THE LONG-TERM EFFECT OF DEMOGRAPHIC SHOCKS ON THE EVOLUTION OF GENDER ROLES: EVIDENCE FROM THE TRANSATLANTIC SLAVE TRADE

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ABSTRACT. Can demographic shocks affect the long-run evolution of female labor force participation and gender norms? This paper traces current variation in women's participation in the labor force within Sub-Saharan Africa to the emergence of a female-biased sex ratio during the centuries of the transatlantic slave trade. This historical shock affected the division of labor along gender lines in the remaining African population, as women substituted for the missing men by taking up areas of work that were traditionally male tasks. By exploiting variation in the degree to which different ethnic groups were affected by the transatlantic slave trade, I show that women whose ancestors were more exposed to this shock are today more likely to be in the labor force, have lower levels of fertility, and are more likely to participate in household decisions. The marriage market and the cultural transmission of internal norms across generations represent important mechanisms explaining this long-run persistence.

1. Introduction

The degree to which women participate in the labor force and their more general role in society differ widely across the world, and this variation goes hand in hand with variation in cultural beliefs about the appropriate role of women (Fortin 2005; Fernandez 2007; Fernandez and Fogli 2009). History can affect the evolution of these beliefs, as specific gender norms arise following shocks to the working status of women and tend to persist as they are transmitted across generations (Alesina et al. 2013). Demographic shocks that alter a society's sex ratio can potentially have long-run effects on the role of women, if a shortage of male workers increases female labor supply and this affects the predominant views about working women. In the context of the United States during World War II, the temporary absence of men pushed women into the labor force, with effects on female labor supply that persisted in the decades after the end of the war (Goldin 1991; Acemoglu et al. 2004; Goldin and Olivetti 2013).

In this paper, I ask whether demographic shocks can have an impact on female labor force participation that persists in the very long run, and I study the role played by different channels in explaining persistence. Specifically, I link current variation in women's participation in the labor force within Sub-Saharan Africa to a large demographic shock that accompanied one of the most crucial events in African history: the transatlantic slave trade.

Male slaves vastly outnumbered female slaves in the transatlantic slave trade, as males were preferred by plantation owners in the New World for their physical strength. This led to a shortage of men and to the emergence of abnormal sex ratios in the remaining African population (Lovejoy 1989). In the areas most affected, historical estimates suggest the presence of as few as 50 men per 100 women (Miller 1988; Manning 1990). Given the shortage of men, women had to substitute for them in the activities they used to perform, taking up areas of work that were traditionally male tasks (Thornton 1983; Manning 1990; Lovejoy 2000). Although sex ratios reverted back to natural levels shortly after the end of the slave trade, the impact of this demographic shock on the role of women could be long-lasting if it persistently affected cultural beliefs and societal norms. Theoretically, revised attitudes towards working women can persist in the long run through a marriage market channel (Fernandez, Fogli, and Olivetti 2004) or a process of intergenerational learning (Fernandez 2013), or in presence of multiple equilibria (Hazan and Maoz 2002). I test whether the shock to the division of labor that followed the transatlantic slave trade had long-lasting consequences on gender-role attitudes and can explain current variation in women's participation in the labor force within Sub-Saharan Africa.

To test for this, I use Demographic and Health Surveys (*DHS*) data on more than 500,000 women from 21 Sub-Saharan African countries, combined with Nunn and Wantchekon (2011)'s ethnicity-level data on the number of slaves taken during the slave trades. Exploiting variation in the degree to which different ethnic groups were affected by the transatlantic slave trade, I show that women whose ancestors were more exposed to this slave trade are today significantly more likely to be in the labor force. In particular, they are more likely to be employed in a higher ranking occupation.

As a falsification test, I examine whether the same result is found when we consider the number of slaves taken during the Indian Ocean slave trade. Consistent with traders during this slave trade not having a preference for exporting more men, we find no evidence of increased women's participation in the labor force among the descendants of those more exposed to the Indian Ocean slave trade. While this result is consistent with the emergence of a biased sex ratio as a channel explaining this long run effect, there were other historical differences between these two slave trades. While historical accounts do not point to a clear factor that could have potentially led to a differential impact of the two slave trades on the long-run evolution of FLFP, my reduced form evidence should be read with this caveat in mind.

I show that we do not find a similar effect of the transatlantic slave trade on current men's participation in the labor force. This rules out the possibility that a greater exposure to the transatlantic slave trade led to structural changes in the economy that were conducive to a persistent higher employment across both genders.

The fact that information on the exposure to the transatlantic slave trade is measured at the level of an ethnic group, rather than at the location level, allows one to shed light on the mechanisms explaining persistence. Fernandez, Fogli and Olivetti (2004) theorize that cultural beliefs about the role of women can be transmitted through a marriage market channel. Working mothers transmit to their sons a more positive view about working women, making them more likely to have a preference for a working wife later in life. Leveraging information on the husband's ethnicity for women in my sample, I can test whether a man's ancestors' exposure to the transatlantic slave trade increases the likelihood that his wife is employed. Specifically, I compare labor force participation among women of the *same* ethnicity who married men whose ancestors' exposure to the transatlantic slave trade differed. Consistent with a husband's beliefs also playing an important role, the exposure of a woman's husband's ethnic group to the transatlantic slave trade is associated with higher women's labor force participation.[1]

While the focus of the paper is on the role played by cultural beliefs, an alternative explanation for the findings is that places that were more affected by the transatlantic

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[1]For a recent investigation of the role played by gender identity norms within the family, see Bertrand et al. (2015).

slave trade developed markets and local institutions leading to higher female labor force participation. To estimate the role played by cultural values that are internal to individuals, I compare individuals of different ethnicities who currently live in the same village or in the same neighborhood within a city. While this specification gives an effect of the transatlantic slave trade that is about 50% lower in magnitude, the transatlantic slave trade continues to play a significant role even after we fully control for the effects of the slave trade on contemporaneous external factors that may be conducive to greater women's employment.

Finally, by looking at heterogeneous effects across cohorts of women born between the 1950s and the 1980s, I show that the positive effect of the transatlantic slave trade on FLFP has remained fairly stable over time. This confirms the high persistence of historical shocks to cultural norms, which continue to play an important role even as external factors change over time.

I show that the results presented are robust to the inclusion of a wide set of controls, including covariates capturing European influence during the colonial period, historical proxies for the initial prosperity of an ethnic group and for the complexity of its political institutions, and information on the historical structure of the ethnic group's economy. Similarly, the results are not explained by an effect of the transatlantic slave trade on polygyny, nor by higher human capital accumulation among women.

In addition, following the approach in Nunn and Wantchekon (2011), I use the historical distance of an ethnic group from the coast as an instrument for the exposure to the transatlantic slave trade. As traders purchased slaves at ports to ship them oversea, groups inhabiting areas closer to the coast were more likely to be exposed to the external demand for slaves. I further augment Nunn and Wantchekon (2011)'s IV specification by exploiting only within-location variation: the identifying assumption requires that, among women currently living in the same location, ancestors' distance from the coast affects women's labor force participation today only through the exposure to the transatlantic slave trade. The estimates from the IV regressions confirm the OLS estimates. These results reduce possible concerns about the presence of unobservable historical factors that are correlated with both the severity of the transatlantic slave trade and current levels of women's participation in the labor force.

Consistent with a higher cost of having children for working women, I show that women whose ancestors were more heavily enslaved in the transatlantic slave trade have lower levels of fertility today. In addition, they are more likely to participate in household decisions. However, using data from the Afrobarometer surveys, I do not find strong evidence of a persistent effect of the transatlantic slave trade on general attitudes towards women in domains other than the labor market. While we may expect that, as

women take up traditional male activities, this will lead to the emergence of more equal gender norms in other domains as well, theoretical models of intra-household bargaining in presence of skewed sex ratios suggest the opposite (Becker 1973, 1974, 1981). A demographic shock that makes men scarce in the marriage market should have reduced women's bargaining power during the centuries of the slave trade. While this decreased bargaining power predicts a higher involvement of women in activities outside of the house, it also points towards the potential crystallization of more conservative attitudes towards women in other domains. Therefore, while the impact of the transatlantic slave trade on the involvement of women in activities outside of the house is theoretically clear, its long-run effects are ambiguous when we consider beliefs other than those affecting the division of labor in the household. The mixed evidence that I find indeed suggests that demographic shocks, while having a persistent impact on FLFP, may not have a comparable effect on gender equality in domains other than the labor market.

This paper contributes to several strands of literature. First, these findings are directly related to the literature on the impact of shocks to sex ratios on women's labor supply. Most of this literature focuses on the United States during World War II.[2] Given the high mobilization rate of men, female labor force participation in the US dramatically increased from 1940 to 1945.[3] Acemoglu et al. (2004) and Goldin and Olivetti (2013) use exogenous variation in mobilization rates across states and uncover that the impact of World War II on FLFP was still present in the 1960s, especially for more educated women. Exploiting the same source of variation, Fernandez, Fogli and Olivetti (2004) find an effect on women's participation in the labor force that persists through the 1980s, which they rationalize with the increased presence of men who were raised by working women.

I contribute to this literature by showing how the effects of demographic shocks to sex ratios can persist in the very long run, as the impact of the transatlantic slave trade on female labor force participation is still significant more than a century after sex ratios reverted back to their natural level. In addition, I rely on an ethnic-group level shock – rather than a location-specific one – and on detailed data on the ethnicity of both women and their husband, as well as on their current location, to disentangle the different channels behind this very long-run effect. First, I can isolate the role played by the intergenerational transmission of cultural values vis-à-vis a persistent effect of

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[2]Other studies that look at the impact of demographic shocks on the marriage market and female labor supply include Grossbard-Schechtman and Neideffer (1997), Angrist (2002), Chiappori et al. (2002), Abramitzky et al. (2011), Francis, (2011), Brainerd (2017).

[3]Historians suggest that this represented a "watershed event" that permanently redefined the role of women in society (William H. Chafe, 1972, p.195). However, a revisionist literature has criticized this view, neglecting the role of World War II in affecting long-run gender roles and women's participation in the labor force. See Goldin (1991) for a review of these two literatures.

the demographic shock on the external environment. Second, leveraging information on a woman's husband's ethnicity, I can show how persistence does not solely follow from cultural transmission of gender norms from parents to daughters, but also from cultural transmissions from parents to sons.[4] Finally, the previous literature on the role of World War II focuses on a country that was experiencing a sustained period of growth and a steady increase in the service sector, which could have facilitated the persistence of more equal gender norms after the end of the demographic shock (Goldin and Olivetti, 2013). By focusing on Sub-Saharan Africa, I show that demographic shocks can persistently affect women's participation in the labor force in a setting characterized by stagnant economic conditions.

More generally, this paper contributes to a nascent literature on the historical roots of attitudes towards gender roles. Alesina et al. (2013) show that a tradition of plough cultivation is associated with more unequal gender norms, consistent with Boserup (1970)'s hypothesis. Building on Diamond (1987), Iversen and Rosenbluth (2010) and Ashraf and Galor (2011), Hansen et al. (2015) link current unequal gender norms to a long history of agriculture. Campa and Serafinelli (2016) document how more equal gender-role attitudes emerged in state-socialist regimes. Becker and Woessmann (2008) study the long-term impact of the Protestant Reformation on the gender-gap in education and literacy. The findings of my paper dovetail and complement those in Grosjean and Khattar (2015), who study the long-run effect of the male biased sex ratio that emerged in Australia by the late eighteenth century as a consequence of the inflow of British convicts. Since the great majority of the convicts were men, in the areas where the convicts were transported individuals are today characterized by more conservative attitudes towards working women.

Finally, this paper contributes to the literature on the effects of the Africa's slave trade. A growing list of studies have looked at the effect of this historical event on long term development (Nunn 2008), interpersonal trust (Nunn and Wantchekon 2011), the evolution of political authority (Whatley 2012a), ethnic stratification (Whatley and Gillezeau 2011), polygyny (Dalton and Cheuk Leung 2014; Fenske 2013; Edlund and Ku 2013), and conflict (Fenske and Kala 2014), and at the determinants of the supply of slaves (Whatley 2012b; Fenske and Kala 2015).

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[4]The fact that I rely on an ethnic-group level shock is crucial to show the persistence of the shock and the mechanisms explaining persistence: while people relocate over the centuries, information on respondents' ethnicity and on the exposure to the shock of each African ethnic group allows me to measure the extent to which the respondents' ancestors were affected by the slave trade.

The rest of the paper is organized as follows. In Section 2, I discuss the historical background and theoretical framework that motivate my hypothesis. Section 3 describes the data and the main empirical specification. The empirical results on the relationship between the transatlantic slave trade and women's labor force participation, together with the analysis of the mechanisms explaining persistence, are presented in Section 4. In Section 5, I look at the impact of the transatlantic slave trade on fertility and general attitudes about gender roles. Section 6 concludes.

2. Historical Background and Conceptual Framework

2.1. **Historical Background.** Between the fifteenth and the nineteenth century approximately 12 million slaves were exported from Africa during the transatlantic slave trade. The other three slave trades - the trans-Saharan, Red Sea and Indian Ocean slave trades - accounted for another 6 million slaves. These figures, together with the number of slaves who died during the raids and transportations to the ports of export, translated into severe demographic consequences. Estimates by Patrick Manning (1990, p.171) suggest that Africa's population in 1850 was half of what it would have been in the absence of slavery.

The main destinations of the slaves in the transatlantic slave trade were the plantations of the New World. Given the physical strength necessary to perform work in the plantations, European traders had a preference for male slaves.[5] Lovejoy (2000) writes that European traders had the goal of exporting two males for every female. Consistent with these accounts, Lovejoy (1989) reports that the ratio of male to female slaves during the transatlantic trade was about 181:100 between the seventeenth and the end of the nineteenth century. Similarly, Manning (1990, p.42) reports that "the exports from the West Coast [...] are in the ratio of two males for every female". Edlund and Ku (2013) use data from Eltis et al. (1999) to construct sex ratios across ports of embarkment, finding an average 65% male ratio, similar across regions of Western Africa.[6]

These patterns dramatically altered the sex ratio in the remaining African population, with the areas more affected by the transatlantic slave trade experiencing a prolonged shortage of men. Figure 1 shows a simulation of the population trajectory in Western Africa - the region most heavily raided - built by Manning (1990) using available data on the size and gender composition of the slave population. The bottom

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[5]A British politician, writing about the business of a plantation, pointed out that "the nature of the slave-service in the West Indies (being chiefly field labor) requires, for the immediate interest of the planter, a greater number of males" (Edwards 1801, p.118).

[6]Consistent with this evidence, the price of slaves differed widely along gender lines. The price of young female slaves was typically 80-85% of that of young males in the late seventeenth and early eighteenth century Caribbeans (Eltis 2000, page 111).

panel shows the volume of exports and two estimates of the dynamics of the Western African population based on a low and a high estimate of population growth respectively, while the top panel presents the corresponding simulations for sex ratios. At the peak of the transatlantic trade at the end of the eighteenth century, the sex ratio in West Africa is estimated to be as low as 70 men per 100 women.

