

# Slave Trade, Ancestral Slavery, and Mistrust in Africa

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## Abstract

The legacy of the slave trade has had a detrimental long-term impact on African development, notably by engendering a culture of mistrust. In this paper, we revisit this line of inquiry by examining the complementarity between ancestral slavery norms and the European slave trade. We find that the slave trade contributed to a culture of mistrust only in societies with ancestral slavery. Instead, in societies where ancestral slavery was absent, the slave trade did not lead to lower trust. This finding is consistent with the mechanism that those accustomed to slavery within their own societies may have been more inclined to sell out their own to meet the increased demand from the European slave trade. We use several alternative strategies and falsification tests to show that the baseline correlations are not spurious. This study enhances our understanding of the persistence of historical factors, by shedding further light on how the slow evolution of cultural norms (shaped by ancestral slavery) may interact with exposure to a historical shock (the Atlantic slave trade), ultimately influencing contemporary attitudes.

*Keywords:* Slave trade; ancestral slavery; mistrust; African development.

*JEL code:* J15, N57, Z13.

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# 1 Introduction

Trust is recognized as a key driver of economic development.<sup>1</sup> With the goal of unraveling the sources of African underdevelopment,<sup>2</sup> scholars have explored the role of trust in Africa (Nunn and Wantchekon, 2011). Findings suggest that the European slave trade had a negative legacy on African development by creating a culture of mistrust in Africa. More specifically, individuals belonging to ethnicities heavily impacted by the slave trade have lower levels of trust today (Nunn and Wantchekon, 2011).

However, to date, this discussion has ignored the role played by indigenous and ancestral slavery norms that were present in Africa prior to the onset of the European slave trade.<sup>3</sup> Historical literature suggests that indigenous slavery systems played a role in facilitating export slavery, such as the Atlantic slave trade, and that the growth of the Atlantic slave trade also amplified indigenous slavery practices (Klein, 1978; Lovejoy, 2011). Therefore, the interplay between ancestral slavery norms and the European slave trade warrants further examination, and this study seeks to address this gap.

The emergence of a culture of mistrust can be attributed to the historical fact that, as the slave trade progressed, it became increasingly common for individuals to be sold into slavery by those closest to them, including neighbors, friends, and even family members (Hair, 1965; Koelle, Hair, and Dalby, 1854; Nunn and Wantchekon, 2011; Piot, 1996). In such an environment, where the threat of enslavement was ever-present, people had to maintain constant vigilance against the risk of being kidnapped, tricked, and sold into slavery, resulting

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<sup>1</sup> E.g., see Algan and Cahuc (2010); Greif (1993); Guiso, Sapienza, and Zingales (2006); Knack and Keefer (1997); Tabellini (2010), among others.

<sup>2</sup> In the economics literature, there is well-documented interest in the determinants of African development (Acemoglu, Johnson, and Robinson, 2001; Alesina et al., 2003; Alesina, Easterly, and Matuszeski, 2011; Easterly and Levine, 1997; Nunn, 2008; Michalopoulos and Papaioannou, 2013, 2020).

<sup>3</sup> We use the terms “indigenous” and “ancestral” interchangeably to refer to the ethnographic characteristics of societies prior to contact with the Europeans, as argued by Murdock and White (1969).

in a profound lack of trust. Moreover, this mechanism is compounded by a long-standing history of ancestral slavery practices that fostered norms more accepting of the sale of one's own relatives, friends, and neighbors to slave traders. Consequently, the demand shock generated by the trans-Atlantic slave trade might have had differential effects on various regions depending on their ancestral slavery traditions.

Our study focuses on this mechanism, delving into how ancestral slavery practices shaped the impact of the slave trade on trust in Africa. Employing individual trust outcomes from the Afrobarometer Survey, data on the slave trade exposure of ethnic groups from [Nunn \(2008\)](#), and data on the ancestral slavery norms of ethnographic societies from [Murdock \(1965\)](#), we find that the slave trade engendered a culture of mistrust solely in societies where some form of ancestral slavery existed. In contrast, in societies with no ancestral slavery, the slave trade did not lead to lower levels of trust. For example, the present levels of trust for relatives and neighbors in societies with ancestral slavery are 0.14 and 0.16 standard deviations lower, respectively, per standard deviation increase in slave trade, whereas there is no significant effect of the slave trade on trust for those ethnicities where ancestral slavery was absent.

We further break down the influence of various forms of ancestral slavery. Our analysis demonstrates that the contemporary effects of the slave trade on mistrust are primarily driven by ethnicities where ancestral slavery held social significance, as opposed to those where it was in its early stages. Additionally, societies where ancestral slavery was currently present at the time of European contact experienced the most substantial decline in trust due to the slave trade, compared to those where ancestral slavery existed only historically.

Even though our results should ultimately be interpreted as partial correlations, we make substantial efforts to address endogeneity concerns for our parameter estimates. We specifically address concerns of measurement error and also explore the geographic roots of ancestral slavery. Importantly, our results are robust to accounting for the potential influence of contact with Europeans. We conduct a falsification exercise showing that the European slave trade does not significantly predict indigenous slavery. Instead, it is proximity to the ancient

trans-Saharan trade routes that predicts indigenous slavery. Subsequently, we demonstrate that the slave trade detrimentally impacted trust only among ethnicities most exposed to pre-existing ancient slave trade near the trans-Saharan trade routes. We employ the reach of the tsetse fly as an exogenously determined boundary for the extent of these trade routes, along with geographically imposed travel times from these routes. These exercises confirm that the negative effect of the slave trade on trust is specific to regions near the historical slave trade routes of the Sahara and the Red Sea.

Our findings are in line with the scholars who argue that indigenous slavery institutions facilitated export slavery (e.g. Atlantic slave trade) and made societies more susceptible to the temptation of the slave trade ([Klein, 1978](#)). The transformation thesis puts forward that the development of the Atlantic slave trade expanded indigenous slavery practices ([Lovejoy, 2011](#)). Consequently, pre-existing local African slave systems began supplying captives for slave markets outside Africa when the trans-Atlantic slave trade started. This implies that there was complementarity between pre-existing slavery systems and the slave trade, as societies with pre-existing slavery likely had higher supply elasticity in response to the large demand shock of the European slave trade.<sup>4</sup> This view is supported by [Wright \(2007\)](#), who argues that pre-existing slavery institutions transitioned into the trans-Atlantic slave trade to take advantage of market conditions.<sup>5</sup>

Why would exposure to the Atlantic slave trade lead to mistrust specifically in societies with prior exposure to indigenous slavery? Our findings are consistent with the mechanism that individuals accustomed to the presence of ancestral slavery in their own society might be more willing to sell out their own people to slave traders. This tendency could be especially pronounced among local leaders and elites in societies with ancestral slavery, as they would

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<sup>4</sup> It is worth to notice that the annual trans-Atlantic slave exports were orders of magnitude larger than the prior forms of more local slavery (by 20 fold by some estimates) ([Nunn, 2008; Wright, 2007](#)). See also [Figure 1](#).

<sup>5</sup> See [Section 2](#) for more details on how the more local pre-existing slavery institutions responded to the large shock of the European slave trade.

have been already familiar with dealing with slaves and the slave trade. These individuals might have been more inclined to extend the sale of their fellow co-ethnics to slave traders. This could, in turn, help explain why we find particularly low levels of trust in local councils in areas heavily impacted by the slave trade.

From an evolutionary perspective, mistrust of relatives and neighbors could arguably be a beneficial behavioral trait in societies that responded to the increased demand for slaves by kidnapping and selling individuals to slave traders. If the payoff for mistrust was sufficiently high, it could have influenced the long-term evolution of trust within these societies, in line with the literature on cultural persistence (Nunn, 2012; Boyd and Richerson, 1985, 2005), through, for instance, vertical transmission of trust from parents to children (Tabellini, 2008; Guiso, Sapienza, and Zingales, 2008).

In addition, it is well known that different societies responded to the Atlantic slave trade demand in varying ways; while some cooperated with other ethnic groups and built fortifications and hilltop settlements (Klein, 2001; Stilwell, 2014; Nunn and Puga, 2012), others deliberately increased the export of their own people (Wright, 2007; Klein, 2010). Prior to the Atlantic slave trade, Saharan trade markets had existed for about a millennium, and as we mentioned, proximity to these markets predicts ancestral slavery. Similar to the evolution of trust, the presence of slave markets may have favored slavery as an institution, because adopting norms that allowed for kidnapping people might lead to greater payoffs for non-slave members. At the same time, since the Saharan slave trade was much less intense than the Atlantic trade (Figure 1), the relative risk of being forced into slavery before the Atlantic slave trade must have been relatively minor compared to other risks such as disease, warfare or starvation. However, the Atlantic slave trade dramatically increased the risk of being taken as a slave, especially in societies already participating in the Saharan slave trade. This would have increased the evolutionary pressure on trust in these societies.<sup>6</sup>

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<sup>6</sup> Manning (1990) estimates that the slave trades reduced the population of Africa such that, by 1850, it had only half the population it would have had in the absence of the slave trades, which must have had a

**Contribution to the literature**— The literature documents that the levels of trust can be influenced by both long-run<sup>7</sup> and short-run<sup>8</sup> determinants. This paper contributes to our understanding of the determinants of trust in Africa by studying how indigenous and external slavery institutions complemented each other to influence trust. To our knowledge, this is the first systematic exploration of the influence of ancestral slavery and the complementarity between ancestral slavery and the European slave trade on the culture of mistrust in Africa. We anticipate that these findings will stimulate further discussion on the legacy of slavery in Africa.

The existing literature on slavery has explored its effects on long-run development in Africa (Nunn, 2008; Whatley, 2022), industrialization in Britain (Eltis and Engerman, 2000), and productivity across U.S. states (Mitchener and McLean, 2003), among others. Bezemer, Bolt, and Lensink (2014) show that indigenous slavery in Africa also has a negative impact on long-run development. We add to this literature by revealing how indigenous slavery could exacerbate a culture of mistrust in regions exposed to the slave trade. This could partially explain the negative effect found by Bezemer, Bolt, and Lensink (2014).

Section 2 lays out the background on ancestral slavery in Africa. Section 3 describes the data and the empirical approach. Section 4 presents the results. Section 5 concludes.

## 2 Background on Ancestral Slavery in Africa

*[The King of Senegal] supports himself by ordering the kidnapping of many slaves both from his own country and from those of his neighbors. He uses these slaves in*

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dramatic impact on evolutionary pressures.

<sup>7</sup> E.g., slave trade, medieval experience of self-government, historical experiences of cooperation, and early proxies of education and democracy (Guiso, Sapienza, and Zingales, 2008, 2016; Nunn and Wantchekon, 2011; Tabellini, 2010).

<sup>8</sup> E.g., socioeconomic factors, recent traumatic experiences, discrimination, income shocks, the flow of information and communication, and war and violence (Alesina and La Ferrara, 2002; Ananyev and Guriev, 2019; Bellows and Miguel, 2008; Fisman and Khanna, 1999).

*many different ways, but above all to cultivate various landholdings made over to him. Moreover, he sells many of them to the Sanhaja Berber and Arab merchants who turn up there with horses and other goods; and he has also begun to sell them to the Christians since they started transacting business in those lands.*

- Alvise Cadamosto, 1455–56

Domestic slavery and the slave trade have a long history in Africa going back at least a millennium before the onset of the trans-Atlantic slave trade (Wright, 2007). Slavery was an ancient practice and an integral form of power relation across the continent, as in the rest of the world (Eltis et al., 2021). The roots of slavery go back to between 3000 BCE and 500 CE, following the consolidation of early African societies into states, as evidenced by archaeological remains (Stilwell, 2014). Both slavery and slave markets existed in one form or another before the arrival of the Europeans in the 15th century (Falola and Heaton, 2008; Klein, 2010; Stilwell, 2014; Wright, 2007), particularly in environments with high agricultural suitability and population density that enabled the formation of centralized societies (Stilwell, 2014).

