

# 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 the level interpersonal trust, and trust in local institutions. We find that the number of slaves taken from an ethnic group between 1400 and 1900 is negatively correlated with how much individuals from that group trust others, especially those closest to the respondent, such as co-ethnics, relatives, and neighbors. A history of slaving is negatively correlated with trust of governments, and this effect is stronger for local governments than for national governments. This is true even controlling for individual's perception of government's performance. We confirm that the effect of slave exports on trust is causal by 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.

Key words: Trust; Slave Trade

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), and for political institutions (e.g. Warren, 1999; Putnam, 2000). In these studies, trust is viewed as an “optimistic expectation or belief regarding the behavior of others”.<sup>1</sup> Trust arises either from repeated interpersonal interactions or from a superior knowledge about the social environment in which one lives (Platteau, 1994). It enables economic agents to engage in mutually beneficial market transactions and warring factions to sign peace agreements and communities to invest in local public goods.

Given that trust is central to economic and political development, it is important to understand its determinants. In a recent paper, Alesina and La Ferrara (2002) use data from US localities to identify three strong 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. In another study that uses data from 64 countries, Bjornskow (2006) finds a strong and negative correlation between generalized trust on one hand, social polarization, ethnic diversity and communist legacy on the other.

An important dimension of the debate on determinants of trust is the role of historical factors. The dominant view expressed in Fukuyama (1995) and Putnam (2000) is that trust originates from shared values that are crucially shaped cultural heritage. Others point to evidence suggesting that trust is crucially affected by current experiences in the form of information flows, and organization membership and risk-sharing relationships (Fisman and Khanna, 1999; Shapiro, 1987). In line with the “trust-as-historical-residue” hypothesis, 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.

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 slave trades on the level interpersonal trust, and trust in local institutions. Because of the manner in which slaves were captured, the effects of the slave trade permeated to the core of the family and local communities within Africa. Although, early

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<sup>1</sup>Gambetta (1988) writes: “when we say we trust someone or someone is trustworthy, we implicitly mean that the probability that he will perform an action that is beneficial is high enough for us consider in some form for cooperation with him. Correspondingly, when we say that someone is untrustworthy, we simply that probability is low enough for us to refrain from doing so.”

in the Atlantic slave trade, slaves were taken primarily through state organized raids and warfare, over the next 400 years, 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 selling friends into slavery (Koelle, 1854; Hair, 1965), of family members selling relatives into slavery (Piot, 1996), and members of the same community kidnapping the children of others.

There is strong anthropological evidence suggesting that the memories of the slave trade have been preserved through oral traditions, rituals and historical imagination in contemporary Africa. Shaw (2004, p. 3) indicates that slave trade is made vividly present in Sierra Leone to the point where, for example money and commodities are linked to an invisible city of “witches whose affluence was built on the theft of human lives”. 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.

There are also elements of 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). 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.

Despite these examples, we have no empirical evidence of the long-term effects of the slave trades on interpersonal trust. This paper, using survey data on individuals’ trust of others, tests 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 different aspects 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 a different ethnicity (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 nega-

tively correlated with how much individuals in that group trust others. Perhaps surprisingly, we find that the slave trade has as strong an effect, if not a stronger effect on the trust of others that are close to the respondent, such as others within the same ethnic group, relatives, and neighbors. This initially surprising result 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 political environment. 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.

One explanation for these findings is that through a culture of mistrust, the slave trades have had an adverse effect on both the economic environment (due to low trust of those closest to you) and the political environment (due to an inherent mistrust of local government). An alternative explanation 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. The core issue concerning the validity of the instrument is whether an ethnic group's distance from the coast affects trust through channels other than the slave trade. We show that in other parts of the world, there is no relationship between distance to the coast and trust.

The most likely reason why the exclusion restriction may fail is that distance from the coast tends to be positively correlated income. Locations closer to the coast tend to be richer (Rappaport and Sachs, 1999). Other studies have shown that income tends to be positively correlated with measured levels of trust. Therefore, through this income channel distance from the coast will be negatively correlated with income and negatively correlated with trust. This will bias the IV

coefficient towards zero.

Our IV results confirm our OLS estimates. In addition, consistent with the direction of the endogeneity bias, we find that the magnitude of the IV estimates are larger than the OLS estimates.