Miller (1988, p.160) reports numbers from a Portuguese colonial census taken in the late 1770s in Angola, the hardest-hit area of the continent: among youths (boys age 7-15, girls age 7-14), the sex ratio was of 65 males per 100 females, while it declined to 50 males per 100 females among adults. Visitors of this area "would have gotten the impression of villages filled with women and children, with the pre-pubertal girls outnumbering the boys" (Miller 1988, p.163).

During the other slave trades, slaves were taken across the Saharan desert to Northern Africa and from Eastern Africa to the Middle East and India. Slaves buyers in these destinations had a preference for female slaves, who were then employed as concubines and domestic servants (Harris 1971).[7] Manning (1990) reports that Eastern Africa, the area most severely hit by these trades, experienced a male biased sex ratio, although the impact was smaller in magnitude and shorter in time.

In the areas hit by the transatlantic slave trade, the emergence of a female biased sex ratio coincided with a more general shock to the role of women. Given the shortage of men, women had to substitute for them in the activities they used to perform. This shock affected both free women and female slaves, for which African demand had increased following the external demand for male slaves. Manning (1990, p.132) underlines that "in areas where women had traditionally participated in agriculture, their role expanded to that of near total domination of agricultural labor", while in areas where they traditionally did less agricultural labor "the shortage of men pushed women more into commerce than into cultivation". Lovejoy (2000, p.125) writes that in the coastal areas of West Africa female slaves "wove raffia cloth, a craft that traditionally belonged to males elsewhere in the interior. Apparently the shift from a male to a female occupation occurred because of the availability of women".

Thornton (1983) cites the notes taken by Lemos Coelho, a Portuguese resident of Guinea Bissau, who wrote in 1684 that women "are the ones who work the fields, and plant the crops, and the houses in which they live, even though small, are clean and bright, and despite all this work they still go down to the sea each day to catch shellfish" (Lemos Coelho 1953, p.178).

A telling example of the activities that women were pushed to undertake is provided by the Army of the Dahomey Kingdom, which in 1727 was reinforced by a regiment

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[7]An exception to this pattern is represented by the predominant export of males to the plantation islands of the Indian Ocean by French traders starting at the beginning of the eighteenth century.

Figure 1. The Demographic Impact of the transatlantic Slave Trade. Source: Manning (1990)
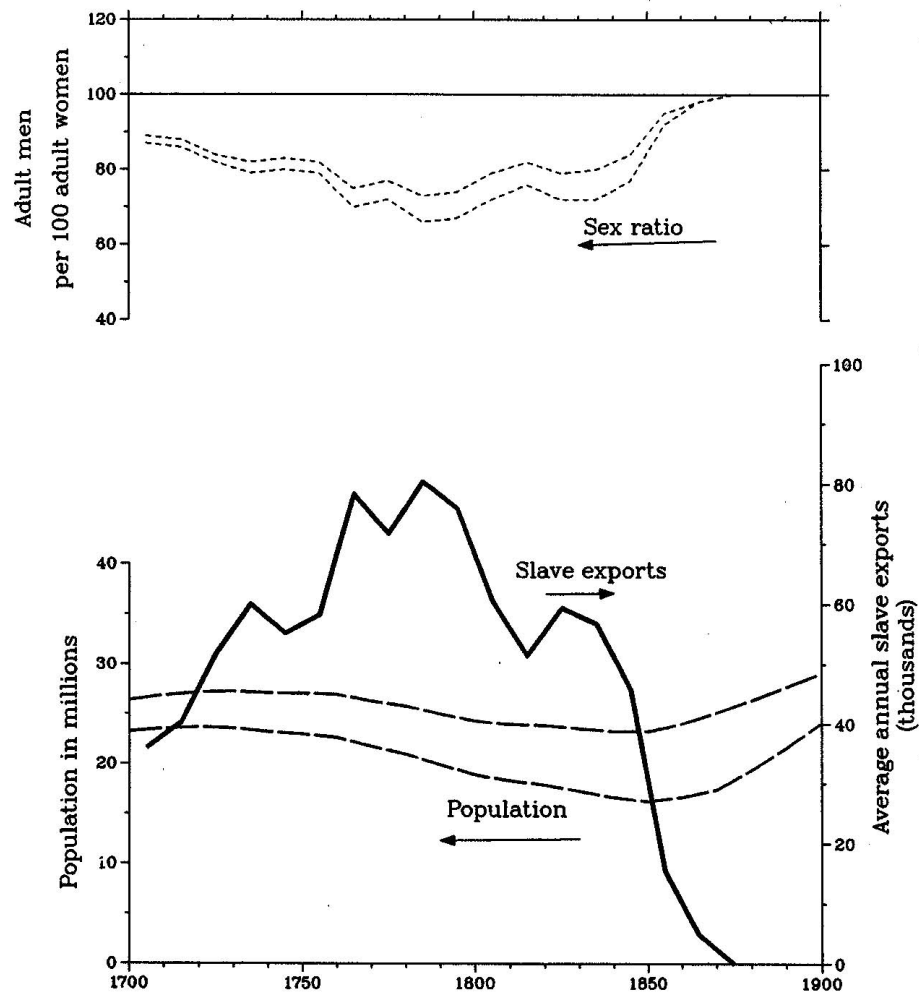
Notes: The figure shows a simulation of the population trajectory in Western Africa built by Manning (1990) using available data on the size and gender composition of the slave population. The bottom panel shows the volume of exports and two estimates of the dynamics of the Western African population based on a low and a high estimate of population growth respectively, while the top panel presents the corresponding simulations for sex ratios.

made entirely by women. Rather than being a deliberate choice, Goldstein (2003, p.64) suggests that this was due to a severe military shortage, one of the causes of which was that the kingdom "depended on a slave trade that gave preference to selling-off able-bodied men".

Historians suggest that another implication of the relative abundance of women in these regions was the increased incidence of polygyny. Although the relevance of polygyny before the slave trades is not known, several authors have pointed out how the unbalanced sex ratio naturally strengthened this institution (Lovejoy 1989; Manning

1990). Empirical support for this hypothesis was recently provided by Edlund and Ku (2013) using cross-country evidence and by Dalton and Cheuk Leung (2014) leveraging micro-level data. However, Fenske (2013) shows that the positive relationship between exposure to the transatlantic slave trade and current polygyny depends only on a comparison of West Africa with the rest of the continent.[8]

The transatlantic slave trade led to a severe shock to sex ratios in the African regions more severely affected, which in turn was conducive to an increase in the share of work and in the number of activities women had to perform. My analysis tests for the long-term impact of this shock, investigating whether areas that were more severely affected by the transatlantic slave trade are today characterized by a higher participation of women in the labor market.

2.2. **Conceptual Framework.** The emergence of a female biased sex ratio can lead to an increase in the share of work carried out by women because of the need of substituting the missing men in the activities they used to perform, or through a marriage market mechanism. As suggested by Becker (1973, 1974), sex ratios influence intra-household decisions, affecting women's bargaining power and labor force participation, an hypothesis supported by empirical evidence (Grossbard-Schechtman and Neideffer 1997; Angrist 2002; Chiappori et al. 2002).

While these channels explain why the emergence of a female biased sex ratio can lead to a temporary increase in women's participation in marketplace activities, this paper tests for the long-run effect of this historical shock on female labor force participation. As it is clear from Figure 1, sex ratios in Western Africa quickly converged back to a natural level after the end of the slave trade.[9] As a consequence, any evidence on the long-run impact of the transatlantic slave trade on gender roles cannot be explained by a long-lasting effect on sex ratios.

A first mechanism explaining persistence rests on the hypothesis that, while temporary, the demographic shock caused by the transatlantic slave trade persistently affected cultural beliefs and norms about the appropriate role of women in society.[10]

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[8]Specifically, Fenske (2013) uses micro-level data from the *Demographic and Health Surveys* and show that the positive impact of the slave trade on polygyny that is found in the data disappears once country fixed effects are included. As discussed later in the paper, I find the same result in my sample.

[9]Appendix Figure A1 shows that there is no significant country-level correlation between exposure to the transatlantic slave trade and current sex ratio.

[10]A common problem when analyzing the role of culture in economics arises from the difficulty of providing a precise definition for this concept. Nunn (2012) proposes to use a definition taken from evolutionary anthropology (Boyd and Richardson 1985), describing culture as a set of heuristics or rules-of-thumb in decision making that arise optimally in presence of costly information acquisition. These set of decision-making heuristics manifest themselves as values and social norms transmitted across generations.

In this case, even as the shock to sex ratios died out with the end of the slave trade, social attitudes about working women could have persisted until today, affecting current female labor force participation among the descendants of the populations that were more severely affected by the transatlantic slave trade.

A number of models have been proposed to explain why a temporary external factor can affect cultural norms and beliefs in a persistent way. One possible explanation is provided by a model where cultural norms present multiple equilibria, as in Guiso, Sapienza and Zingales (2008). Hazan and Maoz (2002) propose a model in this spirit to explain the evolution of FLFP in the United States in the twentieth century. In their model, a woman who works incurs the cost of violating the social norms, which is decreasing in the number of women working in the previous generation. The switch from a low to a high level of women's labor force participation leads to the convergence to an equilibrium characterized by high FLFP and equal gender norms. In the context of my hypothesis, the temporary shock to the role of women in the workforce may have led to the movement to a new equilibrium characterized by more equal gender norms.

In the model by Fernandez (2013) beliefs evolve through a process of intergenerational learning. Women observe both a private and a public signal about the costs of working, with the latter being a function of the number of women working in the previous generation. The model delivers a coevolution of beliefs and FLFP. Every factor affecting the number of women working in one generation affects beliefs about the social costs of working among women in the next generation, influencing their labor force participation choices.

Fernandez, Fogli and Olivetti (2004) theorize that a marriage market mechanism can explain why cultural beliefs about the role of women can vary over time. In their model, a man inherits from his mother his views about the appropriate role of women in society, which crucially depend on the working status of the mother. Working mothers transmit to their sons a more positive view about working women, making them more likely to have a preference for a working wife later in life.[11] In addition, this marriage market effect increases women's incentive to invest in market skills. A temporary shock to the working status of women during the centuries of the slave trade could therefore have translated into a long-lasting effect on social norms and FLFP through a marriage market mechanism. Exploiting information on the exposure to the transatlantic slave trade of a woman's husband's ancestors, I will be able to investigate the role played by this mechanism.

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[11]For a model with vertical transmission of cultural traits from parents to children see Bisin and Verdier (2001).

A second alternative channel that can explain a long-run impact of the transatlantic slave trade on gender roles is not related to cultural factors, but rests on the hypothesis that the temporary shock to the role of women during the centuries of the slave trade permanently shaped the structure of the economy in a way that favors women's participation in marketplace activities. One possibility is that the shortage of men in societies that were more severely hit by the transatlantic slave trade led these societies to specialize in activities that are less capital-intensive, thus reducing women's costs of entering the labor market. I investigate this channel in two ways. First, I analyze which specific occupations are affected by the exposure to the transatlantic slave trade. Second, I exploit within-location variation to control for any long-run effect of the slave trade on the external environment that could have led to higher FLFP, isolating the role played by cultural beliefs in explaining persistence of this historical shock to the role of women.

While all these channels point towards the evolution of more equal gender norms related to women's participation in the workforce, the impact of the transatlantic slave trade on more general attitudes towards women is less clear. One the one side, as women take up traditional male activities outside of the domestic sphere, we may expect this to be accompanied by a more general shift towards more gender equality in other domains. On the other side, the emergence of a female-biased sex ratio increased men's bargaining power in the marriage market during the centuries of the slave trade, which may have potentially led to the crystallization of more conservative gender norms. Therefore, while the long-run impact of the transatlantic slave trade on outcomes and beliefs *directly related to a woman's working status* are theoretically clear, its long-run effects are ambiguous when we consider beliefs other than those affecting the division of labor in the household. In the last part of the paper, I investigate the impact of the transatlantic slave trade on more general gender-roles attitudes.

3. Data and Empirical Specification

To study the long-term impact of the transatlantic slave trade on FLFP and gender norms, I match individual-level data from the *Demographic and Health Surveys* (DHS) and the Afrobarometer surveys with ethnic group-level data on the number of slaves exported during the slave trades. This Section describes the data.

3.1. **Contemporaneous Data.** Data on participation of women in the labor force come from the DHS. I use data from 61 surveys covering 21 countries over the period

1992-2014.[12] I include in the analysis all the Sub-Saharan African surveys that have data on women's employment status and on the ethnicity of the respondent, for a total of 661,718 women between 15 and 49 years of age.[13] Figure 2 shows which countries enter the sample.

Figure 2. Countries and number of surveys in the DHS sample
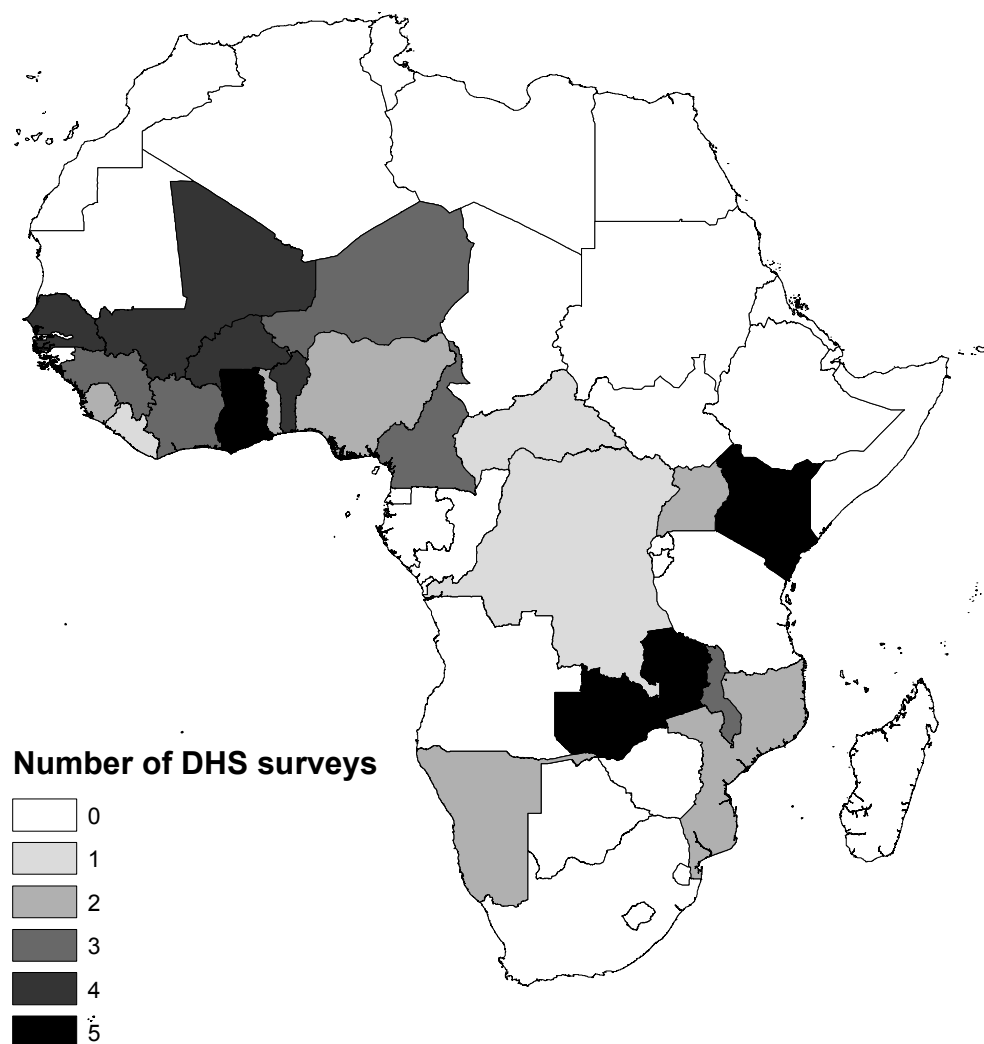
Notes: The figure shows the African countries in the DHS sample, with the corresponding number of survey rounds available for each country.