The history of African slavery is multifaceted, encompassing various forms, including bondage, forced labor, and chattel slavery.<sup>9</sup> For instance, in the Hausa states and Bornu in Nigeria, bondage had a long history up until the trans-Atlantic slavery began and it persisted alongside more intensive forms of slavery even during the trans-Atlantic slave trade (Falola and Heaton, 2008). In the Songhai empire to the west, thousands of slaves toiled in irrigated plantations along the Niger river basin prior to European slave traders' arrival (Klein, 2010). Klein (2010) notes that “*although large-scale commercial use of slaves was limited, the use of slaves within most African societies was widespread. The existence of this large number of slaves meant that a lively internal slave market and intra-continental slave*

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<sup>9</sup> One such categorization is captured by the ancestral slavery variable v70 in the Ethnographic Atlas, our main variable of interest. See histogram in Figure A.1 and geographic distribution in Figure A.2

*trade existed. Thus, a dual slave trade came into existence well before the opening of the West African–Atlantic routes*".<sup>10</sup>

In the early history of slave *trade*, slaves from Sudan, northeast Africa and the Indian ocean were known to be present across the Roman Empire (Eltis et al., 2021) and the Nile Valley as early as 2600 BCE. Both internal and international slave markets had already established themselves in Africa prior to the trans-Atlantic slave trade (Klein, 2010; Wright, 2007). The trans-Saharan trade, the most dominant one before the trans-Atlantic trade,<sup>11</sup> traces its origins to at least the 2nd century AD (Fage, 1969; Klein, 2010), with its roots in the Sahel belt (Falola and Heaton, 2008; Segal, 2002). This trade route was suitable for slave trade for several reasons. First, there was high demand for slaves from distant regions. Second, there was an ample supply of slaves as a result of ongoing warfare in the Sahel belt. Third, trading of goods through the Sahara was risky due to the risk of losing all goods (typically luxury items like gold, salt, and textiles) if a camel perished. In contrast, slaves could traverse the desert themselves (Falola and Heaton, 2008), often even carrying additional merchandise (Wright, 2007). Consequently, slaves emerged as the predominant commodity traded through the Sahara (Segal, 2002), serving as a crucial means for Sahel states to finance their imports from the north (Wright, 2007).

The southward expansion of Islam in 600-1500 led to a dramatic increase in slave trade through the Sahara (Stilwell, 2014), with slaves often procured from the “Sudanic belt”,<sup>12</sup> stretching the south of Sahara across Africa, throughout the Sahel region (Eltis et al., 2021; Klein, 2010; Segal, 2002). The Quran’s prohibition of enslaving fellow Muslims, Christians, and Jews placed added pressure on areas to the south of the *Dar al-Islam*, the border demarcating Muslim and pagan societies (Eltis et al., 2021; Falola and Heaton, 2008; Wright,

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<sup>10</sup>Here the dual trade refers to exports through the north (Sahara) and the east (Red Sea and Indian Ocean) (Klein, 2010).

<sup>11</sup>African slaves were also exported through the Red Sea and Indian Ocean corridors.

<sup>12</sup>Note that in the historical literature, Sudan and Sudanic refers to areas south of the Sahara and not modern day Sudan. From *bilad al-sudan*, meaning “land of the blacks” in Arabic (Eltis et al., 2021; Segal, 2002).

2007). Some of the prominent states engaged in ancestral slave trade in the Sudanic belt before the 16th century were (modern day location in parentheses): the Wolof states (Senegal and Gambia), the Ghana Empire (Mauritania and Mali) followed by the Mali Empire (from Senegal in the west to Niger and Ghana in the east) and subsequently the Songhai Empire (similar location and extent), the Oyo and Benin Empires (Benin-Nigeria), the Kanem-Borno Empire (located around the Lake Chad basin and northern Nigeria and Cameroon), Hausa states (Nigeria), Nubia (upper Nile river basin) and Ethiopia (Eltis et al., 2021; Falola and Heaton, 2008; Klein, 2010; Segal, 2002; Wright, 2007).<sup>13</sup>

The introduction of horses and camels intensified slave raids in the further south of the Sudanic belt, targeting decentralized societies to the south of Ghana, Mali and the other Sudanic states (Eltis et al., 2021; Falola and Heaton, 2008; Klein, 2010; Segal, 2002; Wright, 2007). The Borno and Hausa states in modern Nigeria sought non-Muslim slaves further south (Falola and Heaton, 2008), while the Kanem Empire conducted slave raids south of the Lake Chad region (Wright, 2007). Despite limitations imposed by the tsetse fly to the south of the Sudanic belt, hindering caravans as camels and horses perished to the fly (Klein, 2010),<sup>14</sup> trade extended southwards into the forest zone. The *Jùlá* trade network (Donaldson, 2020), shown in Figure A.4, connected the Ghana and Mali empires with the forested zone south of the savannah (such as the coastal Ife and Benin), serving as the source of many Sahara-traded slaves (Falola and Heaton, 2008; Klein, 2010; Wright, 2007).<sup>15</sup>

The primary methods of slave procurement were kidnapping, followed by war captives, selling by relatives or friends, and judicial processes as a form of punishment (Koelle, Hair, and Dalby, 1854; Nunn and Wantchekon, 2011). In times of hardship, families would sometimes sell their own members. The author of *Hudud al-Alam*<sup>16</sup> reported of “people who steal children

<sup>13</sup>See Figure A.3 for the geographic distribution of these and other pre-colonial states in Africa.

<sup>14</sup>This is close to the 4-8 degree latitudes line used later in our analysis.

<sup>15</sup>Much of this region lies north of 8° N and within the distance cutoffs used in the analysis in Tables 6 and A.3.

<sup>16</sup>A 10th century Persian geography book.

*from each other to sell them to foreign merchants*”. Al-Idrisi, a 12th century geographer, described how people were seized by their neighbours “*through various tricks*” (Wright, 2007). Stilwell (2014) notes that in matrilineal Kabre society in northern Togo, the maternal uncle sometimes sold off his sisters’ children before the father could assert his claim. The Portuguese explorer Cadamosto, as mentioned in the introductory quote, reported that the people of Senegal mistrusted their leaders, as they “*would seize their wives and children to sell them as slaves for every slight failing*” (Wright, 2007).

The estimated volume of the trans-Saharan slave trade spans from five to nine million individuals over the course of more than a millennium (Eltis et al., 2021; Falola and Heaton, 2008; Wright, 2007). Figure 1 presents estimated annual slave exports through the Sahara and the Atlantic Ocean, based on three independent sources cited by Wright (2007) and data from The Trans-Atlantic Slave Trade Database (2019). Wright (2007) provides a slightly lower estimation for the Saharan trade, suggesting that at its peak, it reached no more than 5,000 slaves per year. In contrast, the trans-Atlantic trade, with over 100,000 exported slaves per year at its peak, was more than *20 times* as intense.

Portugal initiated the trans-Atlantic slave trade while originally having set out for the west coast of Africa in search of gold (Lovejoy, 2011). These early explorations offer significant evidence of pre-existing slavery practices. Alongside Cadamosto, Portuguese explorer Pacheco Pereira reported in 1500 that the Benin kingdom engaged in warfare against its neighbors, capturing their soldiers as slaves (Fage, 1969). The first slave trade activities of the Portuguese in fact involved kidnapping and *selling* slaves to African traders in Lagos during 1444-1445 (Klein, 2010), followed by an extended period of trade with African states along the west coast (Lovejoy, 2011). As Klein points out: “*the whole complex of enslavement practices from full-scale warfare and raiding of enemies to judicial enslavement and taxation of dependent peoples had come into use and would easily be adjusted to the needs of the Atlantic slave trade when this came into existence in the early fifteenth century*”. Hence, Portugal integrated into a pre-existing network of Muslim traders and African kingdoms

(Klein, 2010; Wright, 2007).

Gradually, societies reoriented their inland markets towards the coast to meet the increasing demand from European slave traders (Klein, 2010), with caravans sometimes diverting to the coast (Wright, 2007). In some cases, this shift towards coastal trade did not occur until the 18th century, as observed in the case of Hausa state in modern Nigeria (Falola and Heaton, 2008). It was not until the 17th century that the trans-Atlantic slave trade surpassed the trans-Saharan slave trade in export intensity (Klein, 2010; Wright, 2007), as depicted in Figure 1.

While slavery did exist in other parts of Africa, such as the Great Lakes Region, these areas were less interconnected with international trade networks, and slaves were not as widely utilized in production as in the northern regions (Stilwell, 2014). Despite the longstanding practice of slavery, there was a relative absence of slave markets in these areas. Linguistic analysis in this region indicates that the term for “captive” dates back at least 2500-3000 years (Stilwell, 2014), while words indicating traded slaves seem to have entered the language after the arrival of Europeans (Vansina, 1989). The Kingdom of Kongo (Congo) had no connections to the Saharan trade before the Portuguese arrived (Klein, 2010), and the use of slave labor in this region was less intense before the onset of the Atlantic slave trade (Stilwell, 2014).<sup>17</sup> Despite this, the Congo and Angola region was to become the epicenter of the trans-Atlantic slave trade and the largest exporter of slaves among all African regions (Nunn, 2008). As Klein (2010) notes: “*In the region from Senegambia to the Cameroons, and in East Africa, it was less a revolutionary event than in the Central African regions of the Congo and Angola. This had to do with the prior existence of long-term trading arrangements across the Sahara, which reached as far south as the Bight of Biafra in the west and intimate long-term relationships with African trading communities along the entire Eastern African shoreline.*”

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<sup>17</sup>This region lies to the south of the 4° and 8° latitudes.

### 3 Data and Empirical strategy

We employ five measures of trust outcomes that come from the individual level Afrobarometer Survey Round 3 of 2005, following [Nunn and Wantchekon \(2011\)](#). These measures are: trust of relatives, trust of neighbors, trust of local council, intra-group trust, and inter-group trust.

The baseline measure of European slave trade intensity comes from [Nunn \(2008\)](#). This is the number of slave exports normalized by area of land inhabited by the ethnic group, defined as  $\ln(1 + \text{exports}/\text{area})$ .

To identify whether ancestral slavery existed in a given society, we use the Ethnographic Atlas of Murdock, which contains data on the characteristics of ethnographic societies around the world prior to industrialization or European contact ([Murdock, 1965](#); [Alesina, Giuliano, and Nunn, 2013](#); [Giuliano and Matranga, 2021](#)). The variable “Type of Ancestral Slavery” (variable *v70*) in the Ethnographic Atlas reports the type of slavery in a society prior to European contact as one of the following four categories: i. absent; ii. incipient or non-hereditary; iii. reported but type not identified as either hereditary or nonhereditary; and iv. hereditary and socially significant slavery.<sup>18</sup> If mistrust was influenced by friends, relatives, and neighbors turning on each other as demand for slaves increased, this would arguably be more prevalent in societies where local slavery already existed and was more commonplace. Thus, we would expect the European slave trade to have a greater effect on mistrust in these societies.

We first define an *Ancestral slavery* indicator that equals one if any type of ancestral slavery was prevalent in a society and zero if it was reported as absent. We match the ancestral slavery variable in the Ethnographic Atlas to slave trade dataset using the name of each ethnicity as given by [Murdock \(1965\)](#). We successfully match 99% of the original sample to the Ethnographic Atlas, which decreases to 85% after accounting for missing data

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<sup>18</sup>See Figure A.1 in the Online Appendix for a histogram of the categories of ancestral slavery, and the map in Figure A.2 for the geographical distribution across Africa.

in the ancestral slavery variable.<sup>19</sup>

Our baseline estimating equation is as follows.

$$\begin{aligned} Trust_{i,e,d,c} = & \alpha_c + \beta Slave\ Trade_e + \delta Slave\ Trade_e \times Ancestral\ Slavery_e \\ & + \gamma Ancestral\ Slavery_e + \mathbf{X}'_{i,e,d,c} \boldsymbol{\Gamma} + \mathbf{X}'_{d,c} \boldsymbol{\Omega} + \mathbf{X}'_e \boldsymbol{\Phi} + \varepsilon_{i,e,d,c} \end{aligned} \quad (1)$$

where  $i$  denotes individuals,  $e$  ethnic groups,  $d$  districts and  $c$  countries.  $Trust_{i,e,d,c}$  denotes one of the five trust measures. We account for a number of controls at various disaggregation levels (as will be clear when we discuss the results). Standard errors,  $\varepsilon$ , are adjusted for two-way clustering at the ethnicity and district levels. This specification is similar to that of [Nunn and Wantchekon \(2011\)](#), which we augment with our indicator variable  $Ancestral\ Slavery_e$  and its interaction with  $Slave\ Trade_e$ . Our parameter of interest is  $\delta$ , which captures the complementarity between ancestral slavery and slave trade. Ultimately, the parameter estimates on our variable of interest should be interpreted as correlations. However, in the subsequent section, we attempt to provide evidence that the correlations we find are not spurious.

