the sample of countries where the slave trade occurred we see a very strong robust positive relationship between distance from the coast and trust.⁴ In Asia, where the slave trade was absent, the estimated relationship between distance from the coast and trust is zero. These results provide evidence that our exclusion restriction is likely satisfied.

⁴If we examine, current distance from the coast and trust a similar relationship is found.

Table 12. Reduced Form Relationship between Distance from the Coast and Trust within Africa.

	Intra-group trust		Trust of relatives		Trust neighbors		Trust local council	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ethnicity distance from the coast _e	-0.0001 (.0002)	-0.0001 (.0002)	-0.0001 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0000 (.0001)	-0.0000 (.0001)
Ethnicity distance from coast _e × Country slave exports _c	.0001*** (.00003)	.0001*** (.00002)	.0001*** (.00002)	.0001*** (.00002)	.0001*** (.00003)	.0001*** (.00002)	.0001*** (.00002)	.0001*** (.00002)
All controls	No	Yes	No	Yes	No	Yes	No	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number observations	20,512	19,421	20,628	19,523	20,590	19,493	20,213	18,252
Number clusters	183	183	183	183	183	183	183	183
R-squared	0.12	0.14	0.12	0.13	0.12	0.15	0.16	0.19

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 'living conditions' fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level. The s.d. of (Ethnicity distance from the coast_e) is 305 and the s.d. of (Ethnicity distance from coast_e × Country slave exports_c) is 1,908.

That is, the results suggest that within Africa, distance from the coast appears to only affects trust through its effect on the number slave exported during the slave trade.

We pursue a similar falsification exercise. Except rather than comparing the reduced form within Africa and outside of Africa we look within Africa. As in Table 11, we estimate the reduced form relationship between ethnicities' historic to the historic coast and trust today within Africa, but we allow this relationship to differ depending on how many slaves were taken from a region in Africa. If a region was heavily raided by slaves, then the relationship between distance from the coast and trust should be much stronger. We implement this test by interacting the country-level slave export estimate from Nunn (2008) with the distance from the coast. The results are reported in Table 12. As shown, for each of our four measures of inter-personal trust, the distance of an ethnicity from the coast is not different from zero and the interaction is positive and statistically significant. This suggests that where there was no slave trade we do not observe a relationship between historic distance from the coast and trust today. It is only in areas that experienced the slave trade that we see this relationship. This provides the same suggestive evidence as when we estimated the relationship inside and outside of Africa. We only see the positive relationship between trust and historic distance from the coast where the slave trade occurred.

An additional strategy that we also pursue is to control for the current distance of each respon-