In order to perform a falsification test, part of the analysis uses data from the DHS men surveys, where the respondents are the male members of the same households

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[12]A list of the surveys that enter the sample is provided in the Appendix. The individual-recode versions of the surveys are available at http://www.dhsprogram.com/data/available-datasets.cfm.

[13]Surveys from one additional country – Rwanda – respond to these criteria, but the country was not affected by the slave trade.

interviewed in the women surveys. Corresponding men surveys are available for 56 of the 61 surveys considered in the main analysis, for a total of 250,611 male respondents.[14]

I build an individual-level indicator variable, *FLFP*, that takes value one if the respondent is currently working or she has ever worked in the last twelve months (without distinction between formal and informal employment). Since the DHS does not provide information on whether an unemployed respondent is looking for a job, individuals who have been unemployed for more than one year are coded as not being in the labor force.

The DHS provides information on the occupation of the respondent. In order to investigate the effect of the slave trade on women's occupation, I aggregate the possible answers into five indicator variables. The variable *Agriculture* takes value one if the woman is employed in the agricultural sector; the variable *Manual* considers manual occupations; the variable *Clerical* considers women performing clerical work; the variable *Domestic* considers women working as domestic servants; finally, the variable *High Ranking* considers women having relatively higher ranking jobs, namely women working in the sales and service sectors, or as professionals or managers.

Additionally, I use two variables to analyze the effect of the transatlantic slave trade on fertility, namely a woman's number of children ever born and a woman's age at first birth.

Finally, a subset of the DHS surveys present questions that are useful measures of general attitudes about gender roles in domains other than the labor market, which I investigate in Section 5. The questions capture women's participation in a set of household decisions, ranging from health care to large and daily household purchases. In addition, another set of questions asks respondents whether they think there are situations in which a husband is justified in beating his wife. In Section 5, I use also data from rounds 3-6 of the Afrobarometer (for a total of 81 surveys from 26 countries), which contain information on individual beliefs about the appropriate role of women in politics and on whether men and women should have equal rights. Additional details on these variables are provided in Section 5.

3.2. **Historical Data.** Data on the number of slaves taken from each African ethnic group are from Nunn and Wantchekon (2011) and cover the transatlantic and the Indian Ocean slave trades - the only two slave trades for which historical sources provided detailed enough data to build reliable estimates. The dataset uses as unit of analysis Murdock (1959)'s classification of African ethnicities into 842 groups. Figure 3 shows the spatial distribution of the number of slaves taken from each ethnic group

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[14]Men surveys are carried out only for a subsample of the households, resulting in a smaller sample of male respondents relative to the sample of female respondents.

during the transatlantic slave trade.[15] While Western Africa represented the greatest source of slaves, the Eastern coast was also affected. By comparing the maps in Figures 2 and 3, we can see how my sample comprises all the countries that were most affected by the transatlantic slave trade, with the exception of Angola.

I build two variables that measure the number of slaves taken from an ethnic group during the transatlantic and Indian Ocean slave trade, respectively. I follow Nunn and Wantchekon (2011) and, in absence of compelling population estimates for the period before the slave trade, I normalize the number of slaves taken from an ethnic group by the area of land historically inhabited by the group. The distribution of the slave trade variables is severely right skewed. To reduce the influence of outliers the variables are winsorized at the 5% level.[16]

The classification of the respondents' ethnic groups used in the DHS is different from the Murdock's one, requiring a matching between the two datasets. I was able to match $90, 5\%$ of female respondents and 89.8% of male respondents in the *DHS* to the ethnic groups in the slave trade dataset.[17]After dropping the respondents whose ethnic group was not matched to the slave trade data, we are left with a final sample of 583,562 women and 222,970 men.[18]

In my analysis, I use a wide array of historical and geographic controls varying at the ethnic group level. I describe these controls as well as their sources in the next Section.

Table A1 in the Appendix presents summary statistics for the main variables in the analysis.

3.3. **Empirical Specification.** I explore the relationship between the exposure to the slave trade of a woman's ethnic group and her current employment status by estimating the following equation:

$$(3.1) \quad y_{i,e,c} = \alpha_c + \beta \, Transatlantic \ Trade_e + \gamma \, Indian \ Ocean \ Trade_e + X'_{i,e,c}\Delta + Z'_e\Omega + \varepsilon_{i,e,c}$$

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[15]The map refers to locations in the late nineteenth century.

[16]As an alternative, we can use the natural log of one plus the normalized slave trade measures. The results are qualitatively unchanged and they are presented in the Appendix.

[17]Similarly, I match 90.5% of the female respondents in the Afrobarometer surveys that will be used in the analysis in Section 5.

[18]For many of the groups, the matching is straightforward as the name used in the DHS is the same or very similar to the one used by Murdock. When the name of an ethnic group is not found in Murdock's classification, this is typically because an alternative group's name is used. In these cases, online sources were used to correctly match the ethnicity to the slave trade data. One of the most useful sources of information on alternative ethnic groups' names was the Joshua Project website (http://www.joshuaproject.net/). For most of the unmatched ethnicities, the respondent lists her nationality as ethnicity.

Figure 3. Ethnic group-level exposure to the transatlantic slave trade
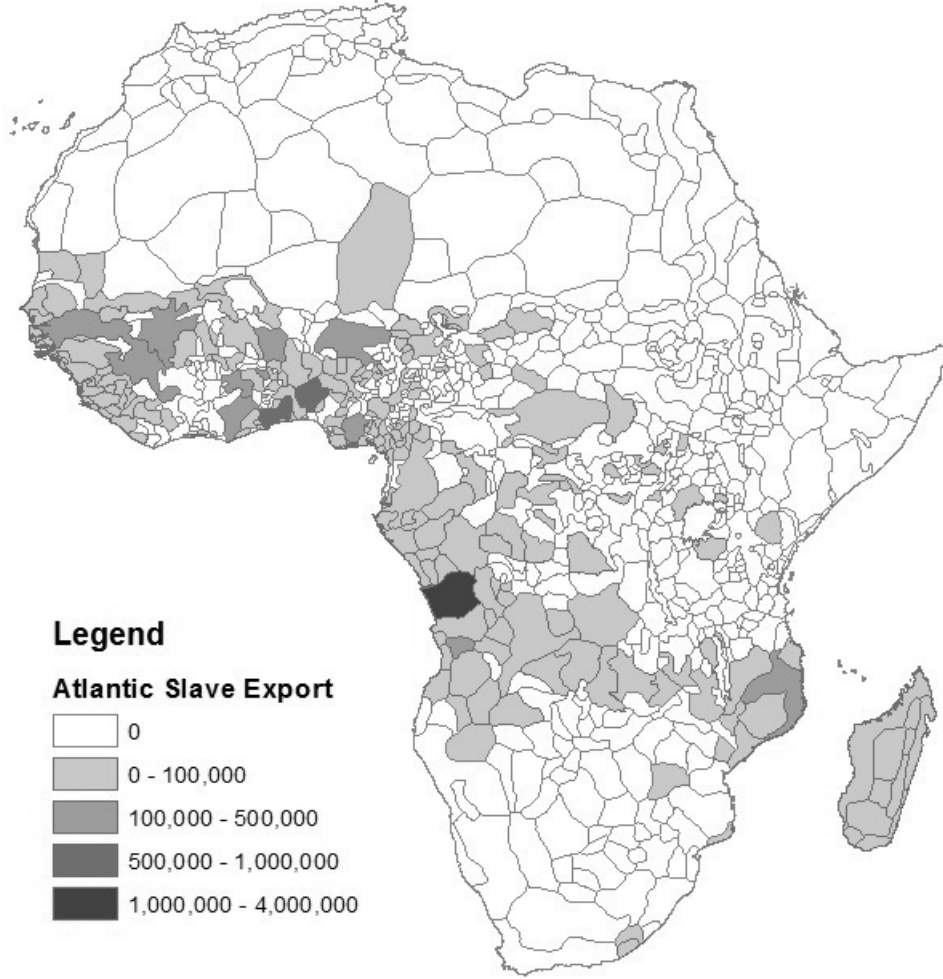
Notes: The figure shows the spatial distribution of the number of slaves taken from each ethnic group during the transatlantic slave trade. The ethnic groups and their location are from Murdock (1959). Data on the number of slaves taken from each group is from Nunn and Wantchekon (2011).

where i indexes a woman who belongs to ethnic group e and lives in country c. *Transatlantic Trade*$_e$ and *Indian Ocean Trade*$_e$ are the number of slaves taken from an ethnic group during the transatlantic and Indian Ocean slave trades, respectively, normalized by the area of land historically inhabited by the group. The coefficient of interest is β, which captures the effect of a woman's ancestors' exposure to the transatlantic slave trade on her employment status. The inclusion of the variable *Indian Ocean Trade*$_e$ provides a falsification test: if my hypothesis is correct, this measure should not have a positive impact on the outcome variables, since the Indian Ocean slave trade did not lead to a shortage of men in the areas affected.[19]

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[19]If anything, given that during the Indian Ocean slave trade the majority of slaves were females, we could find a negative impact of the Indian Ocean slave trade on women's participation in the labor

I control for a set of covariates at the individual level ($X'_{i,e,c}$) and at the ethnic group level (Z'_e). The individual-level controls include a full set of age fixed effects, a dummy for the respondent being married, an indicator turning one if the individual lives in a urban location, an indicator variable that equals one if the respondent is Christian and an indicator variable taking value one if the respondent is Muslim.

A crucial concern for the causal interpretation of the OLS estimates is the possible presence of an omitted variable that is correlated with both current women's employment status and with the degree to which different groups were affected by the transatlantic slave trade. For instance, if groups with ex-ante more equal gender norms were more likely to be affected by the transatlantic slave trade, this would translate in an estimate of β that is biased upward. The ethnicity-level controls are meant to alleviate these concerns.

Following Nunn and Wantchekon (2011), I include four variables that capture the historical prosperity of an ethnic group, which can be correlated with initial attitudes towards gender roles and with exposure to the slave trade. First, to account for the initial disease environment, I control for the malaria ecology of the land that was inhabited by the ethnic group using the Malaria Stability Index (Kiszewski et al. 2004). Second, to account for precolonial level of urbanization, I include the number of cities with more than 20,000 inhabitants that were present in 1400 on the land inhabited by the ethnic group. Third, using data from Murdock (1967)'s *Ethnographic Atlas*, I include a set of fixed effects for the number of jurisdictional hierarchies beyond the local community, which captures the level of complexity of an ethnic group's political institutions.[20] Fourth, using again information recorded in the *Ethnographic Atlas*, we can include an additional proxy for initial population density, namely a set of dummies for precolonial settlement patterns, ranging from fully nomadic to complex settlements. Finally, I control for the fraction of the land historically inhabited by the ethnic group that is suitable to the cultivation of crops, using data from the FAO's Global Agro-Ecological Zones database (GAEZ).

Groups more affected by the slave trade could have been differentially influenced by the European colonizers and this influence could translate into a higher level of female labor force participation today. For this reason, I control for an indicator variable taking value one if a part of the railway network built by the Europeans was on the

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force. If the same channels described in Grosjean and Khattar (2015) are at work, a shortage of females should lead to a long-run decline in women's employment. However, historical records show that the Indian Ocean slave trade was considerably less severe than the transatlantic slave trade. This is confirmed by the different mean values of the two slave trade variables in Table A1.

[20]To match ethnic groups between Murdock's map and the *Ethnographic Atlas*, I use the concordance in the AfricaMap project, available at `https://worldmap.harvard.edu/data/geonode:murdock_ea_2010_3`.

land of the ethnic group. I also include a dummy that takes value one if a European explorer traveled in the land of the ethnic group. Last, I control for a variable measuring the number of religious missions per square kilometer of an ethnic group's land during the colonial period.

Data from Besley and Reynal-Querol (2014) allow me to control for an additional potential omitted variable, namely historical warfare in the precolonial period. Looking within Africa, Besley and Reynal-Querol (2014) find that a history of precolonial conflict is associated with underdevelopment and lower levels of trust today, which could in turn be associated with women's employment status and gender norms. To account for the possibility that ethnic groups that were involved in conflicts in the precolonial period were more severely affected by the slave trade, I include as control the number of conflicts between 1400 and 1700 in the area inhabited by the ethnic group.

Hansen et al. (2015) show evidence that societies that relied more on hunting and gathering have developed more equal gender norms. Since the initial structure of an ethnic group's economy could also be correlated with its exposure to the slave trade, I use data from the *Ethnographic Atlas* to control for the ethnic group's reliance on hunting and gathering and for the presence of large domesticated animals.[21]

Finally, since in some parts of Africa proximity to the coast correlates both with historical distance from the trade networks of the Saharan Desert and with exposure to the slave trade, I control for the distance of an ethnic group's centroid to the closest city and the closest route in the Saharan trade.

In the baseline specification I include country-survey fixed effects, α_c, to take into account country-level institutional factors that could potentially affect current labor force participation and also be correlated with the history of the slave trade.

Finally, in order to account for potential within-group correlation of the residuals, throughout the analysis standard errors are clustered at the ethnic group level.

4. The Long-Run Impact of the Transatlantic slave trade On FLFP

4.1. **Main Results.** Table 1 presents the OLS estimates of the effect of the slave trade on current women's participation in the labor force. In column 1 I include only individual-level controls, while in column 2 I add the set of historical ethnic group-level controls.[22] The coefficient on the transatlantic slave trade variable is positive, statistically significant and unaffected by the inclusion of the historical controls. The

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[21]Using information from the *Ethnographic Atlas*, Alesina et al. (2013) show that individuals whose ancestors used the plough have more unequal gender roles today. However, since there is essentially no variation in the historical use of the plough in Sub-Saharan Africa, this does not represent a confounder in my analysis.