To further disentangle the effect of ancestral slavery, we also estimate the effect on trust of each category of ancestral slavery type by replacing the *Ancestral slavery* indicator with the categorical variable  $v70$ . If slave exports impacted trust more in societies where ancestral slavery was present, we would expect to see a larger reduction in trust for ethnic groups where ancestral slavery was socially significant compared to where it was less significant.

Finally, we estimate the effect of the *timing* of ancestral slavery. Variable  $v71$  in the Ethnographic Atlas reports the status of slavery at the time of European contact as either: i. slavery was never practiced; ii. slavery was present in the past; and iii. slavery is currently present.<sup>20</sup> In our next set of regressions, we replace the *Ancestral slavery* indicator with

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<sup>19</sup>See Table A.4 in the Online Appendix for a complete list of matched and non-matched ethnicities.

<sup>20</sup>See Figure A.5 in the Online Appendix for a histogram of the timing of ancestral slavery, and the map in Figure A.6 for the geographical distribution across Africa.

the categorical variable  $v71$ . Again, we would expect a larger reduction in trust for those ethnicities that practiced slavery more recently at the time of European contact rather than for those that practiced slavery only in the past but not any longer.

## 4 Results

### 4.1 Main results

Table 1 presents our main results.<sup>21</sup> First, in columns 1-5, we run regressions of trust outcomes with only the slave trade variable, using our augmented dataset for which the ancestral slavery information in the Ethnographic Atlas is not missing. The estimates with this sample shows that slave trade exposure negatively predicts trust, in line with the findings of [Nunn and Wantchekon \(2011\)](#).

More importantly, columns 6-10 present our novel results from our baseline specification using the *Ancestral slavery* interaction term, for each of the five trust measures as outcomes. Results in columns 6-10 show that when we introduce the ancestral slavery interaction term, the slave trade estimates generally lose significance.<sup>22</sup> The coefficients on slave trade in trust in local council and inter-group trust regressions are even positive now and statistically significant (columns 8 and 10). Crucially, we find that the negative association between the slave trade and mistrust today instead runs fully through the interaction of the slave trade and ancestral slavery. Only in societies where ancestral slavery was present did the slave trade lead to mistrust today. Instead, in societies where ancestral slavery was absent, slave trade is uncorrelated with lower trust. These findings are consistent with the mechanism

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<sup>21</sup>Note that all regressions account for an extensive set of control variables, including 17 country fixed effects, age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, and the share of the district's population that are the same ethnicity as the respondent.

<sup>22</sup>Figure A.8 provides residual plots corresponding to columns 1-10 of Table 1.

that mistrust arose when people turned on each other after the shock of the slave trade, as this would arguably be more common in societies with already prevalent slavery practices. Note also that ancestral slavery on its own does not correlate with mistrust, and only the interaction of ancestral slavery and the slave trade predicts mistrust.

The magnitudes of the interaction estimates are also large. Using the fact that the standard deviation of both the slave trade variable and the trust measures are close to 1, we interpret each interaction estimate roughly as standard deviation changes in observed trust for a one-standard deviation change in the slave trade variable. For example, we find that trust for local council today in societies with ancestral slavery is 0.118 standard deviations lower per standard deviation increase in slave trade, whereas it is 0.176 standard deviations *higher* per standard deviation increase in slave trade for those ethnicities where ancestral slavery was absent.<sup>23</sup>

Perhaps, the positive effects of slave trade on trust in local council and inter-group trust in columns 8 and 10 merit some discussion. What could explain the seemingly counter-intuitive positive and significant slave trade estimates for trust in local council and inter-group trust? One explanation could be that the slave trade increased trust historically in the local council in societies where ancestral slavery was absent, perhaps, because of the efforts by local leaders to coordinate against slave-raids, and this trust persisted over time. We find suggestive evidence that this indeed was the case in many societies. Klein (2001) reviews the literature on decentralized societies' response to slave raids during the slave trade, often the victim of such raids. He finds that many societies built walls, fortifications, complex tunnel networks and hilltop villages to repel against invading slave raids (see also Stilwell (2014) and Nunn and Puga (2012)), arguably efforts that required a significant increase in political and societal coordination by local leaders. In contrast, in tribes where ancestral slavery was a part of the

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<sup>23</sup>In Table A.1, as a robustness check, we rerun our main analysis with the sample of Round 4 of the Afrobarometer from 2008. By and large, our main findings in the paper are supported. In further rounds of the Afrobarometer, the sampling of ethnic groups is problematic as the number of ethnic groups goes down significantly. Hence, they are less comparable and are unsuitable for our analysis.

society, perhaps the local leaders would instead coordinate with the slave traders and sell out their own people, such that people lost trust in the local leaders –hence, the negative and large interaction term in column 8. Furthermore, Klein (2001) and Stilwell (2014) report that slave raids against these societies encouraged collaboration and coordination of defensive efforts between villages and led to confederal arrangements in many areas, hence potentially uniting different ethnic groups and fostering inter-group trust at the local scale.

Next, Table 2 presents our results using the categorical variable of the Type of Ancestral Slavery (variable  $v70$ ) instead of the ancestral slavery indicator, enabling us to separate different types of slavery. We find that the effects of slave trade on mistrust today is generally stronger for those ethnicities where ancestral slavery was socially significant rather than incipient. This difference is most notable for trust in relatives and neighbors, which is consistent with our proposed mechanism: in societies where ancestral slavery was more socially significant, it was likely easier to capture and sell relatives and neighbors. A case in point, Klein (2001) reports that maternal uncles would sometimes sell their sisters' children to slave traders before the father took over custody. Similar to our results in Table 1, slave trade intensity and ancestral slavery types are generally insignificant when including the interaction terms. We again find that slave trade, conditional on having no ancestral slavery, is associated with higher trust of local council and inter-group trust.

Finally, Table 3 reports instead the estimates of interacting slave trade with the *timing* of ancestral slavery (variable  $v71$ ). The results are consistent with our findings in Tables 1 and 2: societies where slavery was currently present at the time of European contact saw the largest reduction in trust due to the slave trade. The estimates for these societies show the most consistent and overall highest magnitudes across the five trust measures, roughly two to three times greater in magnitude than the estimates in columns 1-5 of Table 1, highlighting the important role of ancestral practice of slavery in the deleterious long-run effects of the slave trade.

## 4.2 Addressing endogeneity concerns

In this section, we address endogeneity concerns in several ways.

**Addressing measurement error**— One potential concern is that the ancestral slavery measure from the Ethnographic Atlas might be contaminated by the slave trade exposure itself and ancestral slavery is measured with error. We address this concern in various ways.

First, it is worth to recall that Murdock's purpose in collecting relevant ethnographic information was to capture indigenous cultures and institutions, paying utmost attention to ruling out European influence. For instance, in the Standard Cross-Cultural Sample (SCCS) (as a subsample of the Atlas), Murdock himself talks about the purpose of the SCCS to avoid the acculturative effect of European contact and to capture ethnographic pre-contact characteristics ([Murdock and White, 1969](#)). The Atlas is ultimately an effort to code, categorize and compile ethnographic information capturing life prior to first contact with Europeans, as argued by multiple studies ([Murdock and White, 1969](#); [Gennaioli and Rainer, 2007](#); [Alesina, Giuliano, and Nunn, 2013](#); [Michalopoulos and Papaioannou, 2013](#)). Furthermore, it is also important to point out that ancestral slavery practices as recorded in the Ethnographic Atlas cannot possibly correspond to the contemporary conditions of the date of observation by ethnographers, since, by the time of the collection of these data, slavery was already made illegal throughout much of the continent.

Moreover, when looking at the detailed slave trade records, we find that, of the 186 surveyed ethnicities, 83 ethnicities have no records of Atlantic slave exports. Out of these 83, 44 are nevertheless recorded in the Ethnographic Atlas as having practiced ancestral slavery. This confirms that the Atlantic slave trade was not a necessary condition for ancestral slavery institutions to arise.

Importantly, we carry out a falsification exercise to test whether the slave trade predicts ancestral slavery, following the instrumental variable strategy of [Nunn and Wantchekon \(2011\)](#). We use the historic distance of each ethnic group from the coast as an instrument

for the number of slaves taken during the slave trade. In columns 1-2 of Table 4, first stage results clearly show that distance from the coast predicts slave trade. However, in columns 3-4 (reduced form), we see that the distance from the coast has no predictive power for ancestral slavery. Finally, in columns 5-6, we show that the instrumented slave trade does not lead to greater ancestral slavery (if anything the relationship is negative). Therefore, we conclude that the slave trade exposure did not systematically shape the observed ancestral slavery measures in the Ethnographic Atlas. Relatedly, [Fenske \(2013\)](#) instruments slave trade exports by distance to international slave ports (an approach complementary to ours) and finds no significant association between slave trade intensity and ancestral slavery in the Ethnographic Atlas.

Finally, as an additional robustness exercise capturing the potential influence of contact with Europeans, we employ an indicator variable which equals one if a European explorer traveled through land historically occupied by the ethnic group ([Nunn and Wantchekon, 2011](#)). In the data, the correlation between European explorer contact and ancestral slavery is insignificant with a p-value of 0.9. Similarly, capturing European missionary contact, number of missions per square kilometer for each ethnic group has no significant correlation with ancestral slavery with a p-value of 0.8. Therefore, there is no evidence that European contact predicts ancestral slavery.

In sum, given the evidence above, we are reassured that the Ethnographic Atlas reflects ancestral and indigenous characteristics, and not the influence of European contact. Nevertheless, we cannot completely rule out measurement error in the data and the influence of slave trade on the observed ancestral institutions of slavery.

**Roots and the geographic factors of ancestral slavery**— What, then, are the roots of ancestral slavery? As argued in the background section, there is a long documented history of domestic slavery and domestic slave trade throughout Africa ([Eltis et al., 2021; Falola and Heaton, 2008; Stilwell, 2014](#)), of which the most significant and long-lasting one was the trans-Saharan slave trade ([Eltis et al., 2021; Segal, 2002; Wright, 2007](#)). Therefore, we

evaluate the predictive power of proximity to Saharan trade routes.

Table 5 shows that while distance to Saharan trade routes is negatively associated with slave trade intensity (columns 2-3), it is still a very strong predictor of the institution of ancestral slavery (columns 4-6). This is in line with the historical literature arguing how the trans-Saharan trade route facilitated slavery and slave trade prior to the start of the European slave trade. This is also consistent with the purpose of the Ethnographic Atlas to capture ancestral lifeways prior to first contact with Europeans, which should arguably be reflective of the pre-existing forms of slavery.<sup>24</sup>

If exposure to the ancient trans-Saharan slave trade predicts ancestral slavery, facilitating the systematic selling of fellow community members to early slave traders, we would expect the effects of the trans-Atlantic slave trade, interpreted as a demand shock,<sup>25</sup> to be especially detrimental for ethnicities exposed to the ancient trans-Saharan slave trade. We analyze this in three ways.

First, historical sources reveal that the trans-Saharan slave trade mostly operated in the north-south direction and it extended at least as south as the 8° N. Figure A.7 reveals the extent of the trans-Saharan slave trade network and how south it reached. As discussed in the background section, the threat of the tsetse fly to caravans (as it infected horses and camels) was a limiting factor for the Saharan trade to reach further south of the Sudanic belt (Klein, 2010). Importantly, Figure 3 in Alsan (2015), depicting a map of historical tsetse suitability in Africa, demonstrates the demarcation zone for the reach of the tsetse fly close to the 4-8

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<sup>24</sup>Note also that, even though the distance to Saharan trade routes is a very strong predictor of ancestral slavery, it does not fulfill the requirements of a good instrument for ancestral slavery as it is correlated with the slave trade (hence, violating exclusion restrictions).

<sup>25</sup>While the ancient trans-Saharan slave trade predicated the trans-Atlantic slave trade by about a millennium and is more strongly associated with ancestral slavery institutions in the Ethnographic Atlas, it was about a factor of 20 times less intense (see Wright (2007) and Nunn (2008) as well as Figure 1 for data on annual exports). Thus, it may have enabled pro-slavery norms by the time the slave trade took off, while not necessarily eroding levels of trust.

degree latitudes, about as far south as the Bight of Biafra. Hence, we use this geographic limitation as an exogenous demarcation line that predicts the extent of the trans-Saharan trade, and hence, the spread of ancestral slavery as a result. Therefore, we simply carry out a reduced form exercise by splitting the sample by latitude and evaluating the effect of slave trade on trust above and below this demarcation zone. Based on the above discussion, we pick the  $8^{\circ}$  N latitude as the demarcation line to split the sample.