## **2. Theoretical Framework**

Why would slave matter for trust in contemporary Africa? What is the mechanism of intergenerational transmission of mistrust in African societies? As we mentioned earlier, some methods of enslavement (e.g. 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, as well as 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 well, 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 historic process is consistent with models of the evolution of cooperation developed in 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 effect 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.

The inter-play between institutions and trust is a subject that we address empirically in Section ??.

### 3. Historical Background

The most glaring potential impact of the slave trade arises from the violent and deceitful manner in which slaves were forced and tricked into slavery. 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. Because the sample is of slaves taken in the Atlantic slave trade at its end, it is not representative of the manner in which slaves were taken during the entire slave trade. Earlier in the slave trade, slaves were more likely to be captured in raids and wars. This is also true of slaves taken in the other slave trades. However, given our analysis here the manner of enslavement at the end of the trans-Atlantic slave trade may be what is most relevant for our analysis.

**Table 1.** The Method of Enslavement of Koelle's Informants

Manner of Enslavement	Percentage
War/Raiding	25.7%
Kidnapped	38.2%
Judicial process	16.7%
Sold by relatives or friends	19.4%

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*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. The category 'Sold by relatives or friends' includes slaves that were sold into slavery, but it does not indicated by whom.

The most common manner of enslavement was for individuals to be taken in kidnappings. Just under 40% of the slaves in the sample were taken in this manner. The next most common manner of enslavement was during wars and raiding expeditions, with 25% of the slaves captured in this manner. 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 supposed friends. The final category are slaves that entered slavery through the judicial process. The slaves in the sample convicted of witchcraft, adultery, theft, and murder.

From these figures it is clear that a common way for slaves to be taken was through wars and raids. 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.<sup>2</sup> There are numerous historical accounts, documenting this detrimental effect of the slave trade.<sup>3</sup> 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.

The figures also show that not only were slaves taken through conflict between communities, but large numbers were also taken as a result of conflict within communities, where individuals were kidnapped or sold into slavery by acquaintances, friends, or family.

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 internal conflict. Slave merchants and raiders formed strategic alliances with key groups inside villages and states in order to extract slaves. Typically, the alliances were with the younger men of the community who were frustrated by the control of power by the male elders.<sup>4</sup>

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).

Akyeampong (2001) provides the example of a drumming group that was tricked into slavery in Atorkor (Ghana) in the 1950s. 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.

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<sup>2</sup>See for example Inikori (2000).

<sup>3</sup>See Hubbell (2001), Azevedo (1982), and Klein (2001).

<sup>4</sup>See for example the accounts Barry (1992), Inikori (2003), and Klein (2003).

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.

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 have also affected the evolution of trust of others close to you, such as friends and relatives. Historically, many chiefs were also slave merchants and traders, who were often forced to sell their own people into slavery. This environment may have also resulted in an evolution of mistrust for leaders.

During the Atlantic trade, many Africans worked for the Europeans as boatmen, deck-hands, and translators. However, even these highly skilled Africans 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).

## 4. Data Sources and Description

### A. *Afrobarometer Data*

The Afrobarometer surveys<sup>5</sup> are based on interviews conducted in local languages of a random sample of at a minimum 1,200 people per country. The minimum sample of 1,200 people gives a margin of error of 3% and a degree of confidence of 95%. The Afrobarometer, as of 2005, covers the following 18 countries: Benin, Botswana, Cape Verde, Kenya, Lesotho, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, Tanzania, Uganda and Zambia. While these countries are in many ways a representative sample of African nations, there are a few key dimensions on which they differ from excluded countries (e.g. democracies and civil war experience). However, in terms of basic country characteristics, the data set approximates quite well Africa as a whole. For instance, the average GDP per capita is \$2,988, while the average for all of sub-Saharan Africa is \$2,566<sup>6</sup> - only slightly lower, especially given the \$2,897 standard deviation. The countries in

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<sup>5</sup>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.

<sup>6</sup> Average excludes Equatorial Guinea, which, with a GDP per capita of \$50,200, is a significant outlier.

Afrobarometer sample represent a variety of levels of freedom. Some, like Benin and Ghana, are by most objective measures total democracies. Others, like Uganda, are arguably much less free.<sup>7</sup> The sample represents all of the major colonial powers except Belgium (as nearly every former Belgian colony has experienced recent severe armed conflict.) Our sample has an average population size that is, in both mean and median, slightly higher than that of Africa as a whole, due to our inclusion of Nigeria, Africa's largest country.