[22]The number of observations decreases slightly as the historical controls are introduced, because of missing values in some of the historical variables for a small number of groups.

magnitude of the effect is large: a one standard deviation increase in a woman's ancestors' exposure to the transatlantic slave trade increases her likelihood of being in the labor force by between 2.7 and 3 percentage points. This effect corresponds to a 4.6-5.1% increase relative to the average female labor force participation rate among women whose ethnic group was unaffected by the transatlantic slave trade (see last row of the table).[23] While the specification of column 2 includes a large set of historical controls, an additional concern is that ethnic groups with ex-ante different levels of women's involvement in activities outside the house were differentially affected by the transatlantic slave trade. To address this concern, in column 3 I use information from the Ethnographic Atlas to further control for the historical female participation in agriculture in the respondent's ethnic group, finding essentially identical results. One shortcoming is that this variable is missing for a large number of ethnic groups, significantly reducing the sample size. For this reason, I exclude this control from the rest of the analysis to focus on the full sample of respondents.[24]

Figure 4 presents a graphical representation of the effect and it shows that the result is not driven by a small number of outliers.[25]

Importantly, the results show that, in line with the history of the Indian Ocean slave trade, this slave trade did not have an effect on the long-run evolution of gender norms. The coefficients on the variable *Indian Ocean Trade* are negative and statistically insignificant.[26] This suggests that, rather than being a general byproduct of an ethnic group's history of slavery, the long run increase in women's labor force participation estimated in Table 1 is the effect of the unbalanced sex ratio generated by the slavers'

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[23]As a comparison, Alesina et al. (2013)'s individual-level estimates imply that a one-standard-deviation increase in traditional plough use leads to a reduction in female labor force participation of 7.3 percentage points.

[24]In Appendix Table A2 I show the coefficients on all the historical controls included in column 3 of Table 1. Consistent with the findings in Nunn (2014) on missionary influence on long-run female education, religious missions are positively correlated with today FLFP. Consistent with the findings in Hansen et al. (2015), ethnic groups that relied more on gathering have higher FLFP today. Ethnic groups that were more involved in precolonial conflicts have lower FLFP today. I do not find strong evidence that in groups that were historically more prosperous, women have different levels of participation to the labor force: while groups with a lower precolonial level of urbanization have lower FLFP today, the coefficients on precolonial settlement patterns and jurisdictional hierarchies beyond the local community are insignificant.

[25]The figure is constructed by first partialing out the controls included in column (2) of Table 1. It shows the mean of the residuals from the regression of *FLFP* on the controls for each equal-sized bin of the residuals from the regression of *Transatlantic Trade* on the controls.

[26]While the estimated coefficient is even larger than the coefficient on the *Transatlantic Trade* variable, the effect is very small in magnitude once we consider the distribution of the *Indian Ocean Trade* variable, whose mean and standard deviation are considerably smaller than those of the transatlantic slave trade measure.

Table 1. OLS estimates, the effect of the slave trade on FLFP

|	FLFP (1)	FLFP (2)	FLFP (3)	FLFP (4)	FLFP (5)	FLFP (6)
Translatlantic Trade	0.048***	0.054***	0.059***	0.056***	0.073***	0.072***
	(0.013)	(0.011)	(0.013)	(0.011)	(0.012)	(0.012)
Indian Ocean Trade	-0.059	-0.120	-0.061	-0.111	-0.146	-0.133
	(0.140)	(0.158)	(0.175)	(0.174)	(0.205)	(0.196)
Observations	583,562	563,379	470,183	563,054	386,503	386,317
R-squared	0.16	0.17	0.18	0.18	0.14	0.14
Ethnic Groups	261	243	170	243	241	241
Country-survey FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	No	Yes	Yes	Yes	Yes	Yes
Hist. Part. Agriculture	No	No	Yes	No	No	No
Education	No	No	No	Yes	Yes	Yes
Polygyny	No	No	No	No	Yes	Yes
Transatlantic std. dev.	0.564	0.564	0.570	0.564	0.564	0.564
Indian Ocean std. dev.	0.033	0.031	0.034	0.031	0.031	0.031
Dep. var. mean unaffected	0.588	0.586	0.589	0.586	0.635	0.635

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *Indian Ocean trade* is the number of slaves exported during the Indian Ocean slave trade normalized by the area of land historically inhabited by the ethnic group. The baseline controls are: age fixed effects, a dummy for the respondent being married, a dummy for the respondent being Muslim, a dummy for the respondent being Christian, and a dummy for the respondent living in a urban location. The historical controls are at the ethnic group level and include: the number of cities in 1400, average malaria presence, a set of fixed effects for the number of jurisdictional hierarchies beyond the local community in the precolonial period, a set of fixed effects for precolonial settlement patterns, a dummy for integration with the colonial railway network, a dummy for a precolonial contact with European explorers, the number of missions per square kilometer during the colonial period, the number of conflicts between 1400 and 1700 in the area inhabited by the ethnic group, an ethnic group's historical reliance on hunting, an ethnic group's historical reliance on gathering, the presence of large domesticated animals, the distance of an ethnic group's centroid to the closest city and the closest route in the Saharan trade, and the fraction of the land historically inhabited by the ethnic group that is suitable to the cultivation of crops. *Hist. Part. Agriculture* is the historical female participation in agriculture in a woman's ethnic group. *Education* indicates a set of fixed effects for number of years of schooling. *Polygyny* is a dummy variable for a woman having co-wives. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

preference for male slaves during the transatlantic slave trade.[27] Importantly, the validity of this placebo test rests on the assumption that, apart for the demographic shock that was specific to the transatlantic trade, there was no other historical difference between these two slave trades that can explain their differential impact on today FLFP. While historical accounts do not point to a clear factor that could have potentially led to such a differential impact, this placebo test should be read with this caveat in mind.

[27]To conserve on space, I do not report the coefficients on *Indian Ocean Trade* in the next tables of the paper. The results are often insignificant and, in general, consistent with the Indian Ocean slave trade not affecting cultural beliefs about the role of women. The variable *Indian Ocean Trade* is always included as a control in all the tables throughout the paper.

Figure 4. Historical exposure to the transatlantic slave trade leads to higher current FLFP
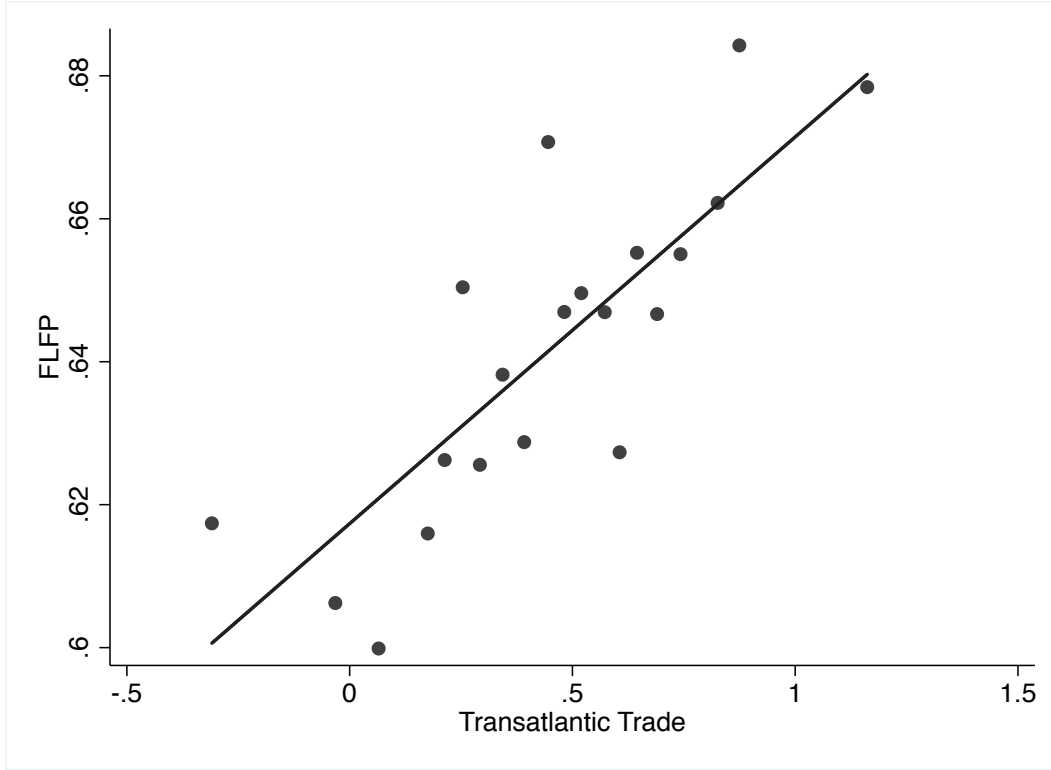
Notes: The figure presents a non-parametric representation of the results in column 2 of Table 1. It is constructed by first partialing out the controls included in column 2 of Table 1, by regressing the variables *FLFP* and *Transatlantic Trade* on the full list of controls (including the Indian Ocean slave trade variable). The residuals from the regression of *Transatlantic Trade* on the controls are then divided in 20 equal-sized bins and, in each bin, I plot the mean of the residuals from the regression of *FLFP* on the controls. The best-fit line is estimated on the underlying data.

In column 4 of Table 1 I investigate whether the positive effect on FLFP can be fully explained by a higher educational level among the female descendants of the groups most exposed to the transatlantic slave trade. I do so by including a full set of fixed effects for the respondent's number of years of education. Despite the potential endogeneity of this variable, since the shock itself could have led to greater human capital accumulation for women, the inclusion of this control is a useful robustness check. As shown in column 4, the estimated coefficient remains virtually unchanged, suggesting that the effect cannot be explained by higher human capital among women belonging to ethnic groups more exposed to the transatlantic slave trade.

Historians have pointed to the strengthening of polygyny as a further implication of the relative abundance of women in the regions most affected by the transatlantic

slave trade.[28] Even though polygyny is typically negatively correlated with measures of female empowerment (Doepke et al., 2012), in column 5 I investigate whether the results are robust to controlling for an indicator that takes value one if the respondent has one or more co-wives. The coefficient on the *Transatlantic Trade* variable remains positive and statistically significant.[29] Finally, column 6 shows that the results are unchanged when both education and polygyny are included as controls.[30]

In the Appendix, I present additional robustness checks. First, I show that the standard errors on the main variable are very similar if adjusted for two-way clustering within ethnic group and village, or if I use Conley (1999)'s adjustment for two-dimensional spacial dependence, or if clustered by country, using a block bootstrap procedure (Table A4). Second, in order to rule out that failing to control for the trans-Saharan and Red Sea slave trades lead to biased estimates, I show that the results are robust to the exclusion of surveys from countries that were strongly exposed to these two slave trades, i.e. Mali, Kenya, Niger, Nigeria (Table A5). Finally, we obtain very similar results using data from the Afrobarometer (Table A6), which provides an important robustness test given the different phrasing of the question on FLFP between the DHS and the Afrobarometer.[31] [32]

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[28]However, as shown in Table A3 in the Appendix, I do not find that polygyny is more widespread among women whose ancestors were more affected by the transatlantic slave trade. This is consistent with Fenske (2013), who also shows that the positive impact of the slave trade on polygyny disappears once country fixed effects are included.

[29]The coefficient is larger than in the specifications in columns 1-4. However, the number of observations drops as we move from column 4 to column 5 since the question on whether a woman has co-wives is not asked to women who are not married or in a union. This change in the sample composition is responsible for the increase in the size of the coefficient: in unreported results, I find that running the specification in column 4 restricting the sample only to women who are currently married or in a union gives an estimated coefficient of 0.072 (standard error 0.012). Alternatively, instead of using an individual-level indicator of polygyny, we can control for the average share of a woman's co-ethnics that have co-wives, leaving the sample size unchanged. The estimated coefficient on *Transatlantic Trade* using this alternative specification is 0.053, with a standard error of 0.011.

[30]Both education and polygyny can be considered "bad controls" in the sense of Angrist and Pischke (2009). For this reason, these controls are excluded in the next part of the analysis. However, as a robustness check, I show in the Appendix that none of the results in the paper is affected by the inclusion of these controls.

[31]A one standard deviation increase in exposure to the transatlantic slave trade increases FLFP by 2.4 percentage points. Relative to the average female labor force participation rate among women whose ethnic group was unaffected by the transatlantic slave trade, this corresponds to a 7.7% increase.

[32]While results focus on the effect of the total number of slaves exported during the centuries of the slave trades, one may wonder whether the duration of the shock matters, *i.e.* whether ethnic groups that were exposed to the transatlantic slave trade for more centuries are characterized by higher FLFP today. In the Appendix, I provide suggestive evidence against this hypothesis, by showing that, among groups that exported similar numbers of slaves, there is not a differential effect of the number of centuries of exposure to the transatlantic slave trade on current FLFP. This is consistent with the literature on the role of much shorter demographic shocks such as wars as drivers of changes in FLFP.

Having shown that belonging to an ethnic group that was more exposed to the transatlantic slave trade is associated with greater women's participation in the labor force, we can analyze which specific occupations are responsible for the result. One potential interpretation of the results presented so far is that regions that experienced the transatlantic slave trade more severely remained predominantly agricultural-based. This would be consistent with Nunn (2008)'s finding that the slave trade led to economic underdevelopment and with Nunn and Wantchekon (2011)'s description of the culture of mistrust generated by slavery, which in turn could have hindered commerce in these areas. At the same time, the almost complete absence of plough agriculture in Sub-Saharan Africa has led to an involvement of women in the fields that has been historically greater than in other parts of the developing world.[33] One could then hypothesize that the increase in FLFP found in Table 1 can be rationalized by an increase in the likelihood that a woman is employed in the agricultural sector.

Table 2 presents the results of the estimation of equation (3.1) using specific occupational dummies as dependent variable.[34] Contrary to what hypothesized in the above discussion, exposure to the transatlantic slave trade is not significantly associated with a woman's probability of being employed in agriculture. The estimate in columns 5 suggests that the increase in a woman's probability of being employed can be entirely rationalized by an increase in the likelihood that she has a relatively higher ranking occupation. A one standard deviation increase in a woman's ancestors' exposure to the transatlantic slave trade increases her likelihood of being employed in one of these occupations by 2.7 percentage points. Exposure to the transatlantic slave trade has not a significant impact on the probability of having a clerical or manual occupation, and it leads to a decrease in the probability of being employed as domestic servant, pointing towards a substitution away from women's involvement in activities within the domestic sphere.

The finding that a higher ancestors' exposure to the transatlantic slave trade leads to a higher probability of employment in a relatively higher ranking occupation is consistent with women belonging to ethnic groups that were more exposed to this shock being more likely to enter areas of work where women may face larger barriers to entry.[35] Finally, this is particularly relevant given that this set of occupations are

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[33]As of 2006, female employment in the agricultural sector as a share of total employment in agriculture was 43.7% in Sub-Saharan African, in comparison to 32.3% in Middle East and North Africa, 21% in Latin America and the Caribbean, 36.3% in South Asia, and 42.3% in South East Asia and the Pacific (ILO: Global Employment Trends Brief, January 2007).

[34]The table shows the results when only the individual-level and historical controls are included. Table A7 in the Appendix shows that the results are unchanged if we additionally control for education and polygyny.