The results in Panel A of Table 6 show that the slave trade had a negative effect on trust only for ethnicities above  $8^{\circ}$  N, which were nearly all affected by the trans-Saharan slave trade. Ethnicities farther south and mostly outside the zone of influence of this earlier trade show no significant effect of the slave trade on mistrust today regardless of the outcome (Table 6 Panel B). Shifting the latitude southwards does not meaningfully change the coefficients as Table A.2 shows by splitting the sample at  $4^{\circ}$  N, and thus, incorporating the whole of West Africa. Therefore, this exercise provides some reduced form evidence that the slave trade had a negative effect on trust only within the geographically limited reach of the old slave routes.

Second, we carry out another exercise in the spirit of the previous one by splitting the sample by distance between each ethnicity's centroid and the nearest Saharan trade node. The advantage of this approach is that travel distance likely more effectively captures actual supply constraints than simple latitude. However, the trade-off is that the distance measure is based on pre-existing trade nodes, whereas the demarcation region of the tsetse fly burden is exogenous to the trade routes. Table 7 reports the results of a sample split by median distance of 2100 km from the nearest Saharan trade node. We again observe that the negative effects of the slave trade on trust today run through those ethnicities most exposed to the pre-existing slave trade in the vicinity of the Saharan trade route. On the contrary, ethnicities unaffected by this pre-existing market show consistently positive effects on trust.

Arguably, the median distance of 2100 km likely overstates transport capacities at the time. Thus, we complement the analysis by splitting the sample at 1000 km, which corresponds to how far the trans-Atlantic slave trade extended from the coast into Africa (Figure

1 in [Nunn and Wantchekon \(2011\)](#)). Table A.3 again shows that ethnicities geographically closer to pre-existing slave markets drive the negative effects of the slave trade on trust.

As mentioned earlier, [Nunn and Wantchekon \(2011\)](#) employ distance from the coast as an exogenous instrument for the intensity of the slave trade, with successful first stage and reduced form results. We also assess how the predictive power of distance to coast changes with distance to the pre-existing slave trade routes of the Sahara. We evaluate this causal link according to the proximity of the ethnic group to the Saharan trade nodes by simply splitting the sample by median distance (2100 km) from the nearest Saharan trade node. Table 8 presents the first stage and the reduced form effects (on the slave trade and trust, respectively) of the exogenous instrument of distance to coast above and below the median distance cutoff. Panel A of Table 8 shows that this causal link is driven by societies in the vicinity of the Saharan trade nodes, whereas Panel B reveals that this causal link does not hold any longer far from the Saharan trade nodes. Comparing column 1 of Panels A and B, distance from the coast is a significant predictor of slave trade exposure only for societies close to the Saharan trade routes, since the first stage coefficient in Panel B is statistically insignificant and more than ten times smaller than the coefficient in Panel A. Similarly, in columns 2-6, the significant reduced form correlations between distance to coast and trust are driven by the sample of ethnic groups near the Saharan trade route in Panel A.

Third, we use the travel time between each ethnicity's centroid and the nearest Saharan or Red Sea trade node as an alternative measure of exposure to pre-existing slave trade. This is motivated by the historical literature on the existence of a dual slave market before the opening of the West African–Atlantic routes, with exports through the Sahara and the Red Sea ([Klein, 2010](#)). This measure takes into account precolonial travel times by assigning historical walking and canoe speeds over different surfaces over all of Africa, and is computed for every ethnicity in the sample ([Whatley, 2022](#)).<sup>26</sup> Figure 2 shows the evolution of the effect of the slave trade on trust for relatives by travel time from the nearest Saharan or

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<sup>26</sup>For more details on how the travel time measure is defined and computed, see [Whatley \(2022\)](#).

Red Sea trade node. When we gradually exclude ethnicities with more than 7 and up to 60 days of travel time from the nearest trade node, we observe that the main results hold for ethnicities located within one to three weeks of travel time. However, for ethnicities with greater than three weeks of travel time from the trade nodes, the effect of the slave trade on trust becomes insignificant and even changes sign. We observe the same pattern regardless of the trust outcome employed (see Figure A.9). Thus, we find that, for a large majority of the ethnicities sufficiently far away from pre-existing slave trade nodes,<sup>27</sup> there is no effect of the Atlantic slave trade on trust today.

All in all, the above exercises indicate that the baseline correlations we find are robust. Our geographically driven and mostly reduced form analyses suggest that our results are not spurious. Nevertheless, despite our efforts, we cannot completely rule out endogeneity.

## 5 Conclusion

This paper provides additional insights into the pathways through which the negative repercussions of the slave trade have impacted mistrust in Africa. Specifically, our research highlights that the slave trade resulted in a culture of mistrust only in those societies where ancestral slavery was prevalent. This aligns with the notion that mistrust arose when individuals began to turn against each other, which would arguably occur more frequently in societies with already pervasive ancestral slavery norms.

By influencing trust levels towards both other fellow citizens and political leaders, we show how the combined legacies of ancestral slavery and the slave trade continue to hinder development across Sub-Saharan Africa. In a broader context, our findings also contribute to our understanding of how the development of cultural norms under the influence of historical institutions can interact with historical shocks to affect contemporary beliefs and attitudes.

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<sup>27</sup>Approximately 82% of the total sample is more than 20 travel days away from the nearest Saharan and Red Sea trade nodes, the point at which the coefficient turns positive. The distribution of travel time for all ethnicities in the sample ranges from 1 to 123 days, with a mean of 53 days.

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Figure 1: Annual slave exports through the Sahara and the Atlantic, based on data from Wright (2007) and The Trans-Atlantic Slave Trade Database (2019)

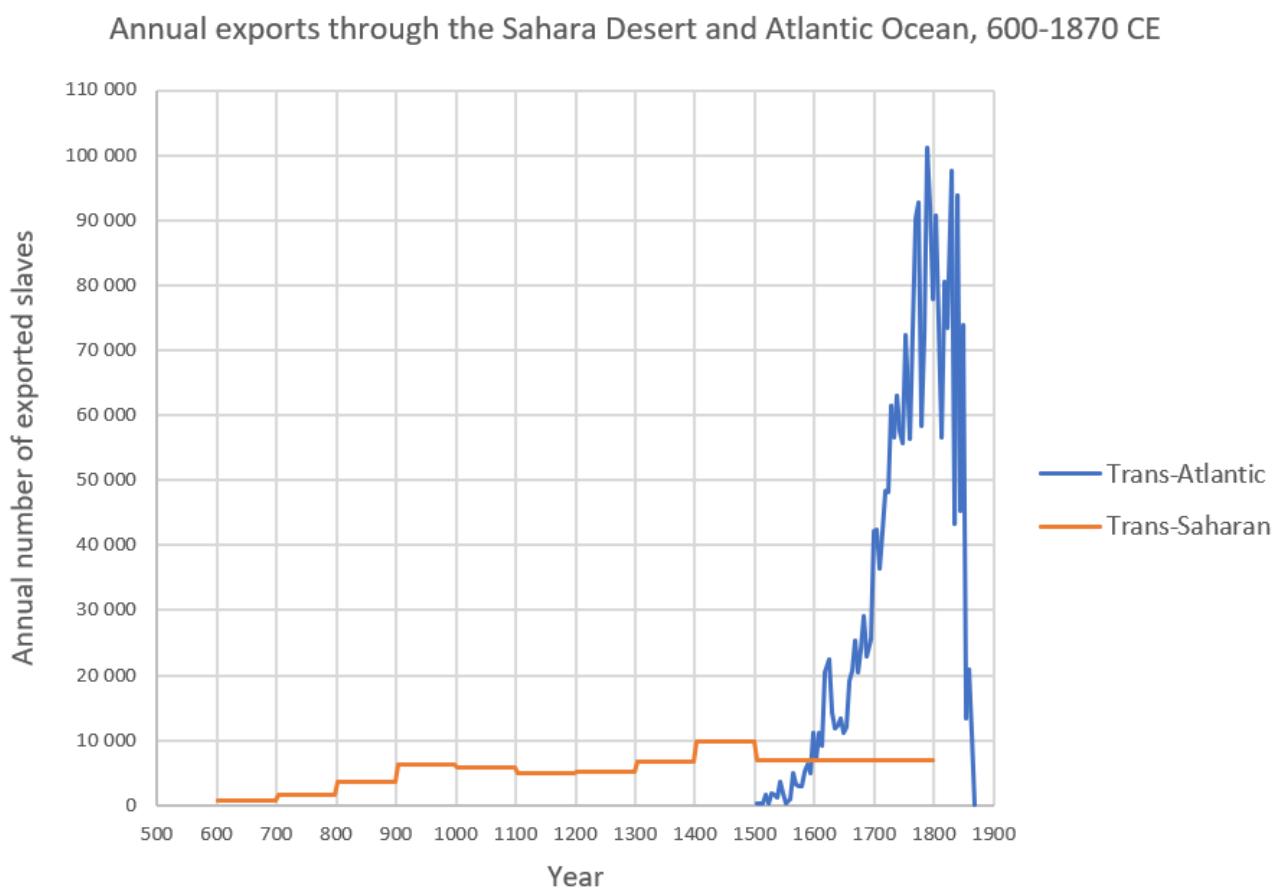


Figure 2: The evolution of the effect of the slave trade on trust for relatives, by travel time from the nearest Saharan and Red Sea trade nodes

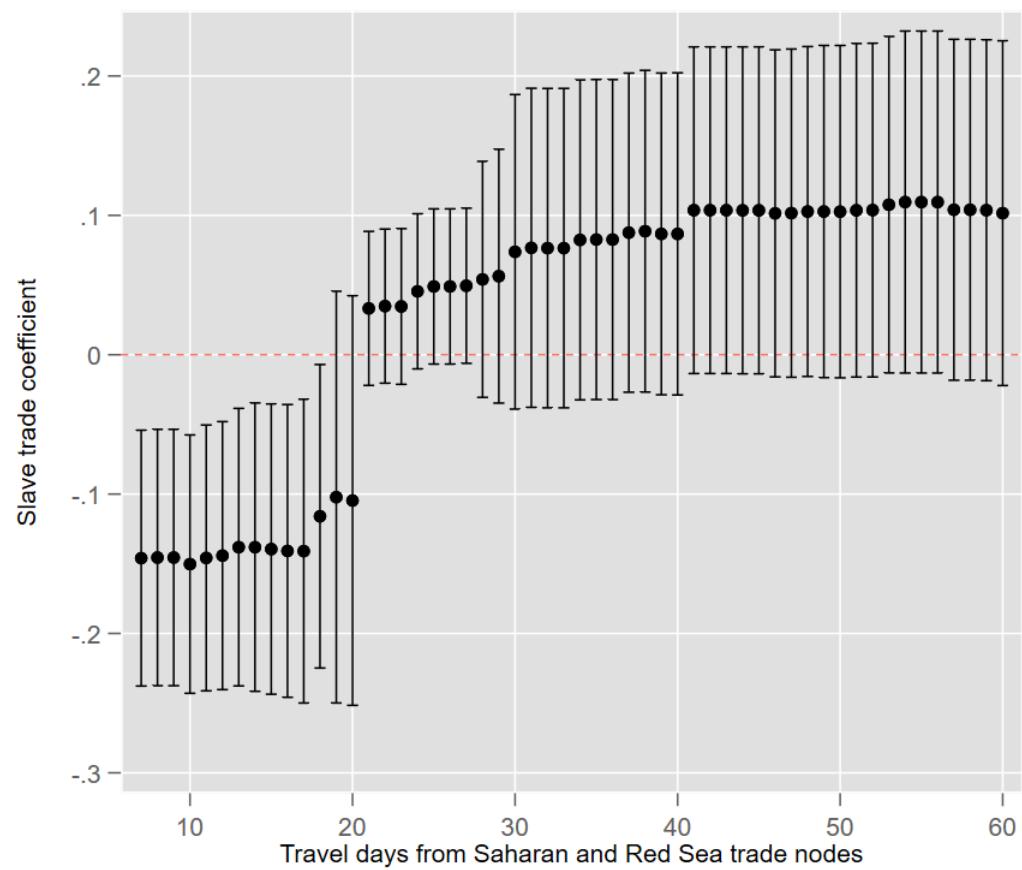


Table 1: Slave Trade, Presence of Ancestral Slavery and Mistrust in Africa

Dependent Variable	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)	Trust of relatives (6)	Trust of neighbors (7)	Trust of local council (8)	Intra-group trust (9)	Inter-group trust (10)
Slave trade	-0.132*** (0.036)	-0.157*** (0.034)	-0.112*** (0.021)	-0.144*** (0.032)	-0.091*** (0.028)	0.007 (0.079)	0.000 (0.093)	0.176** (0.081)	0.069 (0.075)	0.161** (0.081)
Slave trade $\times$ Ancestral slavery						-0.143* (0.082)	-0.159* (0.094)	-0.294*** (0.080)	-0.213*** (0.077)	-0.251*** (0.079)
Ancestral slavery						0.073 (0.065)	0.005 (0.083)	0.100 (0.061)	-0.072 (0.103)	-0.096 (0.104)
Baseline controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	17,599	17,564	16,569	17,505	17,340	17,599	17,564	16,569	17,505	17,340