Because of data limitations, only a subset of the 18 Afrobarometer countries are in our analysis. For Cape Verde and Zimbabwe, the ethnicity of the respondent was not recorded. Therefore, these countries are not included in our analysis.

This results in 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.

### ***B. Tribe Level Slave Export Data***

Construction of tribe level slave export figures uses 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 - for the period 1400 to 1900.

The country-level estimates of total slave exports are disaggregated into ethnicity level estimates using the ethnicity samples from Nunn (2008), and described in full detail in Nunn (2007). Using the sample of the number of ethnicities of each country sold into slavery each century from 1400 to 1900, the total slave exports are disaggregated into each ethnicity. This yields an estimate of the number of slave taken from each ethnicity in each country in Africa.

This procedure is possible for the trans-Atlantic and Indian Ocean 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

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<sup>7</sup>According to Freedom House, Benin, Ghana and Senegal are ranked high on the list of political rights and civil liberties, while Madagascar, Kenya and Nigeria are considered only "partly free". Uganda is the lowest on the list of political freedom.

Ocean slave trade, a sample of over 21,000 slaves is available, with 80 different ethnicities reported. See Nunn (2008) for details. However, 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. Because of this we restrict our analysis to sub-Saharan countries that were affected primarily by the trans-Atlantic and Indian Ocean slave trades. Given that 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 was found that the impact of the slave trades as a whole is, not surprisingly, 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 wide variety of resources, all ethnicities reported in the primary and secondary sources are matched to the classification scheme use 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 classificatory scheme.

A map of the intensity of the trans-Atlantic and Indian Ocean slave trades are shown in Maps 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 number of slaves taken of that ethnicity during the 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 shown in the maps, are generally consistent with the qualitative evidence on the sources of slaves taken during the trans-Atlantic and Indian Ocean slave trades.

**Table 2.** Overview of Trust of Others

Response	<u>How much do you trust:</u>			
	Your relatives?	Your neighbors?	People from your ethnic group?	People from other ethnic groups?
Not at all	1,151	2,246	2,318	3,774
Just a little	3,142	4,715	5,156	5,953
Somewhat	4,115	5,129	4,983	4,301
A lot	8,763	5,055	4,620	2,872

## 5. Empirical Analysis

### 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. The Afrobarometer provides a number of measures of trust in both the personal sphere and in the political sphere.

Consider first measures of interpersonal trust. The Afrobarometer asks respondents how much they trust relatives, neighbors, those from their ethnic group, and those from other ethnic groups. Respondents choose between: (i) not at all, (ii) just a little, (iii) somewhat, or (iv) a lot. The distribution of responses are summarized in Table 2. A number of characteristics of the responses are notable. First, even when asked about relatives, a non-trivial number of respondents indicate that they do not trust their relatives at all, even more respondents report that they only trust their relatives a little.

Table 3 reports similar figures for trust of 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, the parliament, and their local council.

We begin our analysis by testing whether the slave trades had any effect on individuals’ perception of how much they can trust others. Our baseline estimating equation takes the form:

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

**Table 3.** Overview of Trust of the Government

Response	<u>How much do you trust:</u>			
	The president?	The ruling party?	The parliament?	Local council?
Not at all	2,605	3,425	2,952	3,280
Just a little	3,172	3,525	3,748	3,770
Somewhat	3,275	3,535	4,050	3,902
A lot	7,587	5,874	5,211	4,988

where  $i$  indexes individual respondents,  $e$  ethnic groups, and  $c$  countries. The variable trust denotes the measures of trust reviewed above. As we have seen the respondents choose between (i) not at all, (ii) just a little, (iii) somewhat, and (iv) a lot. From their 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”.  $X_{i,e,c}$  denotes a vector of individual level characteristics that are included as control variables.  $X_e$  denote a vector of ethnic group characteristics. These controls will be described in detail as they are introduced to the estimating equation. Our coefficient of interest is  $\beta$ , the estimated effect of the slave trade on trust today. Because our variable of interest, 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 the equation (1) for intra-ethnic group trust are reported in Table 4. In the first column, estimates of (1) with individual level control variables included only. The individual level control variables included are: an indicator variable for the respondent’s sex, the respondent’s age and age squared, fixed effects for the respondents perceived income relative to others, fixed effects for the educational attainment of the respondent, and an indicator variable for whether the respondent lives in an urban or rural area. 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. 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,