[35]Theoretically, we expect this historical shock not to have a significant impact in those areas of work where women were already present before the slave trade took place. In sub-saharan Africa, women's

Table 2. OLS estimates, the effect of the slave trade on occupational choices

	Agriculture (1)	Clerical (2)	Manual (3)	Domestic (4)	High Ranking (5)
Translatlantic Trade	0.018	-0.000	-0.010	-0.004**	0.048***
	(0.016)	(0.001)	(0.008)	(0.002)	(0.011)
Observations	549,009	549,009	549,009	549,009	549,009
R-squared	0.23	0.02	0.05	0.07	0.14
Ethnic Groups	243	243	243	243	243
Country-survey FE	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.276	0.011	0.061	0.026	0.224

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Agriculture* is an indicator variable taking value one if the respondent is employed in agriculture. *Clerical* is an indicator variable taking value one if the respondent is employed in a clerical job. *Manual* is an indicator variable taking value one if the respondent is employed in a manual job. *Domestic* is an indicator variable taking value one if the respondent is employed as a domestic servant. *High Ranking* is an indicator variable taking value one if the respondent is employed in a higher ranking occupation. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

significantly more likely to be performed in the formal economy, pointing towards significant welfare gains for women subjected to this historical shock.[36]

4.2. **Men's employment as a falsification test.** A potential alternative interpretation of the results presented so far is that the transatlantic slave trade led to structural changes in the economy that were conducive to a persistent higher employment across both genders. While previous research points towards a negative impact of the slave trade on long-term development (Nunn 2008), no study has analyzed the long-run effects of this historical shock on the labor market at a micro-level. Therefore, analyzing the long-run impact of the transatlantic slave trade on men's employment probability represents an important falsification test.

Table 3 presents evidence against this alternative account. Odd columns present the results of the estimation of equation (3.1) on the sample of men interviewed in the DHS,

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participation in agriculture was already very common before the slave trade, given the widespread presence of crops that do not require the use of the plough. Indeed, among the 171 ethnic groups in the dataset, only 24% of them were historically characterized by a larger participation in agriculture of men relative to women. As outlined in Section 2.1, historical evidence suggests that the demographic shock caused women to enter new areas of work. We see a large long-run effect of the slave trade in those occupations where women may face larger barriers to entry, like the sales and services sectors or professional occupations, since they require longer hours spent outside of the domestic sphere.

[36]Table A8 and A9 in the Appendix show that the effects on FLFP and occupational choices are qualitatively identical if we use the natural log of one plus the normalized slave trade measures as explanatory variables.

Table 3. OLS estimates, Women's versus Men's Employment

Sample	Men (1)	Women (2)	Men (3)	Women (4)	Men (5)	Women (6)
Translatlantic Trade	-0.010**	0.050***	-0.012**	0.054***	-0.008	0.056***
	(0.005)	(0.013)	(0.006)	(0.010)	(0.005)	(0.010)
Observations	222,970	548,178	216,419	528,006	216,125	527,687
R-squared	0.31	0.16	0.31	0.17	0.32	0.18
Ethnic Groups	235	261	219	243	219	243
Country-survey FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	No	No	Yes	Yes	Yes	Yes
Education	No	No	No	No	Yes	Yes
Transatlantic std. dev.	0.564	0.567	0.563	0.567	0.563	0.567
Dep. var. mean unaffected	0.831	0.593	0.831	0.591	0.831	0.591

Notes: Standard errors in parentheses, clustered at the ethnicity level. In all columns, the dependent variable is an indicator variable taking value one if the respondent was ever employed in the last 12 months. Odd columns show the estimated coefficients for the sample of male respondents, while even columns show the estimated coefficients for the sample of female respondents. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

while even columns replicate the results of Table 1 restricting the sample of women to the surveys for which a corresponding male survey was conducted.[37] If anything, we find a negative, although small, long-run effect of a man's ancestors' exposure to the transatlantic slave trade on his likelihood of being employed.[38] Consistent with the transatlantic slave trade being responsible for a change in gender roles in the labor market, the results confirm that this historical shock led to higher labor force participation only among women.[39]

4.3. **The marriage market channel.** Turning to the issue of what explains the long-run effect of the transatlantic slave trade on female participation in market activities, I leverage the richness of the data to investigate the role played by cultural transmission within the family.

Fernandez, Fogli and Olivetti (2004) theorize that cultural beliefs about the role of women can be transmitted through a marriage market mechanism, according to which working mothers transmit to their sons a more positive view about working

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[37]Only for 5 out of 61 surveys a corresponding male survey was not conducted.

[38]The variable on male LFP is defined in the same way as the variable *FLFP*.

[39]When viewed in combination with the insignificant effect of the Indian Ocean slave trade on FLFP, this result provides further reassurance that the demographic shock that characterized the transatlantic slave trade is the likely channel behind the effect on FLFP that I uncover. Table 3 shows that a potential confounding factor that would invalidate the use of the Indian Ocean slave trade as placebo test needs to both (i) vary between the two different slave trades, and (ii) predict an effect of the transatlantic slave trade on current employment probability for women but *not* for men.

women, a view which is then reflected into the labor market decisions of the sons' future households. If this mechanism is at work, we expect women whose husband belongs to an ethnic group that was more exposed to the transatlantic slave trade to have higher levels of FLFP. The *DHS* provides information on a woman's husband's ethnicity, allowing us to shed light on this channel.

As a benchmark, I start by re-estimating the main specification restricting the sample to married women with non-missing information on the husband's ethnicity. The coefficient in column 1 of Table 4 shows that, among married women, a one standard deviation increase in a woman's ancestors' exposure to the transatlantic slave trade increases her likelihood of being in the labor force by 4 percentage points.[40]

Exploiting information on a woman's husband's ethnicity, we can separately isolate the effect of a husband's ancestors' exposure to the slave trade from that of a woman's own ancestors' exposure. I do so by including a full set of country-survey-woman's ethnicity fixed effects, holding constant a woman's own ancestors' exposure to the slave trades. By doing so, we are comparing women whose ancestors were hit by the slave trade in the exact same way, but who married men whose ancestors' exposure to this historical shock differed. This allows us to isolate the extent to which a woman's labor force participation depends on her husband's beliefs and historical exposure to the transatlantic slave trade. In practice, I estimate a version of equation (3.1) in which I control for country-survey-woman's ethnicity (instead of country-survey) fixed effects and in which all the ethnic group-level variables are measured using the ethnicity of the husband. The results in column 2 show that the transatlantic slave trade has led to a long-run effect on males' views on gender roles, which translate in higher FLFP among women who married men whose ethnic group was more severely hit by this historical shock. Among women belonging to the same ethnic group, a one standard deviation increase in the husband's ancestors' exposure to the transatlantic slave trade is associated with a statistically significant 1.1 percentage points increase in FLFP.

The evidence that a greater number of slaves taken from a man's ethnic group affects his wife's working decisions allows us to interpret the coefficient in column 1 as the likely combination of two effects. The first effect stems from a direct impact of a woman's ancestors' attitudes about working women on her own views about gender roles and the social cost of working. The second effect works through a marriage market mechanism as described in Fernandez, Fogli and Olivetti (2004): since women are more likely to

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[40]Table A10 in the Appendix shows that the results are unchanged if we additionally control for education and polygyny.

Table 4. OLS estimates, the marriage market channel

	FLFP (1)	FLFP (2)	FLFP (3)
Translatlantic Trade	0.071***		0.045***
	(0.015)		(0.009)
Translatlantic Trade Husband		0.021**	
		(0.009)	
Observations	109,310	109,294	109,293
R-squared	0.14	0.18	0.17
Ethnic Groups	232	228	232
Country-survey FE	Yes	No	No
Country-survey-woman's ethnicity FE	No	Yes	No
Country-survey-husband's ethnicity FE	No	No	Yes
Individual Controls	Yes	Yes	Yes
Historical Controls	Yes	Yes	No
Transatlantic std. dev.	0.558	0.559	0.558
Dep. var. mean unaffected	0.652	0.657	0.652

Notes: Standard errors in parentheses, clustered at the ethnicity level (of the female respondent in columns 1 and 3, and of the husband in column 2). The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *Transatlantic Trade Husband* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group for the woman's husband's ethnicity. Historical controls in column 2 are measured using the ethnicity of the husband. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* (or *Transatlantic Trade Husband*) is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

marry co-ethnics,[41] a woman belonging to an ethnic group that was more severely hit by the transatlantic slave trade has greater incentives to work outside the house since her husband is on average less averse to having a working wife.

In an effort to separately identify the magnitude of these two channels, I estimate a version of equation (3.1) which includes a full set of country-survey-husband's ethnicity fixed effects. In this way, I isolate the effect of a woman's own ethnic group's exposure to the transatlantic slave trade while holding constant the ethnicity of the husband. After directly controlling for a woman's husband beliefs, the coefficient on *Transatlantic Trade* provides an estimate of the direct impact of a woman's own ancestors' views on working women on her likelihood of being in the labor force.

The coefficient in column 3 reveals that, among women whose husbands belong to the same ethnic group, a one standard deviation increase in the exposure to the transatlantic slave trade of a woman's own ethnic group increases FLFP by 2.3 percentage

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[41]Among the 109,310 women in the sample of column 1 of Table 4, 83.6% are married to a co-ethnic. Among other explanations, this is consistent with evidence on the presence of own-ethnicity bias in Africa, with individuals having more positive views of co-ethnics (Lowes et al. 2015).

points. The effect is about 40% smaller than the one estimated in column 1, suggesting that about 40% of the effect of the transatlantic slave trade on FLFP stems from an effect of the transatlantic slave trade on a woman's husband's beliefs.

The evidence in this Section shows that the historical persistence of the demographic shock caused by the transatlantic slave trade does not solely follow from cultural transmission of gender norms from parents to their daughters, but also from cultural transmissions from parents to sons, as women whose husband belongs to an ethnic group that was more affected by this historical shock are more likely to be in the labor force. Importantly, as marriage patterns are clearly not random, we cannot interpret the estimates presented in this Section as the *causal* effect of marrying a man whose ancestors were more exposed to the transatlantic slave trade. Clearly, women who are *ex ante* more likely to work outside of the domestic sphere will tend to match with men with more favorable views of working women. As a consequence, the estimates in Table 4 should be intended as the combination of two effects: first, holding fixed women's beliefs, a husband's beliefs will have an impact on the intra-household decisions about the division of labor after marriage; second, women who are *ex ante* more likely to work outside of the domestic sphere will match in the marriage market with men belonging to ethnic groups that were more affected by the transatlantic slave trade, as these men have on average more equal gender-roles attitudes.

4.4. **Isolating the Cultural Transmission Channel.** In this Section, I investigate the extent to which the long-run effect of the transatlantic slave trade of FLFP can be explained by the transmission of specific cultural values. An alternative potential mechanism explaining persistence is unrelated to cultural transmission and rests on the hypothesis that the temporary shock to the role of women during the centuries of the slave trade permanently shaped markets and local institutions in a way that favors women's participation in the labor force today. For instance, the shortage of men may have led to specialization in less capital-intensive activities, reducing women's costs of entering the labor market.

In order to identify the role played by cultural transmission, I exploit the fact that individuals of different ethnic groups have relocated over the centuries and therefore today we find respondents of different ethnic origins living in the same location. The DHS includes information on the enumeration area (EA) of the respondent, allowing to control for the specific location in which a respondent currently lives. In urban areas an EA corresponds to a city block, while in rural areas it is typically a village. In my sample, there are an average of 23 women and 2.8 different ethnic groups within each EA.

I estimate a version of equation (3.1) in which I include EA-survey fixed effects, comparing only women currently living in the same location.[42] These specifications isolate the mechanism of cultural persistence, since relying on this finer variation allows one to isolate the impact of an individual's ethnic origin while keeping constant the current external environment, and thus controlling for any impact of the slave trade on the characteristics of the respondent's location.

Table 5 presents the results of this exercise. When compared to the results in Table 1, the coefficients on the *Transatlantic Trade* variable fall by about 50% but remain statistically significant. Among women currently living in the same location, a one standard deviation increase in a woman's ancestors' exposure to the transatlantic slave trade increases her likelihood of being in the labor force by 1.5 percentage points.[43]

Since this empirical strategy is made possible by the fact that individuals migrated over the past centuries, a potential concern is that the transatlantic slave trade affected not only FLFP but also the probability that individuals moved from the land inhabited by their ancestors. This would represent a problem for the interpretation of the estimates in Table 5 if there is also a differential impact of the transatlantic slave trade on FLFP between movers and non-movers. Column 1 of Table A12 in the Appendix shows that among women currently living in the same location those belonging to ethnic groups that were hit more severely by the transatlantic slave trade are less likely to be movers.[44] However, column 2 of Table A12 shows that in the specification exploiting cross-country variation there is not a differential effect of the transatlantic slave trade on FLFP for movers and non-movers, suggesting that belonging to an ethnic group that was more affected by the transatlantic slave trade does not differentially affect FLFP depending on whether a woman currently lives outside or inside the land historically inhabited by her ancestors. As a further robustness test, column 3 of Table A12 shows that the estimate of column 2 of Table 5 is not affected by the inclusion of a control for the distance of the respondent's current location from the centroid of the land historically inhabited by her ethnic group. Finally, I re-estimate the within-EA specification of column 2 of Table 5 only on the subset of women who are movers and additionally controlling for the current distance from the respondent's ancestors' land.

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[42]Using the DHS, Michalopoulos et al. (2016) employ this strategy to isolate the effect of portable traits associated with ancestral lifeways on individual wealth and education.

[43]Consistent with the results of Table 2, Table A11 in the Appendix shows that the effect is entirely driven by a higher likelihood of having a relatively higher ranking occupation.

[44]I use the term "mover" to define individuals who live today in a location that was different from the one inhabited by their ancestors. Using coordinates information provided by the DHS and information on the location historically inhabited by ethnic groups I can build an indicator taking value one if a woman currently lives outside of the land historically inhabited by her ancestors. About 58% of women are classified as movers following this definition. Coordinates of the respondent's current location are not available for about 20% of observations.

Table 5. OLS estimates, the cultural transmission channel

	FLFP (1)	FLFP (2)	FLFP (3)	FLFP (4)	FLFP (5)
Translatlantic Trade	0.027***	0.029***	0.029***	0.036***	0.035***
	(0.007)	(0.005)	(0.005)	(0.006)	(0.006)
Observations	583,377	563,092	562,766	386,121	385,935
R-squared	0.32	0.32	0.32	0.33	0.33
Ethnic Groups	261	243	243	241	241
EA-survey FE	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Historical Controls	No	Yes	Yes	Yes	Yes
Education	No	No	Yes	No	Yes
Polygyny	No	No	No	Yes	Yes
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.588	0.586	0.586	0.635	0.635

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Column 4 of Table A12 shows that the coefficient on *Transatlantic Trade* is unaffected, providing further reassurance that the estimates are not driven by the comparison of movers and non-movers.

The results presented in this Section emphasize the role played by cultural beliefs in explaining variation in women's participation in the labor force, as women belonging to different ethnicities but living today in the same location have a probability of being employed that depend on the extent to which their ancestors were affected by the transatlantic slave trade. In particular, the estimates suggest that at least half of the effect of the transatlantic slave trade on FLFP is driven by cultural transmission of more equal gender norms across generations.