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . *Ancestral slavery* takes 1 when any type of slavery is present in a society, and 0 otherwise, based on v70 in the Ethnographic Atlas. *Intra-group trust* is trust for people from own ethnic group. *Inter-group trust* is trust for people from other ethnic groups. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Columns 1-5 are the baseline results for the sample of societies whose ancestral slavery information in the Ethnographic Atlas is not missing. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table 2: Slave Trade, Types of Ancestral Slavery and Mistrust in Africa

Dependent Variable	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)
Slave trade	-0.021 (0.076)	-0.037 (0.085)	0.167** (0.078)	0.031 (0.067)	0.134* (0.075)
Slave trade interacted with Types of Ancestral slavery:					
× Hereditary and significant	-0.166** (0.083)	-0.154* (0.090)	-0.323*** (0.078)	-0.179** (0.072)	-0.222*** (0.076)
× Incipient or nonhereditary	-0.033 (0.082)	-0.091 (0.096)	-0.241*** (0.078)	-0.180** (0.085)	-0.223*** (0.084)
× Reported but type unidentified	-0.033 (0.083)	-0.008 (0.087)	-0.214*** (0.080)	-0.071 (0.072)	-0.161** (0.077)
Hereditary and significant	0.061 (0.065)	-0.053 (0.074)	0.124** (0.059)	-0.160 (0.097)	-0.161 (0.101)
Incipient or nonhereditary	0.051 (0.064)	0.041 (0.080)	0.039 (0.067)	-0.021 (0.110)	-0.070 (0.105)
Reported but type unidentified	0.090 (0.065)	0.033 (0.076)	0.097 (0.072)	-0.018 (0.086)	-0.046 (0.096)
Baseline controls	yes	yes	yes	yes	yes
Observations	17,599	17,564	16,569	17,505	17,340

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . Types of slavery are based on v70 in the Ethnographic Atlas. *Intra-group trust* is trust for people from own ethnic group. *Inter-group trust* is trust for people from other ethnic groups. Rows 2-4 present the estimates for the interactions of *Slave trade* with various *Types of Ancestral Slavery*. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table 3: Slave Trade, Timing of Ancestral Slavery and Mistrust in Africa

	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)
Slave trade	0.031 (0.072)	0.024 (0.092)	0.178** (0.078)	0.075 (0.079)	0.173** (0.080)
Slave trade interacted with:					
× Ancestral slavery, currently	-0.240*** (0.078)	-0.224** (0.101)	-0.283*** (0.081)	-0.267*** (0.092)	-0.292*** (0.088)
× Ancestral slavery, formerly	-0.077 (0.075)	-0.084 (0.093)	-0.259*** (0.078)	-0.153* (0.081)	-0.214*** (0.078)
Ancestral slavery, currently	0.195** (0.086)	0.115 (0.109)	0.126 (0.090)	0.028 (0.128)	-0.042 (0.126)
Ancestral slavery, formerly	0.092 (0.072)	-0.005 (0.086)	0.115* (0.064)	-0.095 (0.112)	-0.116 (0.105)
Baseline controls	yes	yes	yes	yes	yes
Observations	15,219	15,186	14,337	15,133	14,990

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . *Ancestral slavery, formerly* indicates that ancestral slavery was practiced at some point in the past, but not at the time of European contact, whereas *Ancestral slavery, currently* indicates that slavery was present both prior to and at the time of first European contact, based on v71 in the Ethnographic Atlas. *Intra-group trust* is trust for people from own ethnic group. *Inter-group trust* is trust for people from other ethnic groups. Rows 2-3 present the estimates for the interactions of *Slave trade* with the timing of *Ancestral Slavery*. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table 4: Slave Trade, Ancestral Slavery and Distance from the Coast

	Slave trade (1)	Slave trade (2)	Ancestral slavery (OLS) (3)	Ancestral slavery (OLS) (4)	Ancestral slavery (IV) (5)	Ancestral slavery (IV) (6)
Historical distance from coast	-1.387*** (0.000)	-1.245*** (0.000)	0.139 (0.251)	0.114 (0.380)		
Slave trade					-0.090 (0.290)	-0.082 (0.407)
First-stage F					17.34	19.17
Baseline controls	no	yes	no	yes	no	yes
Observations	21,702	21,136	18,316	17,808	18,316	17,808

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . *Ancestral slavery* takes 1 when any type of slavery is present in a society, and 0 otherwise, based on v70 in the Ethnographic Atlas. *Historical distance from coast* is the shortest distance, in thousands of kilometers, from each ethnicity's historical centroid to the coast. Columns 5-6 use *Historical distance from coast* (in thousands of kilometers) as an instrument for slave trade exports. Baseline controls include age, age squared, a gender indicator, six living conditions fixed effects, ten education fixed effects, 43 religion fixed effects, 7 employment fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent. All specifications include country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table 5: Slave Trade, Ancestral Slavery and Distance to Saharan Trade Routes

	(1)	Slave trade	(2)	(3)	(4)	Ancestral slavery	(5)	(6)
Historical distance from Saharan trade node	0.473*	-0.296*	-0.332**	-0.348***	-0.461***	-0.451***		
	(0.25)	(0.151)	(0.148)	(0.119)	(0.159)	(0.153)		
Historical distance from coast		-1.606***	-1.478***		-0.211	-0.209		
		(0.356)	(0.319)		(0.187)	(0.183)		
Baseline controls	no	no	yes	no	no	yes		
Observations	21,702	21,702	21,136	18,316	18,316	17,808		

*Notes:* *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . *Ancestral slavery* takes 1 when any type of slavery is present in a society, and 0 otherwise, based on v70 in the Ethnographic Atlas. *Historical distance from Saharan trade node* is the distance, in thousands of kilometers, from each ethnicity's historical centroid to the nearest Saharan trade node prior to the trans-Atlantic slave trade. Baseline controls include age, age squared, a gender indicator, six living conditions fixed effects, ten education fixed effects, 43 religion fixed effects, 7 employment fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent. All specifications include country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels.  
 $*p < 0.10$ ,  $**p < 0.05$ ,  $***p < 0.01$

Table 6: Effect of slave trade on trust, split by  $8^\circ$  N latitude

	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)
Panel A: Sample of Ethnicities North of $8^\circ$ Latitude					
Slave trade	-0.123*** (0.023)	-0.212*** (0.039)	-0.164*** (0.034)	-0.235*** (0.032)	-0.176*** (0.034)
Observations	4,027	4,014	3,739	4,000	3,944
Panel B: Sample of Ethnicities South of $8^\circ$ Latitude					
Slave trade	-0.011 (0.042)	-0.019 (0.046)	-0.012 (0.032)	-0.017 (0.047)	0.026 (0.044)
Observations	13,572	13,550	12,830	13,505	13,396

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . The latitude corresponds to the centroid of each ethnicity's historical location. *Intra-group trust* is trust for people from own ethnic group. *Inter-group trust* is trust for people from other ethnic groups. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels.  
 $*p < 0.10, **p < 0.05, ***p < 0.01$

Table 7: Effect of slave trade on trust, split by median distance (2100 km) to Saharan trade nodes

	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)
Panel A: Sample of Ethnicities < median distance (2100 km) to Saharan trade nodes					
Slave trade	-0.144*** (0.039)	-0.173*** (0.037)	-0.127*** (0.020)	-0.160*** (0.035)	-0.120*** (0.028)
Observations	8,569	8,551	8,155	8,537	8,447
Panel B: Sample of Ethnicities > median distance (2100 km) to Saharan trade nodes					
Slave trade	0.106* (0.056)	0.074 (0.069)	0.121* (0.070)	0.091 (0.069)	0.159** (0.070)
Observations	9,030	9,013	8,414	8,968	8,893

*Notes:* Slave trade is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . Distance to Saharan trade nodes is measured in thousands of kilometers, from each ethnicity's historical centroid to the nearest Saharan trade node prior to the trans-Atlantic slave trade. Intra-group trust is trust for people from own ethnic group. Inter-group trust is trust for people from other ethnic groups. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table 8: First stage and reduced form effects of distance to coast on slave trade and trust, split by median distance (2100 km) to Saharan trade nodes

Dep. Var.	First stage			Reduced form		
	Slave trade	Trust of relatives	Trust of neighbors	Trust of local council	Intra-group trust	Inter-group trust
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Sample of Ethnicities < median distance (2100 km) to Saharan trade nodes						
Historical distance from coast	-2.125*** (0.475)	0.527*** (0.125)	0.619*** (0.162)	0.395*** (0.105)	0.544*** (0.180)	0.481*** (0.151)
Observations	8,595	8,569	8,551	8,155	8,537	8,447
Panel B: Sample of Ethnicities > median distance (2100 km) to Saharan trade nodes						
Historical distance from coast	-0.194 (0.133)	0.183* (0.098)	0.144 (0.093)	0.156 (0.126)	0.187 (0.119)	0.085 (0.137)
Observations	9,213	9,030	9,013	8,414	8,968	8,893

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . Distance to Saharan trade nodes is measured in thousands of kilometers, from each ethnicity's historical centroid to the nearest Saharan trade node prior to the trans-Atlantic slave trade. *Intra-group trust* is trust for people from own ethnic group. *Inter-group trust* is trust for people from other ethnic groups. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

# Online appendix for “Slave Trade, Ancestral Slavery, and Mistrust in Africa”

## A Additional Results

Figure A.1: Histogram for the type of ancestral slavery (v70), from the Ethnographic Atlas

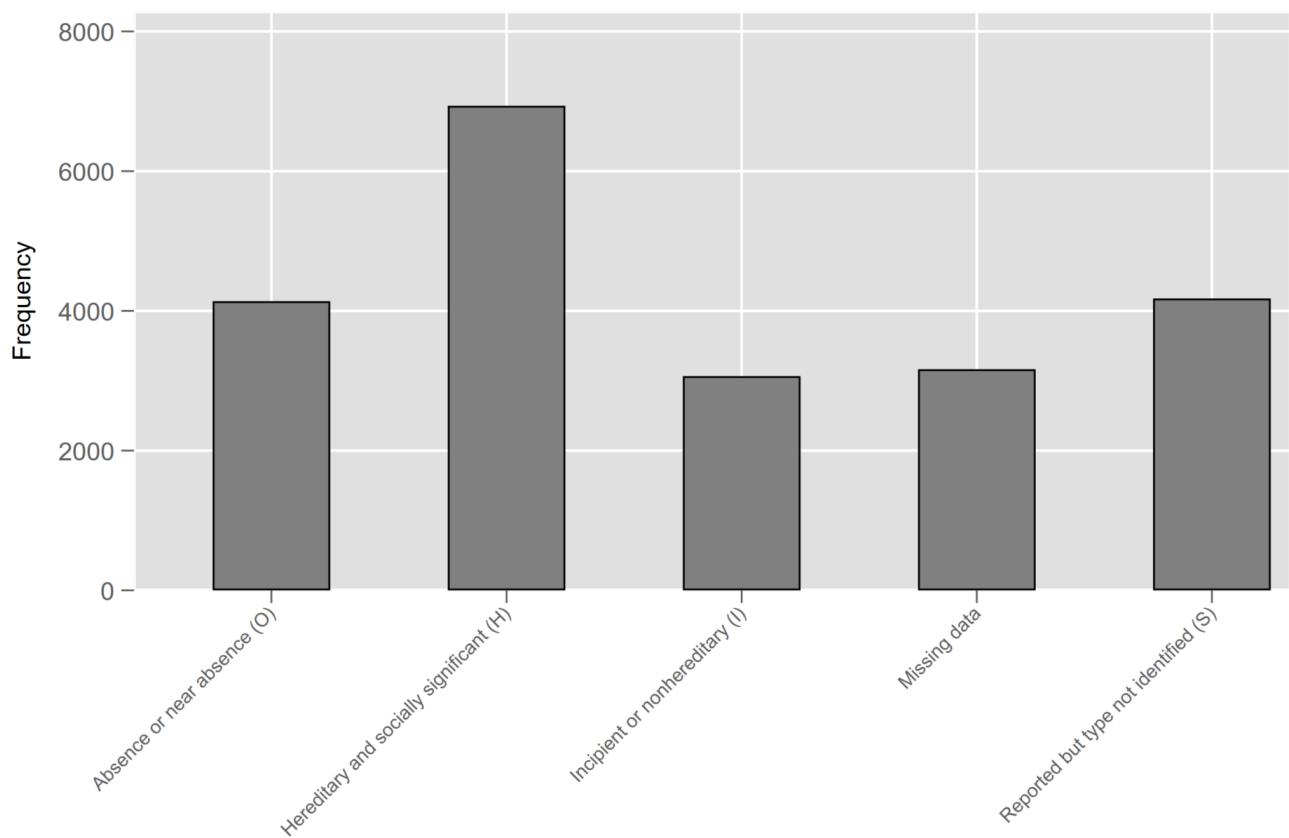


Figure A.2: The geographical distribution of type of ancestral slavery (v70) according to the Ethnographic Atlas and Murdock's Map of Africa