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

	<u>Dep Var: Index of intra-group trust</u>					
	OLS			Ordered Logit		
	(1)	(2)	(3)	(4)	(5)	(6)
Ln normalized slave exports	-.129*** (.043)	-.189*** (.051)	-.162*** (.032)	-.244*** (.085)	-.365*** (.102)	-.326*** (.065)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity controls	No	Yes	Yes	No	Yes	Yes
Country fixed effects	No	No	Yes	No	No	Yes
Number observations	16,709	16,709	16,709	16,709	16,709	16,709
Number ethnicities	161	161	161	161	161	161
R-squared	0.08	0.08	0.15	0.03	0.03	0.06

A unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, income fixed effects, education fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The ethnicity controls include geographic measures of the environment of the historic locations of each ethnicity. The measures include the land's terrain ruggedness, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. \*\*\* indicates significance at the 1% level.

or (v) much better.

The estimated coefficients for the control variables show that trust is decreasing in education and increasing (at a decreasing rate) in age. As well, males and those living in rural (rather than urban areas) report higher levels of trust of others. Individual's perceived income relative to others is uncorrelated with trust.

The second column reports the same estimates with ethnicity level controls included in the estimating equation. These controls are meant to capture factors that affect the historical characteristics of ethnic groups. Based on information on the location of ethnic groups in the 19th century, which is from Murdock (1959), we construct measures of the geographic environment of ethnic groups. The measures we include are: the ruggedness of the land, the proportion of the land that is tropical, and the proportion of the land that is desert. These geographic characteristics may affect how isolated historically an ethnic group was from other ethnic groups and therefore the level of intra- and inter-group trust. Because these geographic characteristics may also be correlated with the number of slaves taken from the group during the slave trade, we include them as controls in our estimating equation. None of these control variables are statistically significant in the estimates.

As reported the estimated coefficients for slave exports are negative and statistically significant. This result is consistent with the slave trades adversely affecting individual's trust of others from their own ethnic group.

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 on the formation of institutions. 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 difficult to disentangle these two. 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 disentangle the trust effect from the institutions effect of the slave trades. The first 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.

Estimates with country fixed effects are reported in column 3 of table 4. Including country fixed

effects causes the magnitude of the estimated coefficient to decrease from  $-.189$  to  $-.162$ . This suggests that part of the relationship between trust and the slave trades may be accounted for by the effect of the slave trades on country level institutions, which affect the trust of its citizens. However, given that the coefficient only decreases by about 15%, this indirect channel appears to be relatively small compared to the total relationship between the slave trades and trust. Even when controlling for the country fixed effects, the relationship remains highly significant.

It is possible that formal institutions vary within a country, possibly at the district level. If this is the case, and the institutional quality is correlated by trust, then part of the estimated  $\beta$  may still be capturing the effect of the slave trades on domestic institutions. We will return to the issue of trying to disentangle institutions from the cultural component of trust below, where we consider how the results change when we control for district fixed effects, to capture institutional differences at this level.

An alternative to constructing a continuous dependent variable and estimating (1) using OLS is to estimate individual's responses using an ordered logit. These estimates are presented in columns 4 to 6 of the table. As shown, the results are qualitatively identical if an ordered logit estimation is used. For the remainder of the paper we report OLS estimates. All of the results are robust to using an ordered logit estimation.

We also consider whether slave exports affected other measures of trust. These estimates are summarized in Table 5. Given that individual's responses about the different trust measures are highly correlated, it is not surprising that slave exports are also correlated with the other measures of interpersonal trust.

#### *a. Trust in governments*

The second strategy that we employ is to consider the determinants of respondent's stated trust for the president, the ruling political party, and the parliament. The advantage of these trust questions 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 of inter-personal trust, where for each respondent the group of neighbors, relatives, etc being asked about is different. As noted, in this environment the actual trust worthiness of the groups may differ across individuals, being determined in part, by the institutional and legal environment. When respondents are asked

**Table 5.** 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	-.109** (.049)	-.124*** (.026)	-.185*** (.060)	-.180*** (.040)	-.170*** (.060)	-.159*** (.041)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Number observations	16,542	16,542	16,774	16,774	16,800	16,800
Number ethnicities	161	161	161	161	161	161
R-squared	0.03	0.12	0.09	0.16	0.06	0.13

A unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, income fixed effects, education fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The ethnicity controls include geographic measures of the environment of the historic locations of each ethnicity. The measures include the land's terrain ruggedness, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. \*\*\* indicates significance at the 1% level.

about national level political groups, the trust-worthiness of the object is arguably being held constant.