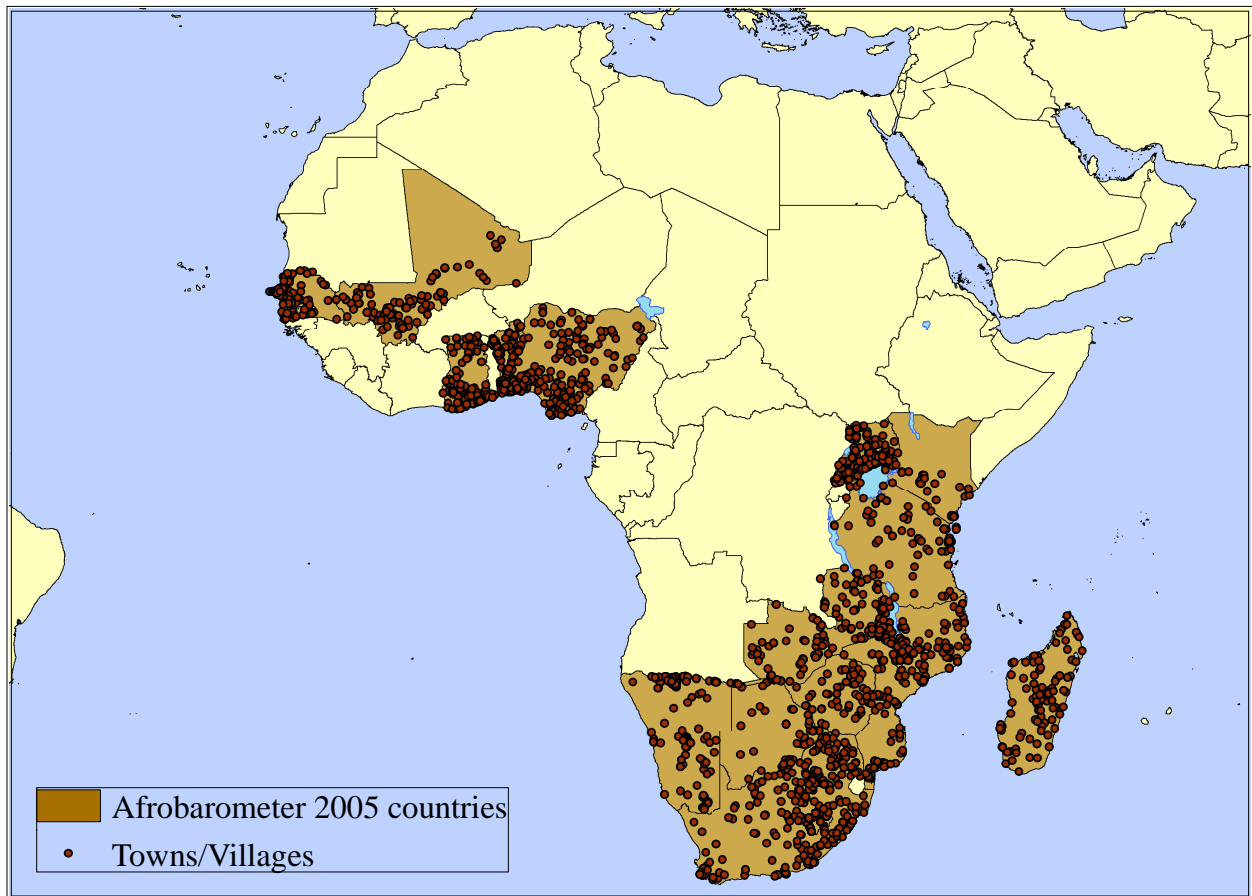


Figure 4. Map Showing the Towns/Villages of the Afrobarometer Respondents

dent from the coast when using the historic ethnic distance as an instrument in our IV estimates. For each respondent we know the town or village that he or she lives in. When the respondent lives in a large city, we actual know which district or portion of the city the individual lives in. The towns of the respondents are shown in Figure 4. In total, there are over 3,000 towns/villages recorded the Afrobarometer. Using ARCGIS we calculate the distance from the town to the nearest point on the coast. This is our measure of how close the respondent is from the coast today. As shown in Figure 5, the contemporaneous distance measure is highly correlated with the historic distance from the coast of each respondent’s ethnic group.

The IV results, controlling for each respondent’s current distance from the coast, are reported in Table 13. As shown, the estimated impact of slave exports on trust changes little. The magnitudes and statistical significance are similar to those reported in Table 10. The current distance of a respondent from the coast enters with a positive coefficient. Based on the results of previous studies, this result is surprising. Since individuals further from the coast are expected to be poorer, and