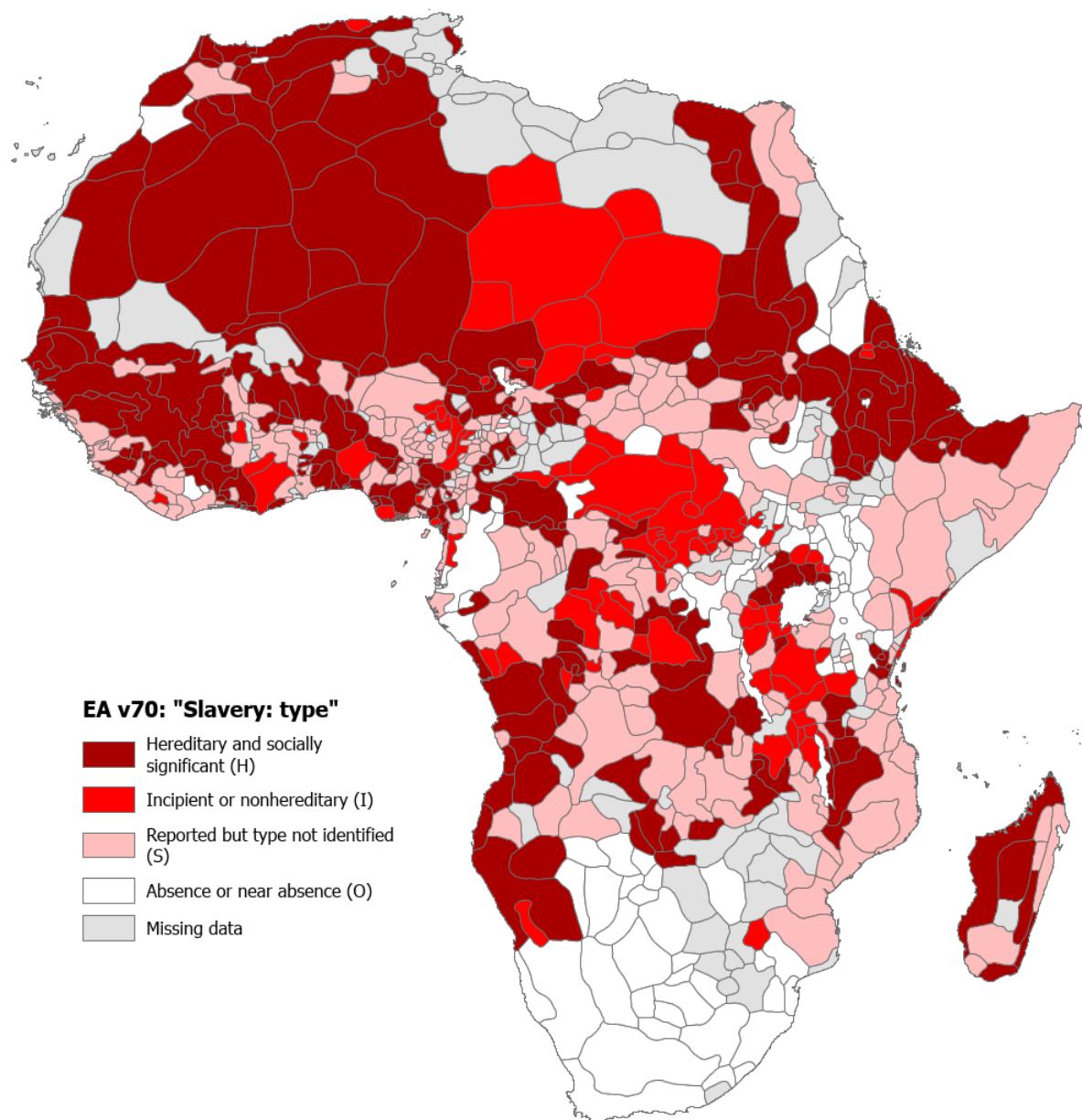


Figure A.3: Map showing the location and extent of pre-colonial African states (non-exhaustive), spanning from roughly 500 BCE to 1500 CE ([Wikimedia Commons, 2007](#)).

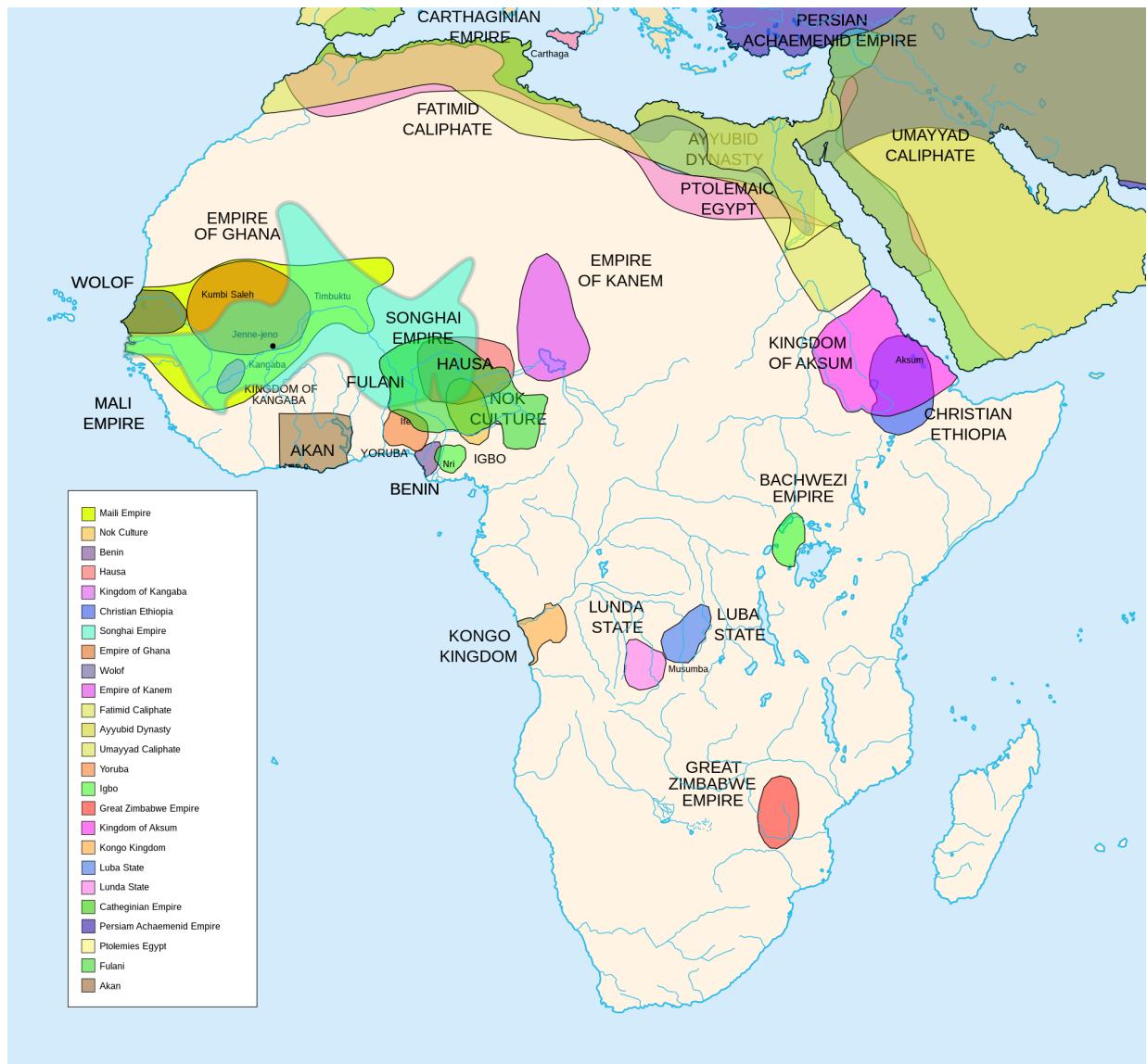


Figure A.4: Map showing the historical extent of the Ghana and Mali Empires, together with the Jùlá trade network, from [Donaldson \(2020\)](#).

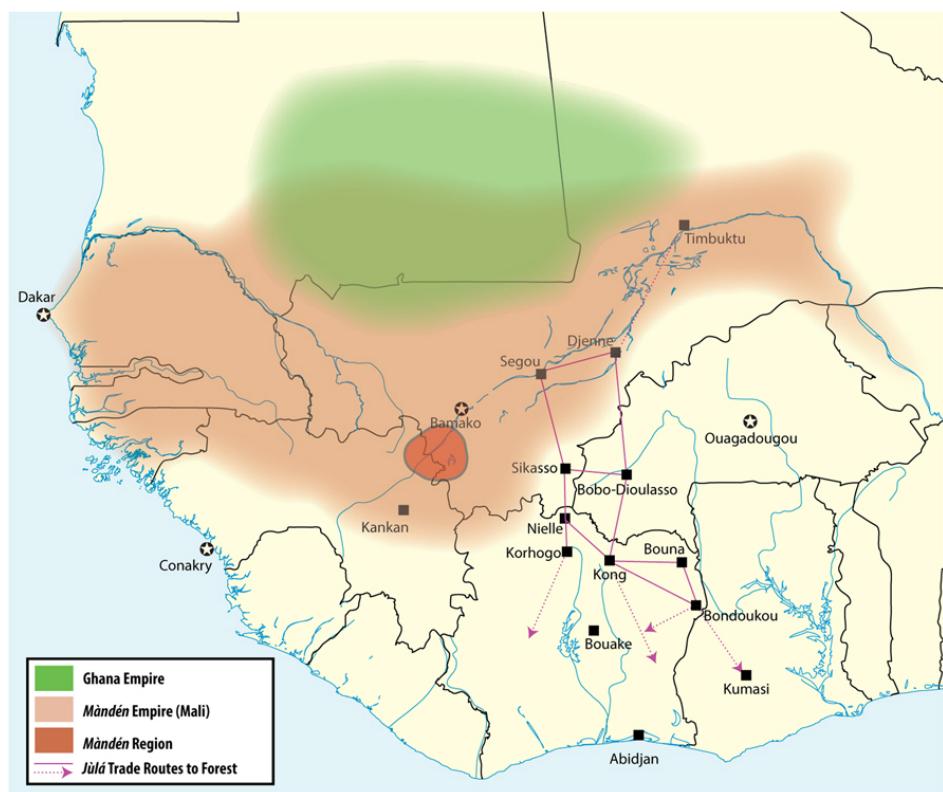


Figure A.5: Histogram for the timing of ancestral slavery (v71), from the Ethnographic Atlas