4.5. **Heterogeneous effects across cohorts.** A natural question arising from the above analysis is whether the long-run effect of the transatlantic slave trade on FLFP has been dissipating over time. Since economic development is typically associated to more equal gender norms, the effect of historical shocks on more recent cohorts may be muted by relatively higher levels of education and standards of living. Finding a positive effect of the transatlantic slave on FLFP even for relatively younger cohorts of women would provide evidence that historical shocks continue to play an important role even as material conditions change.

I can shade light on the evolution of the impact of the transatlantic slave trade over time by exploiting the availability of repeated cross-sectional surveys conducted in the

same country.[45] This allows us to estimate cohort-specific effects while controlling for age fixed effects. Specifically, I estimate the following augmented version of equation (3.1):

(4.1)
$$y_{i,e,t,c} = \alpha_c + \sum_{t=1948}^{1989} \beta_t \, Transatlantic \ Trade_e + \gamma \, Indian \ Ocean \ Trade_e + \theta_t + X'_{i,e,c}\Delta + Z'_e\Omega + \varepsilon_{i,e,c}$$

where the effect of the transatlantic slave trade on FLFP is allowed to be different for each cohort t of women, I add cohort-specific fixed effects θ_t, and α_c are country fixed effects in lieu of country-survey fixed effects.[46]

Figure 5 plots the estimated coefficients β_t for each cohort of women born between 1948 and 1989. The coefficients are relatively stable for cohorts of women born between the 1950s and the 1970s and, while on average smaller in magnitude, the effect is positive and significant also for the cohorts born in the 1980s.[47] The results point towards a limited dissipation over time of the effect of the transatlantic slave trade on women's participation in the labor force, with women born in the 1980s and one standard deviation apart in the distribution of the transatlantic slave trade variable still having a 2.4 percentage points average difference in their employment probability.

4.6. **Instrumental Variable Strategy.** While the results presented so far are robust to controlling for a wide array of observable historical factors, there could still be unobservable omitted variables that are correlated with both an ethnic group's exposure to the transatlantic slave trade and current FLFP. A priori, the direction of the potential omitted variable bias is not clear. Consider for instance the possibility that ethnic groups that were historically characterized by higher involvement in warfare may have experienced the slave trade more severely. On the one side, as more powerful military societies were probably ex-ante more likely to be male dominated, this could drive down the OLS estimates towards zero. On the other side, women belonging to these groups may have been historically more likely to work outside the house to substitute for the men involved in warfare, which would drive the estimates away from zero.

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[45]Repeated cross-sections are available for 18 of the 21 countries covered in the analysis.

[46]I have to exclude women born in the 90s as they are too young to be present in multiple cross-sections in the same country for a sufficient number of countries.

[47]Since, because of data availability, the effects for the cohorts of women born in the 1980s are identified using only variation across women in their 20s, we cannot rule out that the decreased magnitude of the estimated coefficients is the result of age-specific heterogeneous effects in the impact of the transatlantic slave trade. For instance, women born in the 1980s are significantly less likely to be married at the time in which they take the survey, and thus less likely to be affected by their husband's attitudes about working women – a factor that was shown to play a significant role.

Figure 5. Heterogeneous effects of the transatlantic slave trade across cohorts
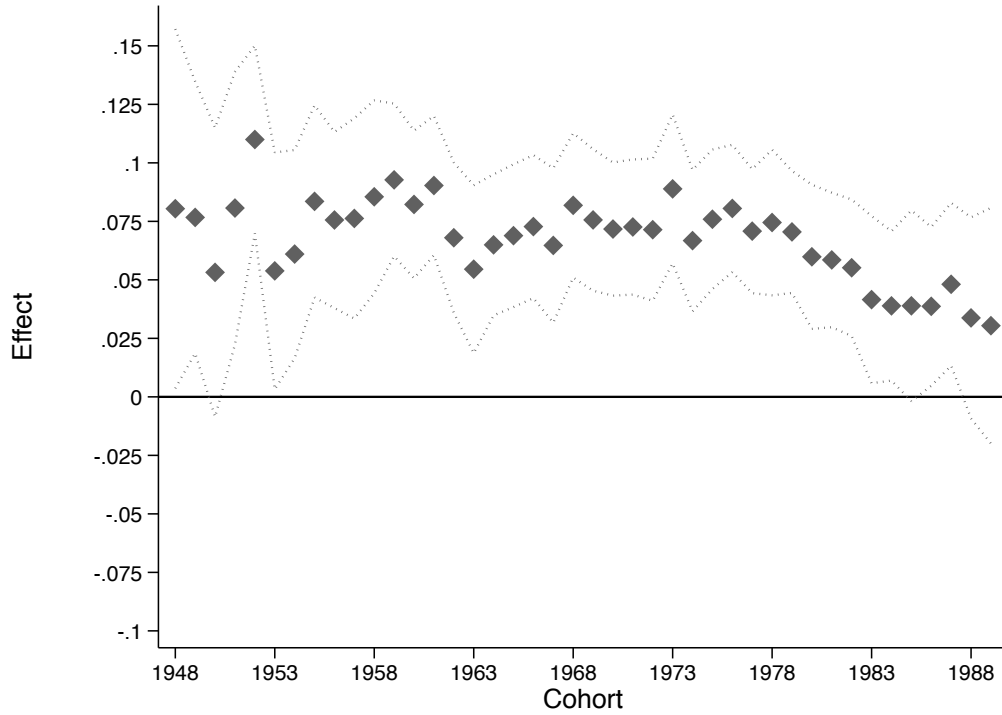
Notes: The figure presents the coefficients β_t for each cohort of women born between 1948 and 1989 estimated in equation (4.1), together with 95% confidence intervals. The individual-level and historical controls included are described in Table 1.

To address these concerns, in this Section I rely on the instrumental variable strategy suggested by Nunn and Wantchekon (2011). Traders purchased slaves at ports to ship them to the New World, making groups inhabiting areas closer to the coast more likely to be exposed to the external demand for slaves. Therefore I use an ethnic group's historical distance from the sea as instrument for the exposure to the transatlantic slave trade.[48] In addition, the use of an IV strategy has the benefit of yielding consistent estimates in presence of measurement error in the slave export variable.

I present IV estimates both for the specification with country-survey fixed effects and for the one with EA-survey fixed effects. The latter has the additional advantage of holding constant the external environment, reducing concerns that the instrument is correlated with characteristics of the respondent's current location that in turn affect current FLFP. The identification assumption is that, after controlling for the usual set of historical variables, among women currently living in the same country (or in the

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[48]An ethnic group's distance from the coast is built using Murdock (1959)'s map of the historical borders of African ethnic groups, and it measures the distance of the centroid of the area of land historically inhabited by the ethnic group to the closest point on the coast.

Table 6. IV estimates, the effect of the slave trade on women's labor market

	FLFP (1)	High Ranking (2)	FLFP (3)	High Ranking (4)
Second stage:				
Translatlantic Trade	0.048*	0.072***	0.050***	0.054***
	(0.027)	(0.021)	(0.013)	(0.011)
Observations	563,379	549,009	563,092	548,694
R-squared	0.17	0.14	0.32	0.27
Transatlantic std. dev.	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.586	0.224	0.586	0.224
First stage: dependent variable is Transatlantic Trade				
Historical Distance from Coast	-0.00096***	-0.00096***	-0.00109***	-0.00107***
	(0.00019)	(0.00019)	(0.00020)	(0.00019)
Observations	563,379	549,009	563,092	548,694
R-squared	0.69	0.69	0.90	0.90
Ethnic Groups	243	243	243	243
Fixed Effects	Country	Country	EA	EA
Individual Controls	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes
1st stage F-stat	30.30	30.51	40.15	39.45

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *High Ranking* is an indicator variable taking value one if the respondent is employed in a higher ranking occupation. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. The top panel shows the second stage estimates of *Transatlantic Trade*, while the bottom panel shows the first stage estimates of *Historical Distance from Coast*. "1st stage F-stat" indicates the value of the Kleibergen-Paap F statistic on the excluded instrument. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

same EA), the historical distance from the coast of a woman's ancestors affects her labor force participation today only through the exposure to the transatlantic slave trade.

Table 6 presents the estimates. The Kleibergen-Paap F statistic on the excluded instrument confirms that the instrument is a strong predictor of the exposure to the transatlantic slave trade, as places further from the coast were less likely to be affected. Most importantly, the second stage estimates confirm the OLS results: women belonging to groups that were more severely targeted by the transatlantic slave trade are today more likely to be employed and to have a relatively higher-ranking occupation.[49] The IV estimates are slightly larger than the OLS estimates.[50] This can be explained by measurement error in the slave export variable, consistent with the results in Nunn

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[49]Table A13 in the Appendix shows the results when the other occupational dummies are used as dependent variable. Similarly to the OLS estimates, the results are generally insignificant.
[50]However, in three out of the four specifications of Table 6 we cannot reject the null hypothesis of the consistency of the OLS estimates at the 5% level or lower

(2008). Alternatively, we cannot rule out the possibility that ethnic groups that exported more slaves in the transatlantic slave trade were initially characterized by a lower participation of women in activities outside the domestic sphere, an effect that is biasing the OLS estimates towards zero.[51]

5. The Effect on Fertility and Gender Norms in Other Domains

In the previous Section I have presented evidence that women belonging to ethnic groups that were more severely affected by the transatlantic slave trade are today more likely to be part of the labor force. In this Section, I investigate whether the demographic shock brought about by the transatlantic slave trade affected fertility and gender norms in domains other than the labor market.

Since women whose ancestors were more heavily enslaved in the transatlantic slave trade are today more likely to be in the labor force, we expect lower levels of fertility in these ethnic groups, since the costs of having children will be higher. I test this hypothesis using information on a woman's number of children and her age at first birth. The first two columns of Table 7 show the results for the fertility variable. Women belonging to ethnic groups that were more exposed to the transatlantic slave trade have fewer children: a one standard deviation increase in *Transatlantic Trade* translates into 0.05 fewer children ever born, a 3% reduction relative to the average number of children of women whose ancestors were not subjected to the transatlantic slave trade. The result holds even when we leverage variation only across women currently living in the same location.

Columns 3 and 4 of Table 7 show results for the subsample of women with children when the dependent variable is a respondent's age at first birth. Not only is the transatlantic slave trade associated with lower fertility today, but it also increased the average age at which a woman has the first child.[52]

Are ethnic groups that were more heavily affected by this shock characterized by more equal gender norms in domains other than the labor market? As discussed in Section 2.2, whether an increase in FLFP following the emergence of a female-biased sex ratio is accompanied by a more general shift towards more gender equality in other domains is theoretically ambiguous. A lower number of men relative to women could have decreased female bargaining power in the marriage market during the centuries

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[51]Table A14 in the Appendix replicates the results of Table 6 controlling for education and polygyny, finding essentially identical results.

[52]Tables A14 and A15 in the Appendix shows that the results are unchanged if I additionally control for education and polygyny, and when I instrument the transatlantic slave trade export measure with an ethnic group's historical distance from the coast.

Table 7. OLS estimates, the effect of the slave trade on fertility

	Number of Children (1)	Number of Children (2)	Age First Birth (3)	Age First Birth (4)
Translatlantic Trade	-0.086**	-0.057***	0.336***	0.231***
	(0.034)	(0.015)	(0.091)	(0.046)
Observations	563,379	563,092	416,965	416,639
R-squared	0.64	0.67	0.11	0.20
Ethnic Groups	243	243	243	243
Fixed Effects	Country	EA	Country	EA
Individual Controls	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes
Transatlantic std. dev.	0.564	0.564	0.560	0.560
Dep. var. mean unaffected	1.514	1.515	18.596	18.596

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Number Children* is the respondent's number of children ever born. *Age First Birth* is the respondent's age at first birth. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

of the slave trade, and result in the crystallization of less equal gender roles in spite of an increase in FLFP.

To shed some light on this issue, I use a series of questions from the DHS measuring women's participation in household decision-making and attitudes towards domestic violence, and two questions from the Afrobarometer on general attitudes towards women that are not directly related to their role in the labor market.

The DHS includes a set of questions measuring a woman's degree of participation in household decisions, namely her own health care, large household purchases, daily household purchases, and visits to family and friends.[53] I summarize these questions building a variable that records the share of questions for which the respondent answers that she has a say in the decision.[54] Another set of questions from the DHS asks the respondent whether she believes a husband is justified in beating his wife in the case she goes out without telling him, if she neglects the children, if she argues with the partner, if she refuses to have sex, or if she burns the food. I summarize this set of questions building a variable capturing the share of questions for which the respondent answers that, in that specific case, violence against a wife is justified.

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[53]An additional question asks whether the woman participates in the decision about what to cook. However, this question is not relevant to capture women empowerment, as this decision traditionally pertains to women in societies where women's role is confined within the house.
[54]For each question, the respondent is coded as having a say in the decision either if she takes the decision alone, or if she takes it together with her partner or another member of the household.

The Afrobarometer surveys include a question measuring a respondent's belief about women's role in politics. The corresponding variable takes values from 1 to 5, increasing in the respondent's agreement with the fact that men and women should have equal rights to be elected to political office. A second, more general question asks the respondent whether he believes that men and women should have equal rights. The corresponding variable takes values from 1 to 5, increasing in the respondent's agreement with the statement that women should be treated as men.[55]

Table 8 presents the estimated effect of the transatlantic slave trade on these measures. For the three variables measuring a respondent's beliefs (columns 2-7), we can look separately at the coefficients for men and women. Women belonging to ethnic groups more affected by the transatlantic slave trade are today more likely to participate in household decisions, with a one standard deviation increase in *Transatlantic Trade* leading to a 2.5 percentage points increase in the share of household decisions to which a woman participates. Similarly, women (but not men) whose ancestors were more severely hit by this shock are more likely to believe that women and men should have equal rights. However, we do not find a significant effect of the transatlantic slave trade on attitudes towards domestic violence or on beliefs about the role of women in politics.[56]

Therefore, while the transatlantic slave trade led to a persistent change in the role of women in the labor market, with a consequent impact on fertility, not all the results point towards a significant long-run effect on more general gender roles attitudes. We do find that in groups more affected by this historical shock women have more power over household decisions today, consistent with the fact that their financial contribution to the household is higher. However, other beliefs not directly related to the role of women in the labor market are not significantly affected. In particular, we do not find an effect on beliefs about the appropriate role of women in politics, suggesting that, although the shock to sex ratios led to more equal gender norms related to participation

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[55]Specifically, in the first question the respondent is asked to indicate, between two statements, which one is closest to his view. The two statements are: "Men make better political leaders than women, and should be elected rather than women" and "Women should have the same chance of being elected to political office as men". The variable takes values from 1 to 5, corresponding to "strongly agree with the first statement", "agree with the first statement", "agree with neither", 'agree with the second statement", "strongly agree with the second statement". In the second question, the respondent is asked to choose between the following two statements: "Women have always been subject to traditional laws and customs, and should remain so" and "In our country, women should have equal rights and receive the same treatment as men do". Once again, the variable takes values from 1 to 5, increasing in the respondent's agreement with the second statement.

[56]The results are similar when I instrument the transatlantic slave trade export measure with an ethnic group's historical distance from the coast (see Table A17 in the Appendix). The coefficient on women's beliefs about equal rights for men and women remains positive but it is now marginally insignificant, while the effect on women's attitudes towards domestic violence becomes negative and statistically significant.