The determinants of these trust measures are reported in Table 5. As shown, without or with country fixed effects, an individual's trust of the president, the ruling party, and the parliament is negatively correlated with the number of slave exported from the respondent's ethnic group.

We next consider the political process at the local level. The Afrobarometer also asks respondents about their trust and satisfaction with their local council. Typically, the local council is [–fill in –]. Table 7 reports estimates of this trust measure. In the first two columns, the dependent variable is an individual's opinion of the performance of their local government councilor. Respondents chose between the following responses: strongly disapprove, disapprove, approve, and strongly approve. The responses are coded to create a variable that takes on the values 1 to 4, strongly disapprove is coded as 1 and strongly approve is coded as 4.

The results reported in the first two columns show that individual's perceived performance of their local councilor is adversely affected by the past slave exports. This may be because, as reviewed in Section ??, the slave trade resulted in a deterioration of local political structures and

**Table 6.** OLS Estimates of the Determinants of the Trust of Government

	Trust president		Trust ruling party		Trust parliament	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln normalized slave exports	-.175*** (.062)	-.143*** (.053)	-.188*** (.060)	-.145*** (.043)	-.181*** (.059)	-.124*** (.040)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Number observations	16,298	16,298	16,025	16,025	15,649	15,649
Number ethnicities	161	161	160	160	161	161
R-squared	0.10	0.23	0.10	0.20	0.08	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, income fixed effects, education fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The ethnicity controls include geographic measures of the environment of the historic locations of each ethnicity. The measures include the land's terrain ruggedness, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. \*\*\* indicates significance at the 1% level.

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 to 6 we re-estimate equation (1) controlling for individual's perception of the performance of their local councilor. In column 3 and 5, we re-estimate (1) with trust in local council as the dependent variable. In columns 4 and 6, we also control for the perceived performance of the local councilor. In both specifications, individual's perceived performance of their local councilor is positively correlated with their trust of their local councilor. This relationship is extremely strong and highly significant. Including this variable, decreases the magnitude of the estimated coefficient for slave exports. Without fixed effects the magnitude of the coefficient decreases from  $-.211$  to  $-.160$ , and with fixed effects the coefficient decreases from  $-.164$  to  $-.130$ . However, both coefficients remain highly significant. Even controlling for a measure of the actual performance of the local government, which, as shown in columns 1 and 2, is also affected by the slave trades, slave exports continue to have a negative effect on trust.

The fall in the magnitude of the coefficients is approximately consistent with the indirect effect of the slave trades on trust by affecting actual political performance. For example, consider the

**Table 7.** OLS Estimates of the Determinants of the Trust of Local Government, Controlling for Perceived Performance

	Local Council Performance		Trust Local Council			
	(1)	(2)	(3)	(4)	(5)	(6)
Ln normalized slave exports	-.215*** (.063)	-.163*** (.026)	-.211*** (.063)	-.160*** (.046)	-.164*** (.027)	-.130*** (.022)
Local council performance				.336*** (.028)		.226*** (.017)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	No	Yes	Yes
Number observations	15,232	15,232	14,721	14,721	14,721	14,721
Number ethnicities	160	160	159	159	159	159
R-squared	0.06	0.19	0.06	0.14	0.19	0.22

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, income fixed effects, education fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The ethnicity controls include geographic measures of the environment of the historic locations of each ethnicity. The measures include the land's terrain ruggedness, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. \*\*\* indicates significance at the 1% level.

specification with country fixed effects. The indirect effect of slave exports is:  $= .163 \times .226 = -.037$ , which is very close to the decrease in the coefficient once performance is controlled for: .034. Therefore, 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.

## **B. IV Estimates**

To this point our goal has been to isolate the relationship between an ethnic group's trust and the number of slaves from that ethnic group taken in the trans-Atlantic and Indian Ocean slave trades. We have shown that even controlling the perceived quality of domestic institutions, a strong and robust relationship between trust today and slave exports in the past remains.