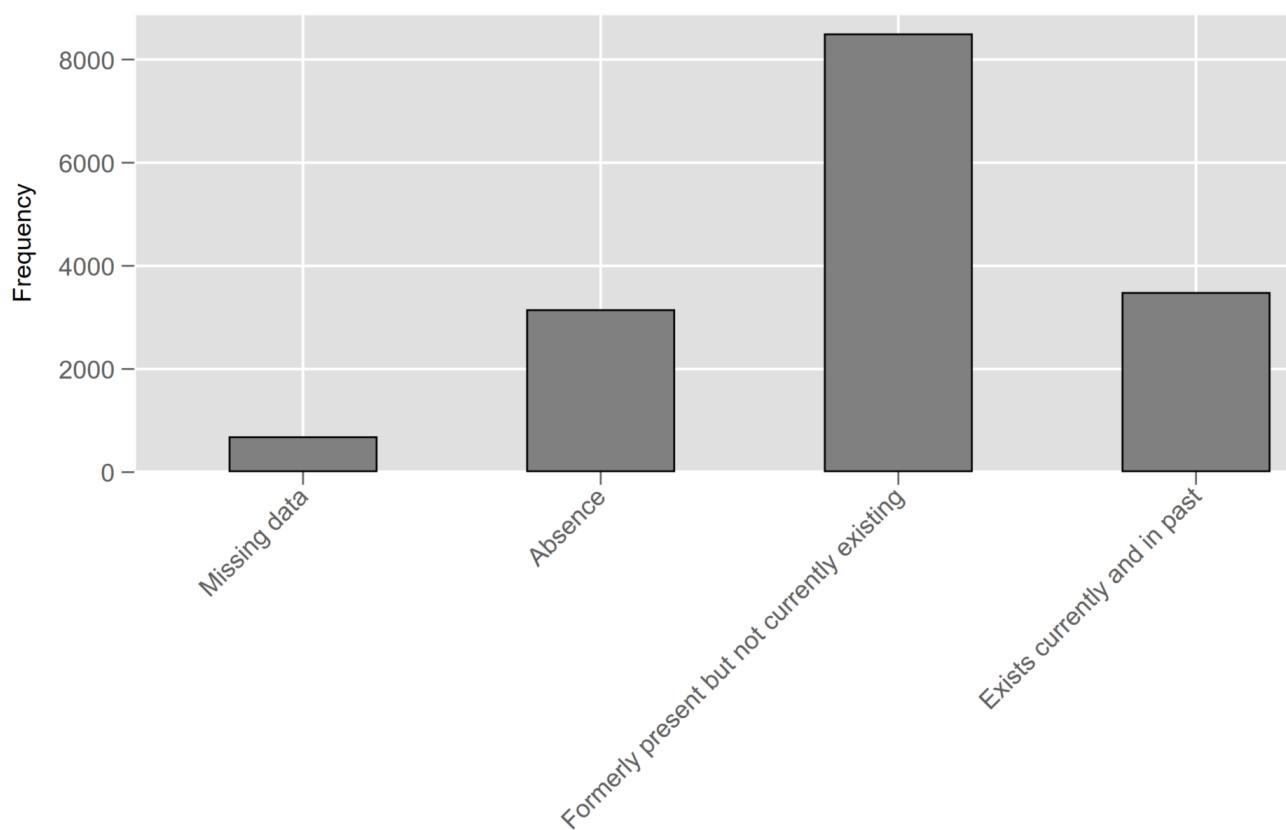


Figure A.6: The geographical distribution of timing of ancestral slavery (v71) according to the Ethnographic Atlas and Murdock's Map of Africa

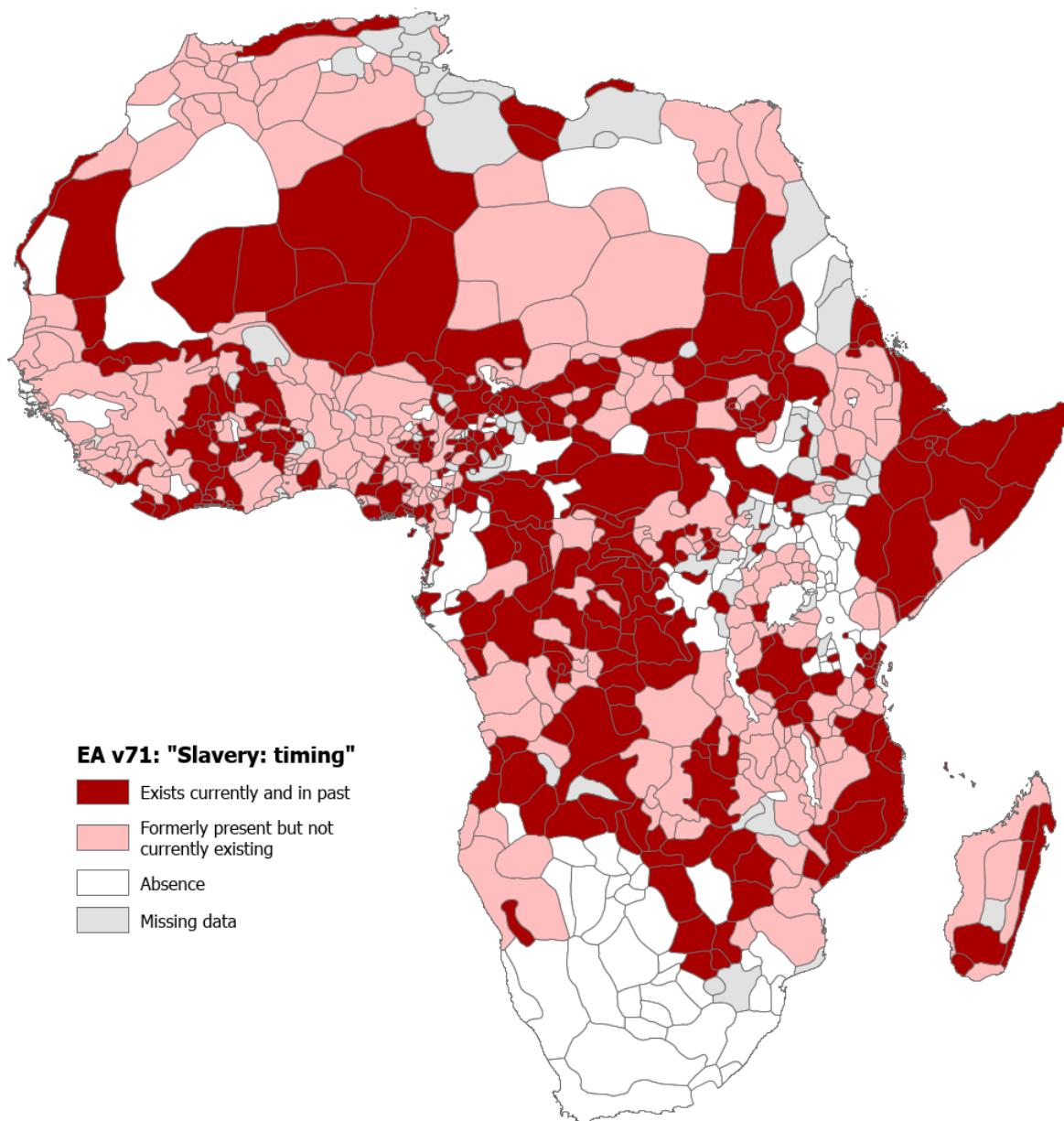


Figure A.7: Map showing Saharan trade route data from [Ciolek \(2001\)](#), the 8 degree latitude line used in the heterogeneity analysis, and the geographical distribution of type of ancestral slavery (v70) according to the Ethnographic Atlas and Murdock's Map of Africa