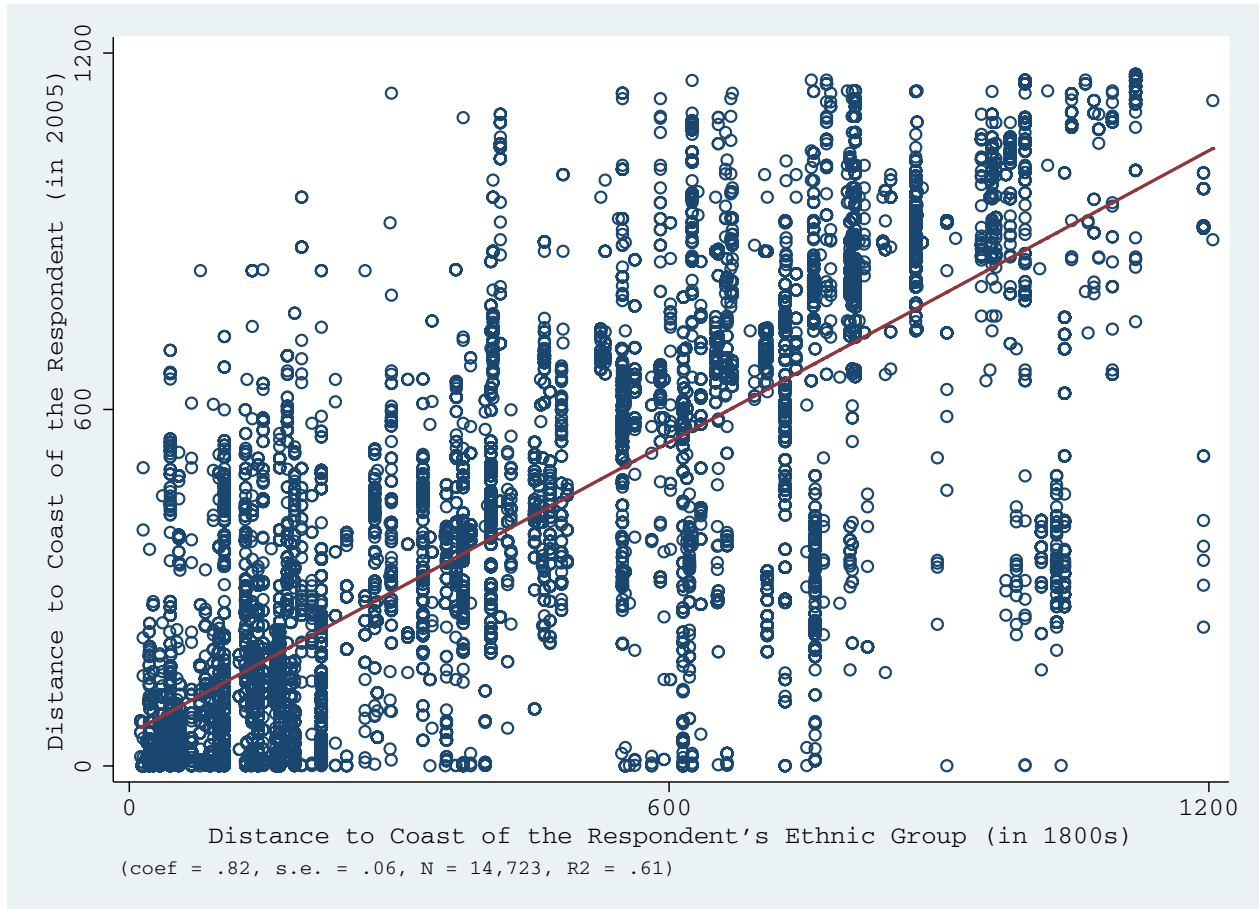


Figure 5. Correlation between the distance to the coast of the respondent in 2005 and the average distance to the coast of the respondent's ethnic group in 1800s.

Table 13. IV Estimates of the Effect of the Slave Trade on Trust, Controlling for Current Distance to the Coast.

	Intra-group	Relatives	Neighbors	Local council
	(1)	(2)	(3)	(4)
Second Stage. Dep var: Trust measure				
Ln normalized slave exports	-.194** (.091)	-.269*** (0.76)	-.270*** (.075)	-.127** (.063)
Current distance of respondent from coast	.0003* (.0001)	-.000002 (.0001)	.0001 (.0001)	.0003** (.0001)
R-squared	0.14	0.13	0.15	0.17
First Stage. Dep var: Ln normalized slave exports				
Historic distance of ethnic group from coast	-.0013*** (.0003)	-.0013*** (.0003)	-.0013*** (.0003)	-.0013*** (.0003)
Current distance of respondent from coast	-.0006*** (.0002)	-.0006*** (.0002)	-.0006*** (.0002)	-.0006*** (.0002)
Individual controls	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Number observations	13,277	13,340	13,322	12,343
Number ethnicities	173	173	173	172
F-statistic	7.21	7.20	7.16	7.62
R-squared	0.68	0.68	0.68	0.69

IV estimates are reported. The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 'living conditions' fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

since lower incomes reduce trust, then we would expect distance from the coast to be negatively correlated with trust. Instead we find a positive coefficient. Although the explanation for this is not central to this paper, it may be the result of a non-negative relationship between distance from the coast and income. As shown by Nunn and Puga (2007), because of Africa's unique history, the relationship between geographic characteristics and income can be very different inside of Africa than they are outside of Africa.