Having established this relationship a second issue arises: causality. There are two leading explanations for this relationship. One is that ethnic groups that are inherently less trusting were more likely to be taken during the slave trades. We feel that this is unlikely. If anything, as our historic description in section ?? illustrates, individuals who were inherently more trusting were more likely kidnapped or tricked into slavery, particularly during the trans-Atlantic slave trade. Although we feel that this explanation for the relationships shown in the previous section is unlikely, if this explanation is correct, this is a very interesting finding. The evidence would then show that vertically transmitted traits, like an individual's trust, can be transmitted and persist for centuries. Further, as we will show in section ??, these traits have important economic and political impacts.

A second explanation, which we find more plausible is that ethnic groups that were most severely exposed to the slave trades become less trusting of others inside and outside of their communities and families. In this section, we try and distinguish between these two competing hypotheses. Our core strategy to achieve this is the use of instrumental variables, where the historic distance of each ethnic group from the coast is used as an instrument. Clearly, how far an ethnic group was from the coast was a primary determinant of how severely exposed the society was to the slave trade and ultimately in how many slaves were taken. Therefore, the instrument is relevant. The core issue is whether the instrument satisfies the exclusion restriction. That is, is an ethnic group's historic distance from the coast correlated with any other characteristics which may have affected how trusting the ethnic group is today. For example,...

**Table 8.** 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	-.266*** (.097)	-.265*** (0.70)	-.301*** (.083)	-.261*** (.056)
R-squared	0.15	0.13	.16	0.19
First Stage. Dep var: Ln normalized slave exports				
Distance from coast	-.002*** (.000)	-.002*** (.000)	-.002*** (.000)	-.002*** (.000)
R-squared	0.69	0.69	0.69	0.70
Individual controls	Yes	Yes	Yes	Yes
Ethnicity controls	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Number observations	16,191	16,275	16,253	15,185
Number ethnicities	161	161	161	160

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, income fixed effects, education fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The ethnicity controls include a number of geographic measures of the environment of the historic locations of each ethnicity. The measures include the land's terrain ruggedness, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. \*\*\* indicates significance at the 1% level.

The IV estimates are reported in Table 8. As shown, the IV estimates also find a negative and statistically significant relationship between slave exports and trust.

Checks of the validity of the exclusion restrictions are reported in Table 9. The table reports the reduced form relationship between the distance from the coast and Trust of the local 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 distance of 1,000 kilometers increases the trust measure by about .40, which is a significant amount.

In columns 5 to 8, we implement 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,

**Table 9.** Reduced Form Inside and Outside of Africa

	Trust of Local Council / Government							
	Africa				Asia			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Distance from the coast	.382** (.189)	.419*** (.155)	.399*** (.107)	.348*** (.092)	-.147 (.088)	-.021 (.066)	.055 (.076)	.066 (.081)
Individual controls	No	Yes	No	Yes	No	Yes	No	Yes
Country fixed effects	No	No	Yes	Yes	No	No	Yes	Yes
Number observations	15,185	15,185	15,185	15,185	5,472	5,472	5,472	5,472
Number clusters	159	159	159	159	57	57	57	57
R-squared	0.01	0.07	0.17	0.19	0.01	0.08	0.19	0.20

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 thousands of 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, income, and education. Because the Asiabarometer did not include a measure of whether the respondent lives in an urban or rural location, this control was not included in either the Africa or the Asia regressions. \*\*\* and \*\* indicate significance at the 1% and 5% levels.

and Uzbekistan. In the data, a broadly defined location is given for each respondent. For each location, we calculate the minimum distance from the coast. In columns 5 to 8, we replicate the estimates of columns 1 to 4, but use the data from the Asia barometer. It is important to note that the distance measure is slightly different. In the Asia data, it is a measure of the distance from the current location of the resident, but in the Africa data it is a measure of the historic distance of the 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 Asia barometer the question is: "How much do you trust your local government?" not "How much do you trust your local council?". The possible answers to 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 estimating equations.

The results show no relationship between distance from the coast and trust in the Asia sample. This result is 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. In Asia, where the slave trade was absent, there is a zero relationship. These results provide support that our exclusion restriction is satisfied. That is, that distance from the coast affects trust only through its

influence on the number slave exported during the slave trade.

### *C. Exploring the Consequences of mistrust: Civic Engagement and Vote-Buying*

Having providing evidence of a causal relationship between exposure to the slave trades and trust today, we now examine the 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 a meeting, contact a local councilor about a problem, or feel that violence is sometimes justified.