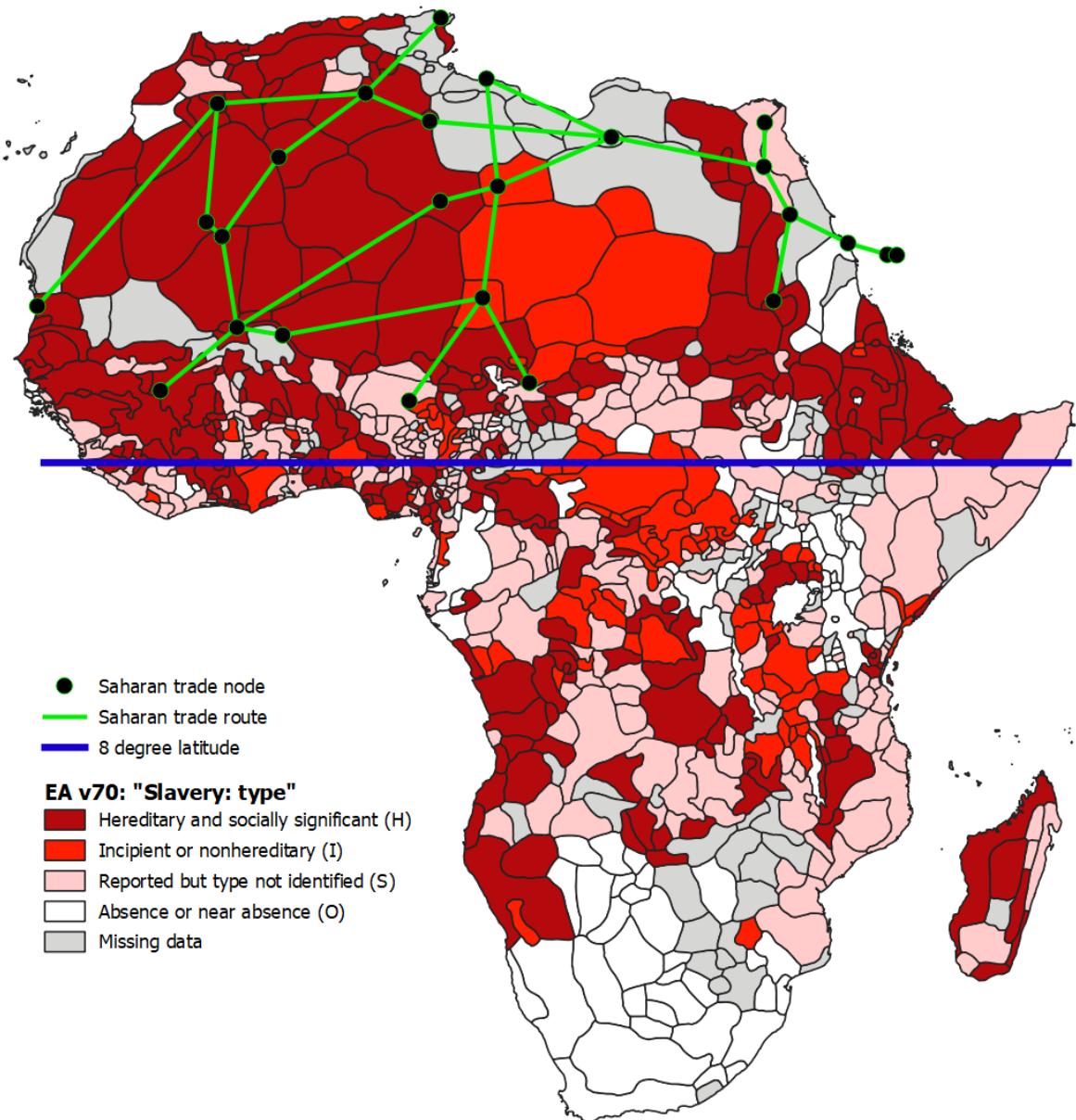


Figure A.8: Residual Plots for Table 1 Specifications

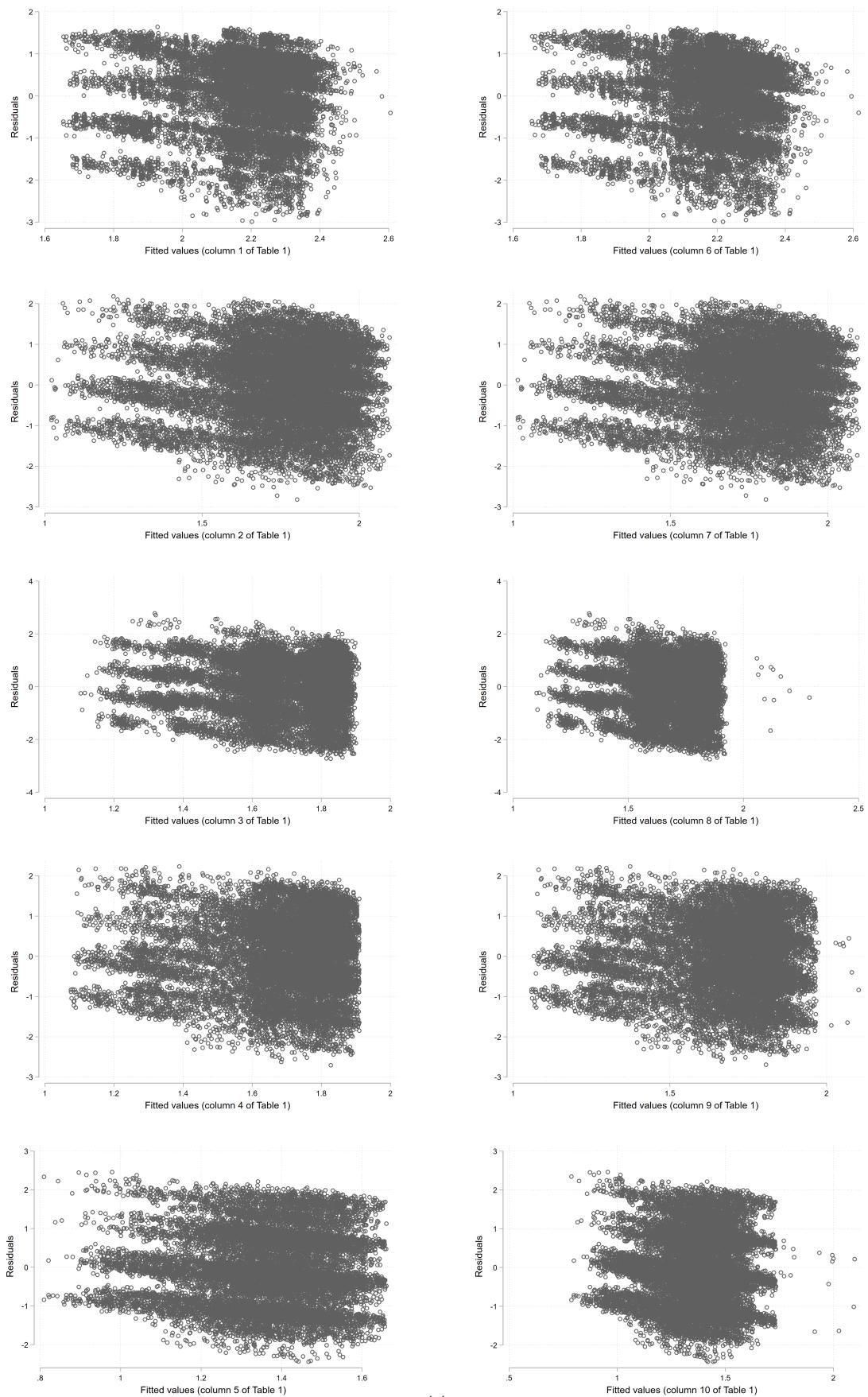


Figure A.9: The evolution of the effect of the slave trade on four trust outcomes, by travel time from the nearest Saharan and Red Sea trade nodes

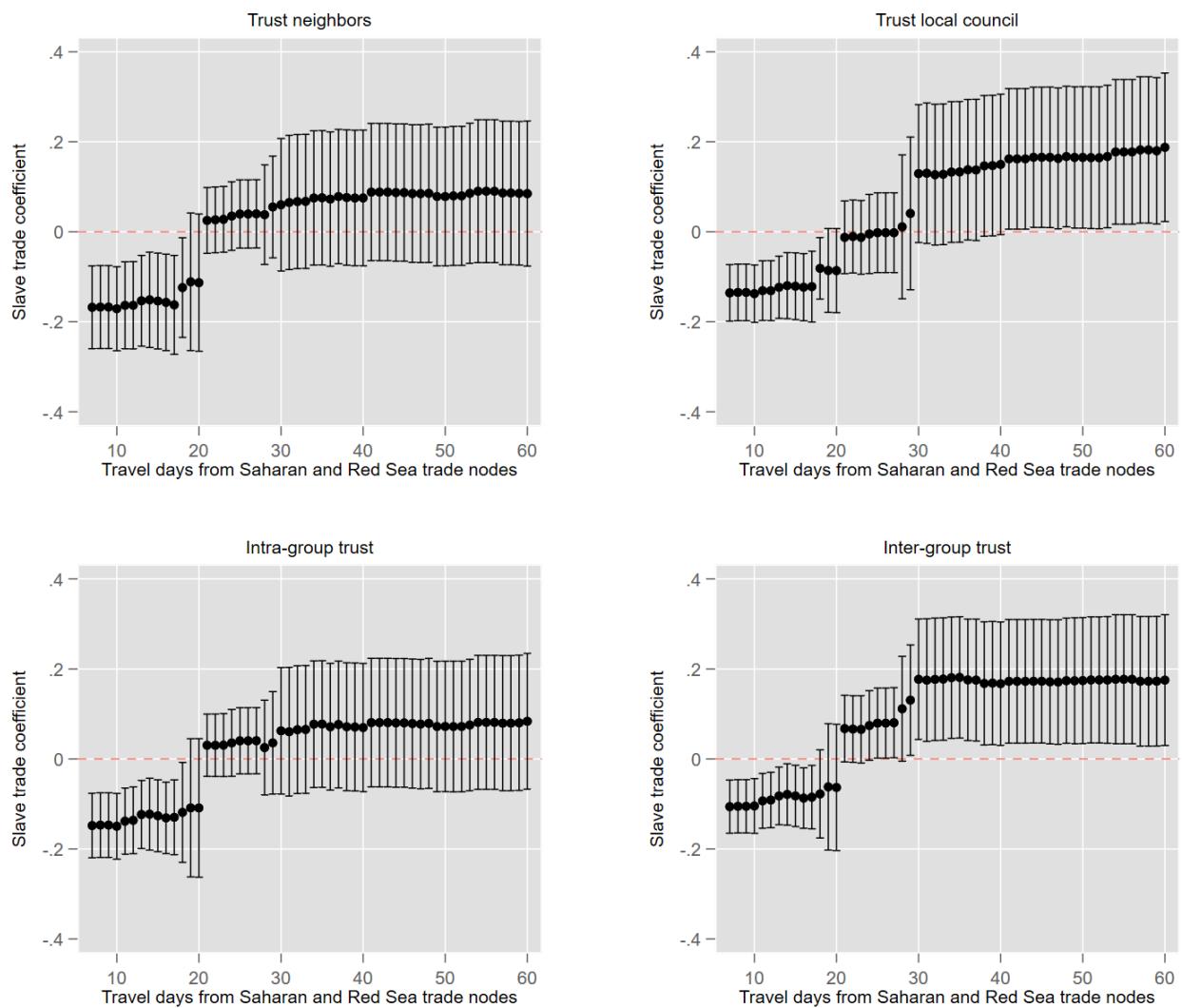


Table A.1: Slave Trade, Presence of Ancestral Slavery and Mistrust in Africa, using data from Afrobarometer Round 4 of 2008

	Trust of relatives (1)	Trust of people you know (2)	Trust of local council (3)	Trust other people of same na- tionality (4)	Trust of relatives (5)	Trust of people you know (6)	Trust of local council (7)	Trust other people of same na- tionality (8)
Slave trade	-0.082* (0.046)	-0.119** (0.048)	-0.055** (0.023)	-0.111** (0.045)	0.076* (0.043)	0.159 (0.098)	0.095 (0.115)	0.165** (0.069)
Slave trade $\times$ Ancestral slavery					-0.162*** (0.057)	-0.285*** (0.106)	-0.154 (0.117)	-0.283*** (0.079)
Ancestral slavery					0.068 (0.055)	0.147* (0.084)	0.052 (0.067)	0.190*** (0.069)
Observations	14,754	14,686	13,847	14,536	14,754	14,686	13,847	14,536

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . *Ancestral slavery* takes 1 when any type of slavery is present in a society, and 0 otherwise, based on v70 in the Ethnographic Atlas. Baseline controls include age, age squared, a gender indicator, six living conditions fixed effects, ten education fixed effects, 43 religion fixed effects, 7 employment fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 19 country fixed effects. Columns 1-4 are similar to the baseline results for the sample of societies whose ancestral slavery information in the Ethnographic Atlas is not missing. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table A.2: Effect of slave trade on trust, split by 4° N latitude

	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)
Panel A: Sample of Ethnicities North of 4° Latitude					
Slave trade	-0.144*** (0.038)	-0.166*** (0.038)	-0.125*** (0.020)	-0.147*** (0.035)	-0.109*** (0.030)
Observations	6,477	6,460	6,098	6,451	6,372
Panel B: Sample of Ethnicities South of 4° Latitude					
Slave trade	0.082 (0.056)	0.058 (0.068)	0.112 (0.071)	0.075 (0.068)	0.164** (0.072)
Observations	11,122	11,104	10,471	11,054	10,968

Notes: *Slave trade* is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . The latitude corresponds to the centroid of each ethnicity's historical location. *Intra-group trust* is trust for people from own ethnic group. *Inter-group trust* is trust for people from other ethnic groups. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels.  
 \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table A.3: Effect of slave trade on trust, split by 1000 km distance to Saharan trade nodes

	Trust of relatives (1)	Trust of neighbors (2)	Trust of local council (3)	Intra-group trust (4)	Inter-group trust (5)
Panel A: Sample of ethnicities < 1000 km from Saharan trade node					
Slave trade	-0.156*** (0.037)	-0.179*** (0.037)	-0.133*** (0.020)	-0.161*** (0.033)	-0.120*** (0.028)
Observations	6,401	6,383	6,025	6,375	6,296
Panel B: Sample of ethnicities > 1000 km from Saharan trade node					
Slave trade	0.078 (0.056)	0.053 (0.068)	0.112 (0.071)	0.071 (0.068)	0.162** (0.072)
Observations	11,198	11,181	10,544	11,130	11,044

*Notes:* Slave trade is defined as  $\log(1 + \text{slaveexports}/\text{area})$ . Distance to Saharan trade nodes is measured in thousands of kilometers, from each ethnicity's historical centroid to the nearest Saharan trade node prior to the trans-Atlantic slave trade. Intra-group trust is trust for people from own ethnic group. Inter-group trust is trust for people from other ethnic groups. Baseline controls include age, age squared, a gender indicator, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, an indicator for whether the respondent lives in an urban location, a measure of ethnic fractionalization at the district level, the share of the district's population that are the same ethnicity as the respondent, and 17 country fixed effects. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Table A.4: List of ethnic groups from matching slave trade data with ancestral slavery (v70) from the Ethnographic Atlas

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**Matched to v70, with non-missing data (n = 160):**

ALUR, AMBO, ANA, ANGAS, ANTAISAKA, ANTANDROY, ASHANTI, AULLIMINDEN, AUSHI, BAJUN, BAMBARA, BANYUN, BARA, BARARETTA, BARGU, BAUCHI, BEMBA, BERGDAMA, BETSIMISARAKA, BISA, BOBO, BORAN, BOZO, BUYE, CHEWA, CHIGA, CHOKWE, CHUABO, DAFI, DAGARI, DAGOMBA, DENDI, DIGO, DIOLA, DOGON, DURUMA, EDO, EGBA, EKOI, EWE, FIPA, FON, FOUTATORO, GA, GANDA, GBARI, GISU, GOGO, HAUSA, HAWIYA, HAYA, HEHE, HERERO, HURUTSHE, IBIBIO, IBO, IDOMA, IGALA, IGBIRA, IJAW,ILA, IRAMBA, ISOKO, ITSEKIRI, IWA, KABRE, KAGORO, KAMBA, KANURI, KAONDE, KARAMOJONG, KASONKE, KEYU, KGALAGADI, KIKUYU, KIPSIGI, KOBA, KONSO, KWANGARE, KWENA, KWERE, LALA, LAMBA, LAMBYA, LENJE, LOMWE, LOZI, LUGBARA, LUGURU, LUNDA, LUO, LUVALE, MAHAFAKY, MAKONDE, MAKUA, MALINKE, MASAI, MASHI, MAURI, MBUKUSHU, MBUNDU, MERINA, MERU, MINIANKA, MOSSI, MURLE, NAMA, NANDI, NDAU, NDEBELE, NGWAKETSE, NKOLE, NKOYA, NUPE, NUSAN, NYAKYUSA, NYAMWEZI, NYANJA, NYORO, PARE, PEPEL, ROLONG, RUANDA, SABEI, SAKALAVA, SENA, SENGA, SENUFO, SERER, SHEBELLE, SHUWA, SIHANAKA, SOGA, SOMBA, SONGHAI, SONINKE, SOTHO, SUBIA, SUK, SUKUMA, SWAZI, TABWA, TANALA, TAWANA, TEITA, TEKNA, TESO, THONGA, TIV, TSIMIHETY, TUMBUKA, TURKANA, TURU, VENDA, WANGA, WOLOF, YAO, YERGUM, YORUBA, ZULU

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**Matched to v70, with missing data (n = 24):**

BETSILEO, CHAGA, CHOPI, FAJULU, GUSII, GYRIAMA, KARANGA, KGATLA, KONJO, KUNDA, LAKA (NDEBELE), LUCHAZI, LUNGU, MADI, MASINA, MBUNDA, NGWATO, NSENGA, PEDI, SAMO, TLOKWA, TONGA, XOSA, ZEZURU

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**Not matched to v70 (n = 2):**

NGONI, NIKA

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