C. Exploring the Consequences of Mistrust: Civic Engagement and Vote-Buying

Having provided evidence of a causal relationship between exposure to the slave trades and trust today, we now examine the potential consequences of lower trust. Specifically, we examine whether there is evidence that trust affects the way individuals participate in the political process, as measured by whether they attend local council meetings, contact a local councillor about a problem, or feel that violence is sometimes justified.

The dependent variable in the first two columns of Table 14 is a quantification of respondents' answers to the following question: Do you attend community meetings (check on the exact wording). Respondents answered: (i) no, would never do this, (ii) no, but would do if had the chance, (iii) yes, once or twice, (iv) yes, several times, or (v) yes, often. Their answers were coded into a variable that took on the values 0, 1, 2, 3, 4. The value 0 corresponds to the first category and 4 to the fifth category. As shown in the table, the higher an individual's trust in the local council, the more likely he or she is to attend local community meetings. As shown in the second column, this remains true even after controlling for the individual's satisfaction with the performance of the local council.

In columns 3 and 4 of the table, the dependent variable is based on respondents' answer to the following question: How often do you contact your local government councillor? The respondent's answer: (i) never, (ii) only once, (iii) a few times, and (iv) often. The responses were coded in a variable taking on the values 0, 1, 2, and 3. As shown, respondents that were more trusting of their local council were more often

The results of Table 14 show that respondents that trust their local councillors more, contact their local councillor more often. Again, this result is robust to controlling for individuals' perceived performance of their local council.

The final outcome considered is each respondent's attitude towards political violence. The respondents were given two statements: (A) "Violence is never justified in politics today", and (B) "In this country, it is sometimes necessary to use violence in support of a just cause". Respondents were then instructed to choose one of the following responses about the extent to which they agree or disagree with the two statements: (i) agree very strongly with A, (ii) agree with a, (iii) agree with b, or (iv) agree very strongly with B. Respondents were also allowed to answer that they agree with neither, or that they do not know. We omit observations that chose one of the last two responses, and construct a measure that takes on the values 1, 2, 3, and 4, each number corresponding to (i),

Table 14. The Relationship Between Trust and the Behavior of Individuals

	Attend a meeting		Contact local councillor		Feel violence is sometimes justified			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trust local council	.057*** (.013)	.044*** (.012)	.043*** (.008)	.022*** (.008)	-.039*** (.008)	-.035*** (.009)		
Local council performance		.038*** (.013)		.060*** (.013)		-.013 (.011)		
Trust President							-.077*** (.009)	-.046*** (.010)
President performance								-.068*** (.012)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number observations	17,093	17,093	17,124	17,124	16,423	16,423	17,578	17,578
Number ethnicities	182	182	182	182	181	181	181	181
R-squared	0.18	0.18	0.16	0.16	0.07	0.07	0.07	0.07

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, a gender indicator variable and its interaction with age and age squared, 5 income fixed effects, 10 education fixed effects, 20 religion fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The district ethnicity controls include a measure of ethnic fractionalization at the district level and a measure of the share of the population of the ethnic group of the respondent. *** indicates significance at the 1% level.

(ii), (iii) and (iv), respectively.

As shown in columns 5 and 6, individuals that trust their local councillor more are less likely to feel that violence is sometimes justified. Similarly, columns 7 and 8 show that respondents that trust the president less are also more inclined to feel that violence is sometimes justified.

The results Table 14 show that different ethnic groups have different levels of trust for local and national politicians, and that some of these differences are driven by their different experiences during the slave trades. Politicians may take these different levels of in trust into account when making decisions. For example, the dominant strategy often employed by politicians is to make campaign promises to try and persuade voters that when in office they will follow through on the campaign promises. However, if voters have inherently low levels of trust towards candidates, then candidates may rationally foresee that voters will not be persuaded by these promises. As a result politicians may be forced to pursue an alternative strategy to obtain votes, such as the exchange of up-front favors and gifts for votes, i.e. clientelism. We examine whether the data support this possibility. Specifically, we test whether politicians' giving of gifts up-front in exchange for votes is correlated with the trust of voters.