The dependent variable in the first two columns of Table 10 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 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 councilor? The respondent's answered: (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 10 show that respondents that trust their local council more, contact their local councilor more often. Again, this result is robust to controlling for individuals' perceived performance of their local council.

The final outcome considered is respondents' attitudes towards violence. The respondents were given two statements: (a) violence is never justified (b) violence is sometimes necessary. 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, (iv) agree very strongly with b, and (v) agree with neither. We omit the

**Table 10.** The Effects of Trust on 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	.066*** (.013)	.053*** (.012)	.040*** (.008)	.021*** (.009)	-.043*** (.008)	-.039*** (.010)		
Local council performance		.031*** (.013)		.055*** (.012)		-.005 (.011)		
Trust President							-.078*** (.010)	-.050*** (.011)
President performance								-.069*** (.014)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number observations	15,177	15,177	15,145	14,214	14,496	13,643	15,095	14,632
Number ethnicities	160	160	160	160	158	158	159	158
R-squared	0.17	0.17	0.16	0.16	0.10	0.10	0.11	0.11

The unit of observation is an individual. Standard errors are clustered at the ethnicity level. The individual controls are for age, age squared, income fixed effects, education fixed effects, and an indicator for whether the respondent lives in an urban or rural location. The ethnicity controls include geographic measures of the environment of the historic locations of each ethnicity. The measures include the land's terrain ruggedness, the proportion of the land that is desert, that is tropics, and the prevalence of malaria. \*\*\* indicates significance at the 1% level.

last category and construct a measure that takes on the values 1, 2, 3, and 4, with each number corresponding to the same numbered category.

As shown in columns 5 and 6, individual's that trust their local council more are less likely to feel that violence is justified as measured by our coded variable. Columns 7 and 8 shows similarly that respondents that trust the president less are also more inclined to feel that violence is sometimes justified.

The analysis to this point has shown that different ethnic groups have different levels of trust for local and national politicians, and that much of these differences are driven by their different experiences during the slave trades. Politicians may take these differences in trust into account when making their decisions. One strategy that politicians often employ is to make campaign promises to try and persuade voters that the politician and political party cares about the welfare of its constituents, and when in office will choose policies that are welfare improving. If voters have inherently low levels of trust towards candidates, then candidates may pursue an alternative strategy to gaining votes. An alternative strategy is clientelism, exchanging favors and gifts for votes.

We examine whether the data are consistent with this. We examine whether politicians decisions of whether to give gifts up front in exchange for votes is affected by the reported trust of individuals. In practice, politicians' decisions of whether to give gifts for votes are not made on an individual by individual basis. Politicians cannot observe the level of trust of each individual, and therefore they cannot condition their actions on this. Instead, politicians have a sense of groups of people, possibly of certain ethnicities or living in certain regions, that exhibit less trust towards political actors. Their trust can be displayed a number of ways [examples?]

Because the relevant unit of analysis is something much larger than the individual, when examining the data we aggregate up to the district level. On average each country has ?? districts.

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 11. 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 trust in the local council are both negatively correlated with election incentives being offered. However, 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 differing levels of trust for local versus national political actors. Since the question is about clientelism in the previous national election, it is reassuring that the form of trust that is robustly important is trust of national political figures.

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.

## **6. 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 Trans Atlantic Slave Trade. In particular, we find that, trust in relatives, neighbors, and co-ethnics is the most adversely affected by slavery. We also find that intrinsic trust in government, civil engagement, tolerance of violence, vote-buying are all 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 more basic level, our results shed lights on current debates about the ethnic divisions, social capital and economic growth in Africa. The current findings showing negative correlation between ethnic divisions and public goods provision implicitly relies on the assumption that trust

**Table 11. The Effects of Trust on 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.

is negatively correlated with ethnic distance, and that ethnic identities are exogenous. These results could be undermined by the fact that some historical legacies such as slavery might shape ethnic identities in a way that both lowers intra group trust and evens out intra and inter group trust.

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 perpetrators are mostly out-groups or in-groups members and how the victims learned to cope with the consequences of the tragedy. As a result, one may argue that while the Holocaust and Slave Trade is likely to have had opposite effects on intra group cohesion and trust, the Soviet Red Terror and the Slave trade may have had similar effects.

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