Table 8. **OLS estimates, the effect of the slave trade on women's empowerment**

	Share HH Decisions (1)	Share Violence (2)	Share Violence (3)	Rights Politics (4)	Rights Politics (5)	Rights General (6)	Rights General (7)
Translatlantic Trade	0.048***	-0.008	-0.005	0.018	-0.057*	0.098***	-0.019
	(0.013)	(0.011)	(0.009)	(0.031)	(0.031)	(0.037)	(0.057)
Observations	337,994	426,485	163,173	40,394	40,536	24,215	24,389
R-squared	0.26	0.22	0.11	0.07	0.07	0.10	0.09
Ethnic Groups	223	225	189	275	275	261	262
Sample	DHS	DHS	DHS	Afrob.	Afrob.	Afrob.	Afrob.
Gender	Female	Female	Male	Female	Male	Female	Male
Transatlantic std. dev.	0.567	0.570	0.564	0.536	0.536	0.540	0.538
Dep. var. mean unaffected	0.451	0.336	0.198	4.031	3.578	4.081	3.712

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Share HH Decisions* is the share of household decisions for which the respondent answers that she has a say. *Share Violence* is the share of questions for which the respondent answers that, in that specific case, violence against a wife is justified. *Rights Politics* is the respondent's agreement with the fact that men and women should have equal rights to be elected to political office. *Rights General* is the respondent's agreement with the statement that women should be treated as men. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero. ***, **, * indicate significance at the 1%, 5% and 10% level.

in high-ranking occupations, it was not accompanied by a similar effect on beliefs about women's leadership ability.[57]

6. Conclusions

This paper shows that an historical shock that affects the division of labor between men and women can have a persistent effect on female labor force participation. Since a great majority of men were exported during the transatlantic slave trade, skewed sex ratios emerged in the African population of the regions more severely affected by this historical shock. Historical accounts show that the shortage of men pushed women into the labor force and led women into taking up new areas of work.

Using data on more than 500,000 women from 21 Sub-Saharan African countries, I show that women whose ancestors were more exposed to the transatlantic slave trade are today significantly more likely to be in the labor force.

Leveraging information on a woman's husband's ethnicity, I show that the marriage market is an important mechanism explaining persistence of this shock. In addition, comparing individuals of different ethnicities who currently live in the same village or

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[57]One possible, additional reason explaining the insignificant effect on the variable capturing attitudes towards domestic violence is that this variable captures a combination of attitudes towards women and attitudes towards violence. As shown by Fenske and Kala (2014, 2015), the slave trade had a long-run effect on conflict, with areas more affected by the slave trade experiencing higher levels of violence today. To the extent that the estimated coefficients capture also this effect, this could explain the zero result.

in the same neighborhood within a city, I isolate the significant role played by cultural beliefs that are internal to individuals.

Consistent with a higher cost of having children for working women, women whose ancestors were more heavily enslaved in the transatlantic slave trade have lower levels of fertility. However, consistent with theoretical models on the impact of skewed sex ratios on intrahousehold bargaining, I find mixed evidence on the effect of the transatlantic slave trade on general attitudes towards women in domains other than the labor market. While women belonging to ethnic groups that were more affected by this historical shock are more likely to participate in household decisions, these ethnic groups are not characterized by different attitudes towards domestic violence or by different beliefs about the role of women in politics. These results suggest that demographic shocks, while having a persistent impact on FLFP, may not have a comparable effect on gender equality in domains other than the labor market.

<center>Data Appendix and Additional Results</center>

Description of Variables and Summary Statistics. The DHS surveys used in the analysis are: Benin 1996; Benin 2001; Benin 2006; Benin 2012; Burkina Faso 1993; Burkina Faso 1998; Burkina Faso 2003; Burkina Faso 2010; Cameroon 1998; Cameroon 2004; Cameroon 2011; Central African Republic 1994; Cote D'Ivoire 1998; Cote D'Ivoire 2005; Cote D'Ivoire 2011; DRC 2007; Ghana 1993; Ghana 1998; Ghana 2003; Ghana 2008; Ghana 2014; Guinea 1999; Guinea 2005; Guinea 2012; Kenya 1993; Kenya 1998; Kenya 2003; Kenya 2008; Kenya 2014; Liberia 2013; Malawi 2000; Malawi 2004; Malawi 2010; Mali 1995; Mali 2001; Mali 2006; Mali 2013; Mozambique 1997; Mozambique 2011; Namibia 1992; Namibia 2000; Niger 1992; Niger 1998; Niger 2006; Nigeria 2008; Nigeria 2013; Senegal 2005; Senegal 2010; Senegal 2012; Senegal 2014; Sierra Leone 2008; Sierra Leone 2013; Togo 1998; Togo 2013; Uganda 1995; Uganda 2011; Zambia 1992; Zambia 1996; Zambia 2001; Zambia 2007; Zambia 2013.

The main analysis uses the "Individual Recode" datasets. The falsification test using men's employment probability uses the "Men's Recode" datasets, for the surveys for which this dataset is available. Data on the coordinates of the respondent's location is taken, for the surveys for which this is available, from the "Geographic Datasets". Information on the ethnicity of a woman's husband is taken, for the surveys for which this is available, from the "Couples' Recode" datasets.

The Afrobarometer surveys used in the analysis are: Benin (rounds 3, 4, 5, 6); Burkina Faso (rounds 4, 5, 6); Botwsana (rounds 3, 4); Cameroon (rounds 5, 6); Cote D'Ivoire (rounds 5, 6); Gabon (round 6); Ghana (rounds 3, 4, 5, 6); Guinea (rounds 5, 6); Kenya (rounds 3, 4, 5, 6); Liberia (rounds 4, 5, 6); Madagascar (rounds 3, 4, 5, 6); Mali (rounds 3, 4, 5, 6); Malawi (rounds 4, 5, 6); Mozambique (rounds 3, 4, 5, 6); Namibia (rounds 3, 4, 5, 6); Niger (rounds 5, 6); Nigeria (rounds 3, 4, 5, 6); South Africa (rounds 3, 4, 5, 6); Senegal (rounds 3, 4, 5, 6); Sierra Leone (rounds 5, 6); Tanzania (rounds 3, 4, 5, 6); Togo (rounds 5, 6); Uganda (rounds 3, 4, 5, 6); Zambia (rounds 3, 4, 5, 6); Zimbabwe (rounds 3, 4, 5, 6).

Description of the variables used in the paper:

- *Transatlantic Trade*: Number of slaves taken from the respondent's ethnic group in the transatlantic slave trade, divided by the area of land historically inhabited by the group. The variable is winsorized the 5% level: for the ethnic groups with values in the top 5% of the distribution of this variable, the variable takes the value of the 95% percentile. Source: Nunn and Wantchekon (2011).
- *Indian Ocean Trade*: Number of slaves taken from the respondent's ethnic group in the Indian Ocean slave trade, divided by the area of land historically

inhabited by the group (variable winsorized at the 5% level). Source: Nunn and Wantchekon (2011).

- *Transatlantic Trade Husband*: Number of slaves taken from the woman's husband's ethnic group in the transatlantic slave trade, divided by the area of land historically inhabited by the group (variable winsorized the 5% level). Source: Nunn and Wantchekon (2011).

- *Indian Ocean Trade Husband*: Number of slaves taken from the woman's husband's ethnic group in the Indian Ocean slave trade, divided by the area of land historically inhabited by the group (variable winsorized at the 5% level). Source: Nunn and Wantchekon (2011).

- *ln(1+Transatlantic/Area)*: Logarithm of 1 plus the number of slaves taken from the respondent's ethnic group in the transatlantic slave trade divided by the area of land historically inhabited by the group. Source: Nunn and Wantchekon (2011).

- *ln(1+Indian Ocean/Area)*: Logarithm of 1 plus the number of slaves taken from the respondent's ethnic group in the Indian Ocean slave trade divided by the area of land historically inhabited by the group. Source: Nunn and Wantchekon (2011).

- *FLFP* (in the DHS): dummy taking value one if the respondent is employed or has ever been employed in the past 12 months. Source: DHS.

- *FLFP* (in the Afrobarometer): dummy taking value one if the respondent is currently employed (full time or part time) in a job that pays cash income. Source: Afrobarometer.

- *Agriculture*: dummy taking value one if the respondent is employed in agriculture. Source: DHS.

- *Clerical*: dummy taking value one if the respondent is employed in a clerical occupation. Source: DHS.

- *Manual*: dummy taking value one if the respondent is employed in a manual occupation. Source: DHS.

- *Domestic*: dummy taking value one if the respondent is employed as domestic servant. Source: DHS.

- *High Ranking*: dummy taking value one if the respondent is employed in the sales and service sectors, or as professional or manager. Source: DHS.

- *Number of Children*: number of children ever born. Source: DHS.

- *Age First Birth*: woman's age when first child was born. Source: DHS.

- *Share HH Decisions*: the share of questions on a woman's participation in household decisions for which the woman answers that she has a say in the decision. Questions include decisions regarding: her own health care, large household purchases, daily household purchases, and visits to family and friends. Since the answer to some of these questions can be missing for some respondent, this variable should be intended as the share of decisions for which the woman has a say among the decisions for which we have non-missing information. Source: DHS.

- *Share Violence*: the share of questions on attitudes towards domestic violence for which the woman answers that it is justified for a husband to beat his wife. Questions include the following: in the case she goes out without telling him, if she neglects the children, if she argues with the partner, if she refuses to have sex, if she burns the food. Since the answer to some of these questions can be missing for some respondent, this variable should be intended as the share of instances for which the respondent answers that beating is justified among the questions for which we have non-missing information. Source: DHS.

- *Women Rights*: respondent's agreement on a scale from 1 to 5 with the statement "Women should have the same chance of being elected to political office as men" (the alternative is the statement 'Women have always been subject to traditional laws and customs, and should remain so"). Source: Afrobarometer.

- *Women Politics*: respondent's agreement on a scale from 1 to 5 with the statement "In our country, women should have equal rights and receive the same treatment as men do" (the alternative is the statement "Men make better political leaders than women, and should be elected rather than women"). Source: Afrobarometer.

- *Married*: dummy taking value one if respondent is married. Source: DHS.

- *Age*: age of the respondent. Source: DHS.

- *Urban*: dummy taking value one if respondent lives in a urban location. Source: DHS.

- *Muslim*: dummy taking value one if respondent is Muslim. Source: DHS.

- *Christian*: dummy taking value one if respondent is Christian. Source: DHS.

- *Polygyny*: dummy taking value one if respondent has co-wives. Source: DHS.

- *Education*: respondent's number of years of education (in the DHS), and respondent's highest level of education, ranging from "No formal schooling" to "Post-graduate" (in the Afrobarometer).

- *Contact explorer*: dummy that takes value one if a European explorer traveled in the land of the ethnic group. The source for explorers' routes is Century

Company (1911). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Missions/area*: the number of religious missions per square kilometer of an ethnic group's land during the colonial period. The source for the locations of missions is Roome (1924). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Cities in 1400*: the number of cities with more than 20,000 inhabitants that were present in 1400 on the land inhabited by the ethnic group. The data on the locations of the cities is from Chandler (1987). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Malaria index*: the malaria ecology of the land that was inhabited by the ethnic group. The data on malaria ecology is from Kiszewski (2004). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Railway network*: dummy taking value one if a part of the railway network built by the Europeans was on the land of the ethnic group. The source for the location of the railway network is Century Company (1911). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Precolonial conflicts*: the number of conflicts between 1400 and 1700 in the area inhabited by the ethnic group. Data on precolonial conflicts is from Besley and Reynal-Querol (2014). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Settlement patterns*: precolonial settlement patterns, ranging from fully nomadic to complex settlements. Source: Ethnographic Atlas (variable v30).

- *Jurisdictional hierarchies*: the number of jurisdictional hierarchies beyond the local community. Source: Ethnographic Atlas (variable v33).

- *Distance Saharan route*: the minimum distance of the centroid of the land historically inhabited by the ethnic group from the routes of the Saharan trade. Information on the historic locations of routes is from Oliver (2000). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Distance Saharan node*: the distance of the centroid of the land historically inhabited by the ethnic group from the closest city of the Saharan trade. Information on the historic locations of cities is from Oliver (2000). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Hunting dependence*: the ethnic group's historical reliance on hunting. Source: Ethnographic Atlas (variable v2)

- *Gathering dependence*: the ethnic group's historical reliance on gathering. Source: Ethnographic Atlas (variable v1)

- *Agricultural Suitability*: the average suitability to agriculture of the land historically inhabited by the ethnic group. Agricultural suitability is calculated using data on suitability for barley, foxtail millet, pearl millet, rye, sorghum, and wheat from the FAO's Global Agro-Ecological Zones database (GAEZ). Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Domesticated Animals*: dummy taking value one if the ethnic group had large domesticated animals. Source: Ethnographic Atlas (variable v40).

- *Historical Participation Agriculture*: historical female participation in agriculture. The variable takes values from one (only males participated) to 5 (only females participated). Source: Ethnographic Atlas (variable v54).

- *Historical distance from coast*: distance (in kilometers) of the centroid of the land historically inhabited by the ethnic group to the closest point along the coast. Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Mover*: dummy taking value one if respondent currently lives outside the area of land historically inhabited by her ethnic group. Source for respondent's location: DHS. Information on the land historically inhabited by the ethnic group is from Murdock (1959).

- *Distance Homeland*: distance (in kilometers) of the location of the respondent from the centroid of the land historically inhabited by the ethnic group. The distance is zero if the variable *Mover* takes value zero. Source for respondent's location: DHS. Information on the land historically inhabited by the ethnic group is from Murdock (1959).