In practice, politicians' decisions of whether to give gifts for votes are not made on an individual by individual basis. That is, a politicians cannot observe the level of trust of each individual, and therefore they cannot condition their actions on this. Instead, politicians only have a general sense of the level of trust that certain groups of people have in them. These groups may be certain ethnic groups of people living in certain regions of the country.

Because the relevant unit of analysis is something much larger than the individual, when examining the data we aggregate our up to the district level. The results are similar if the data are aggregated to other levels, such as the city or ethnicity level.

Our dependent variable of interest is a measure of whether election incentives were offered to the respondent in the last election. Respondents were asked the following question: "And during the <year> election, how often (if ever) did a candidate or someone from a political party offer you something, like food or a gift, in return for your vote?" Respondents answered either: (i) never, (ii) once or twice, (iii) a few times, or (iv) often. From these responses we code a variable that takes on the values 0, 1, 2, or 3.

Estimation results are reported in Table 15. The same set of control variables as before is used, except now district averages are used rather than individual measures. In columns 1 to

3, we examine whether individuals' trust in political figures affects whether election incentives are offered. The results in columns 1 and 2 show that a district's average level of trust in the president and its average level of trust in the local council are both negatively correlated with election incentives being offered.

Of interest is the fact that trust in the president appears to be more highly correlated with the giving of election incentives. This is consistent with intuition, since it is trust in national level political figures, not local level political figures, that should matter. In the third column, we examine this potential difference further by including both measures in the estimating equation. As shown, the coefficient for trust in local council becomes insignificant, while the coefficient for trust in the president remains essentially unchanged. One explanation for this finding is that individuals have different levels of trust for local and national politicians. Since the question is about clientelism in the previous *national* election, it is reassuring that the form of trust that is important is trust in the *national* political figure.

In columns 4 to 6, we undertake a similar exercise, looking instead at intra- versus inter-group trust. The results here are similar to the findings when looking at trust of the local council versus trust of the president. Trust of those most familiar and closest to the respondent (intra-group trust), and trust of those less well known and further from the respondent (inter-group trust) are both negatively correlated with clientelism, but it is inter-group trust that appears to matter most.

5. Conclusions

This paper provides empirical evidence suggesting that low levels of interpersonal trust and trust in political institutions in Africa can be traced back to the legacy of the slave trade. In particular, we find that trust in relatives, neighbors, and co-ethnics is adversely affected by the slave trade. We also find evidence consistent with the hypothesis that intrinsic trust in government, civil engagement, tolerance of violence, vote-buying are also affected by the intensity of the slave trade. Given the centrality of trust for development, governance and democracy, our results indicate that coping with legacy of the slave trade at the individual and group levels should be part of any reasonable development strategy in Africa.

At a broader level, our study illustrates a way which a shared tragic group experience such as the Holocaust and the Soviet Red Terror affect intra group cohesion. Presumably this would depend on whether the external threat are entirely out-groups or are also in-groups members, as

Table 15. The Relationship Between Trust and the Behavior of Politicians

	Dep var: Election incentives offered					
	(1)	(2)	(3)	(4)	(5)	(6)
Trust president	-.136*** (.026)		-.136*** (.029)			
Trust local council		-.071*** (.029)	-.001 (.033)			
Inter-group trust				-.115*** (.028)		-.144*** (.042)
Intra-group trust					-.069** (.030)	.041 (.044)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number observations	1,151	1,151	1,151	1,151	1,151	1,151
R-squared	0.30	0.30	0.30	0.29	0.29	0.30

A unit of observation is a district. The individual controls are district level averages of the age, age squared, as well as the proportion of the respondents that fall into each income category, education category, and the fraction of respondents that live in an urban location. The ethnicity controls include district level averages of the respondents' ethnicity based historic geographic measures of the environment of their ethnicity. The measures include the land's terrain ruggedness, its distance from the coast, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. *** indicates significance at the 1% level.

well as how the victims learned to cope with the consequences of the tragedy. Along these lines, one may argue that while the Holocaust may have had opposite effects on intra-group cohesion and trust compared to the slave trades, but that Soviet Red Terror may have had similar effects to the slave trade.

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