Table A1: Summary statistics, Women Sample

Variable	Mean	Std. Dev.	Min.	Max.	Obs.
Slave Trade Variables					
Transatlantic Trade	0.446	0.564	0	1.26	583562
Indian Ocean Trade	0.01	0.033	0	0.15	583562
Transatlantic Trade Husband	0.457	0.560	0	1.26	113360
Indian Ocean Trade Husband	0.01	0.032	0	0.15	113360
ln(1+Transatlantic/Area)	0.663	1.06	0	3.656	583562
ln(1+Indian Ocean/Area)	0.029	0.139	0	0.999	583562
DHS Variables					
FLFP	0.642	0.479	0	1	583562
Agriculture	0.284	0.451	0	1	569134
Clerical	0.009	0.092	0	1	569134
Manual	0.076	0.265	0	1	569134
Domestic	0.015	0.12	0	1	569134
High Ranking	0.263	0.44	0	1	569134
Number of Children	3.05	2.893	0	24	583562
Age First Birth	18.844	3.709	6	47	432851
Share HH Decisions	0.438	0.413	0	1	350841
Share Violence	0.321	0.373	0	1	443115
Married	0.615	0.487	0	1	583562
Age	28.417	9.43	15	49	583562
Urban	0.357	0.479	0	1	583562
Muslim	0.389	0.488	0	1	583562
Christian	0.542	0.498	0	1	583562
Polygyny	0.317	0.465	0	1	400222
Education (years)	4.027	4.447	0	26	583227
Historical and Geographical Variables (DHS Sample)					
Contact explorer	0.551	0.497	0	1	583562
Missions/Area	0.000166	0.000321	0	0.002644	583562
Cities in 1400	0.25	0.553	0	2	583562
Malaria Index	18.3	9.372	0	33.95	583562
Railway network	0.333	0.471	0	1	583562
Precolonial Conflicts	0.784	2.225	0	10	583562
Settlement patterns	6.312	1.461	1	8	563481
Jurisdictional hierarchies	1.717	0.878	0	3	564323
Distance Saharan route	1289.88	1269.099	11.883	4709.896	583562
Distance Saharan node	1300.695	1259.739	113.862	4709.896	583562
Hunting dependence	8.44	5.974	2.5	30	581843
Gathering dependence	5.236	4.598	2.5	70	581843
Agricultural Suitability	14.466	8.003	0	36.263	583562
Domesticated Animals	0.968	0.175	0	1	564425
Historical Participation Agriculture	3.013	0.953	1	5	470183
Historical distance from coast	471.151	333.048	0.208	1638.367	583562
Mover	0.578	0.494	0	1	473382
Distance Homeland	140.182	265.64	0	3111.992	473382

Table A1 (continued): Summary statistics, Men Sample

Variable	Mean	Std. Dev.	Min.	Max.	N
Slave Trade Variables					
Transatlantic Trade	0.455	0.564	0	1.26	222970
Indian Ocean Trade	0.01	0.032	0	0.15	222970
DHS Variables					
Male Labor Force Participation	0.828	0.378	0	1	222970
Married	0.511	0.5	0	1	222970
Age	31.114	11.92	15	97	222970
Urban	0.377	0.485	0	1	222970
Muslim	0.379	0.485	0	1	222970
Christian	0.545	0.498	0	1	222970
Education (years)	5.954	4.837	0	25	222664
Historical and Geographical Variables					
Contact explorer	0.566	0.496	0	1	222970
Missions/area	0.000182	0.000352	0	0.002644	222970
Cities in 1400	0.243	0.556	0	2	222970
Malaria Index	18.105	9.496	0	33.95	222970
Railway network	0.342	0.474	0	1	222970
Precolonial Conflicts	0.825	2.324	0	10	222970
Settlement patterns	6.345	1.439	1	8	216482
Jurisdictional hierarchies	1.696	0.887	0	3	216906
Distance Saharan route	1287.902	1218.813	11.883	4709.896	222970
Distance Saharan node	1297.305	1210.429	113.862	4709.896	222970
Hunting dependence	8.447	6.039	2.5	30	222299
Gathering dependence	5.111	4.502	2.5	70	222299
Agricultural Suitability	14.723	8.169	0	36.263	222970
Domesticated Animals	0.966	0.181	0	1	216969

Table A1 (continued): Summary statistics, Afrobarometer Women Sample

Variable	Mean	Std. Dev.	Min.	Max.	N
Slave Trade Variables					
Transatlantic Trade	0.369	0.533	0	1.26	55222
Indian Ocean Trade	0.023	0.049	0	0.15	55222
Afrobarometer Variables					
FLFP	0.3	0.458	0	1	55222
Rights Politics	3.912	1.445	1	5	43863
Rights General	3.927	1.409	1	5	26253
Age	34.704	13.134	18	130	55222
Urban	0.369	0.483	0	1	55222
Muslim	0.253	0.434	0	1	55222
Christian	0.603	0.489	0	1	55222
Education	3.897	2.044	1	10	55104
Historical and Geographical Variables					
Contact explorer	0.471	0.499	0	1	55086
Missions/Area	0	0	0	0.004	55086
Cities in 1400	0.189	0.481	0	2	55086
Malaria Index	13.85	9.77	0	34.64	55086
Railway network	0.382	0.486	0	1	55086
Precolonial Conflicts	0.721	2.036	0	10	55086
Settlement patterns	6.29	1.459	1	8	50790
Jurisdictional hierarchies	1.843	0.951	0	3	50827
Distance Saharan route	2124.659	1578.459	15.19	5221.349	55086
Distance Saharan node	2130.327	1571.67	113.862	5221.349	55086
Hunting dependence	8.861	5.745	2.5	40	54975
Gathering dependence	5.194	7.845	2.5	80	54975
Agricultural suitability	15.94	8.56	0	39.801	55086
Domesticated Animals	0.967	0.178	0	1	50855

Additional Results.

Figure A1: Exposure to the Transatlantic Slave Trade and Current Sex Ratio
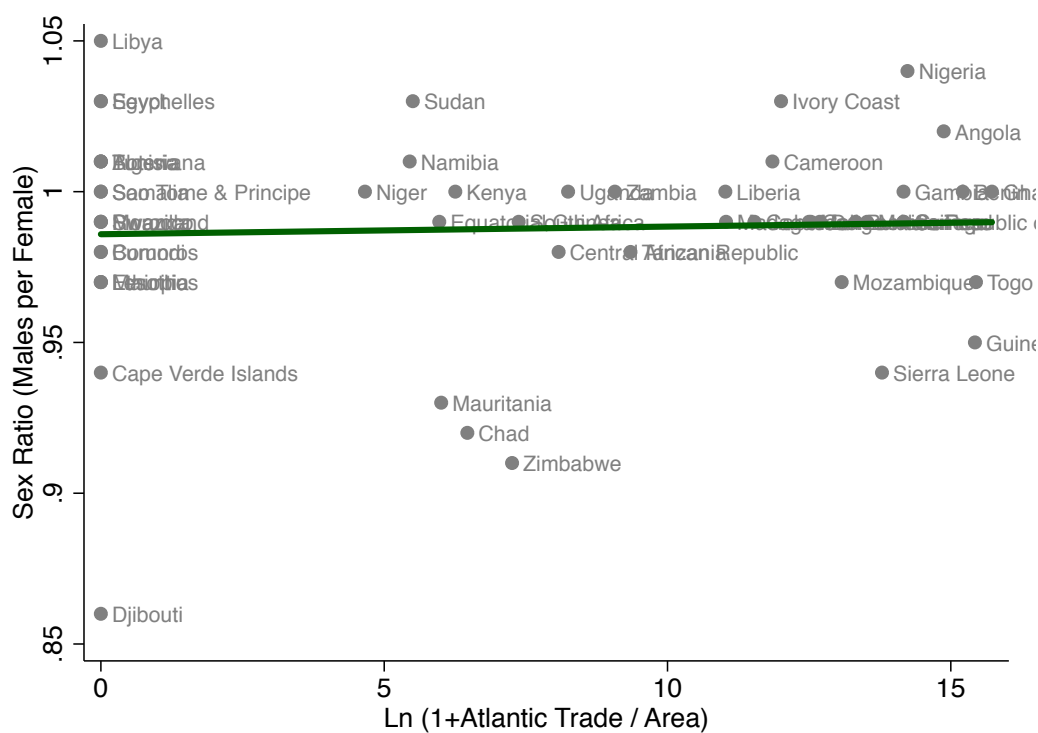
Notes: The figure presents the country-level correlation between current sex ratio and exposure to the transatlantic slave trade. Data on sex ratios are from the 2011 CIA World Factbook. Country-level data on the transatlantic slave trade are from Nunn (2008).

Table A2: OLS estimates, Historical Determinants of FLFP

	Coefficient (1)	Standard Error (2)
Transatlantic Trade	0.059***	(0.013)
Indian Ocean Trade	-0.061	(0.175)
Contact explorer	-0.025	(0.018)
Missions/area	46.829**	(20.717)
Cities in 1400	-0.032**	(0.014)
Malaria index	0.000	(0.001)
Railway network	0.022	(0.018)
Precolonial conflicts	-0.014***	(0.005)
Hunting dependence	0.001	(0.001)
Gathering dependence	0.003**	(0.002)
Agricultural suitability	-0.001	(0.001)
Domesticated Animals	-0.027	(0.027)
Historical Participation Agriculture	-0.003	(0.011)
Settlement patterns 2	-0.022	(0.060)
Settlement patterns 4	0.060	(0.040)
Settlement patterns 5	0.043	(0.041)
Settlement patterns 6	-0.066	(0.048)
Settlement patterns 7	-0.008	(0.041)
Settlement patterns 8	-0.050	(0.039)
Jurisdictional hierarchies 1	0.016	(0.031)
Jurisdictional hierarchies 2	0.016	(0.033)
Jurisdictional hierarchies 3	0.044	(0.035)
Distance Saharan route	0.000	(0.000)
Distance Saharan node	-0.000	(0.000)
Observations	470,183	
R-squared	0.178	

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. The indicator variables for settlement patterns correspond to the following types of patterns: 2="semi nomadic"; 3="semisedentary" (excluded because of collinearity); 4="compact but impermanent settlements"; 5="neighborhoods of dispersed family homes"; 6="separated hamlets, forming a single community"; 7="compact and relatively permanent"; 8="complex settlements"; the excluded category is the indicator equal to 1 ("nomadic or fully migratory").
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A3: The Transatlantic Slave Trade and Polygyny

	Polygyny (1)	Polygyny (2)	Polygyny (3)
Translatlantic Trade	-0.008	0.005	-0.001
	(0.015)	(0.011)	(0.010)
Observations	400,222	400,222	386,503
R-squared	0.06	0.12	0.13
Ethnic Groups	259	259	241
Country-survey FE	Yes	Yes	Yes
Individual Controls	No	Yes	Yes
Historical Controls	No	No	Yes
Transatlantic std. dev.	0.564	0.564	0.564
Dep. var. mean unaffected	0.259	0.259	0.258

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Polygyny* is an indicator variable taking value one if the respondent has co-wives. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A4: the effect of the slave trade on FLFP, robustness to different standard errors corrections

	FLFP	FLFP	FLFP	FLFP	FLFP	FLFP
Translatlantic Trade	0.048***	0.054***	0.059***	0.056***	0.073***	0.072***
	(0.013)	(0.011)	(0.013)	(0.011)	(0.012)	(0.012)
	{0.012}	{0.009}	{0.011}	{0.009}	{0.011}	{0.010}
	[0.013]	[0.011]	[0.013]	[0.011]	[0.012]	[0.012]
	⟨0.009⟩	⟨0.010⟩	⟨0.011⟩	⟨0.010⟩	⟨0.011⟩	⟨0.010⟩
Observations	583,562	563,379	470,183	563,054	386,503	386,317
R-squared	0.16	0.17	0.18	0.18	0.14	0.14
Ethnic Groups	261	261	261	261	261	261
Country-survey FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	No	Yes	Yes	Yes	Yes	Yes
Hist. Part. Agriculture	No	No	Yes	No	No	No
Education	No	No	No	Yes	Yes	Yes
Polygyny	No	No	No	No	Yes	Yes
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.588	0.588	0.588	0.588	0.588	0.588

Notes: The unit of observation is a female respondent. Standard errors in parentheses are clustered at the ethnicity level as in Table 1. Standard errors in curly brackets are Conley (1999) standard errors adjusted for two-dimensional spatial dependence. Standard errors in square brackets are double clustered at the ethnicity and enumeration area level. Standard errors in angle brackets are clustered by country, using a block bootstrap procedure. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A5: the effect of the slave trade on FLFP, robustness to other slave trades

	FLFP (1)	FLFP (2)	FLFP (3)	FLFP (4)	FLFP (5)	FLFP (6)
Translatlantic Trade	0.035***	0.052***	0.046***	0.050***	0.061***	0.062***
	(0.011)	(0.012)	(0.016)	(0.013)	(0.014)	(0.014)
Indian Ocean Trade	0.054	-0.069	0.054	-0.035	-0.036	-0.031
	(0.140)	(0.132)	(0.146)	(0.137)	(0.147)	(0.147)
Observations	415,243	396,378	343,779	396,155	265,179	265,057
R-squared	0.18	0.19	0.19	0.19	0.15	0.15
Ethnic Groups	186	175	127	175	175	175
Country-survey FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	No	Yes	Yes	Yes	Yes	Yes
Hist. Part. Agriculture	No	No	Yes	No	No	No
Education	No	No	No	Yes	No	Yes
Polygyny	No	No	No	No	Yes	Yes
Transatlantic std. dev.	0.560	0.560	0.565	0.560	0.562	0.562
Indian Ocean std. dev.	0.035	0.033	0.035	0.033	0.033	0.033
Dep. var. mean unaffected	0.598	0.596	0.598	0.596	0.650	0.650

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. The sample is restricted to surveys from countries that were not strongly exposed to the trans-Saharan and Red Sea slave trades, i.e. Mali, Kenya, Niger, Nigeria. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *Indian Ocean trade* is the number of slaves exported during the Indian Ocean slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A6: The effect of the slave trade on FLFP, Afrobarometer sample

	FLFP (1)	FLFP (2)	FLFP (3)
Translatlantic Trade	0.035***	0.047***	0.045***
	(0.013)	(0.010)	(0.010)
Indian Ocean Trade	0.147	0.266	0.221
	(0.186)	(0.216)	(0.222)
Observations	55,222	50,762	50,668
R-squared	0.15	0.17	0.20
Ethnic Groups	313	286	286
Country-survey FE	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes
Historical Controls	No	Yes	Yes
Education	No	No	Yes
Transatlantic std. dev.	0.533	0.531	0.531
Indian Ocean std. dev.	0.049	0.042	0.042
Dep. var. mean unaffected	0.313	0.311	0.311

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent is employed. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *Indian Ocean trade* is the number of slaves exported during the Indian Ocean slave trade normalized by the area of land historically inhabited by the ethnic group. Individual controls include age fixed effects, a dummy for the respondent being Christian, a dummy for the respondent being Muslim, and a dummy for the respondent living in an urban location. Historical controls are as in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A7: the effect of the slave trade on occupational choices, with additional controls

	Agriculture (1)	Agriculture (2)	Clerical (3)	Clerical (4)	Manual (5)	Manual (6)	Domestic (7)	Domestic (8)	High Ranking (9)	High Ranking (10)
Translatlantic Trade	0.024	0.028	-0.002***	-0.002***	-0.009	-0.012	-0.004**	-0.003**	0.044***	0.057***
	(0.017)	(0.018)	(0.001)	(0.001)	(0.008)	(0.009)	(0.002)	(0.001)	(0.011)	(0.012)
Observations	548,691	377,271	548,691	377,271	548,691	377,271	548,691	377,271	548,691	377,271
R-squared	0.24	0.24	0.04	0.05	0.06	0.06	0.08	0.09	0.14	0.17
Ethnic Groups	243	241	243	241	243	241	243	241	243	241
Country-survey FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polygyny	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.276	0.326	0.011	0.009	0.061	0.063	0.026	0.017	0.224	0.230

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is at the ethnicity level. *Agriculture* is an indicator variable taking value one if the respondent is employed in agriculture. *Clerical* is an indicator variable taking value one if the respondent is employed in a clerical job. *Manual* is an indicator variable taking value one if the respondent is employed in a manual job. *Domestic* is an indicator variable taking value one if the respondent is employed as a domestic servant. *High Ranking* is an indicator variable taking value one if the respondent is employed in a higher ranking occupation. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A8: the effect of the slave trade on FLFP, alternative slave trade measure

	FLFP (1)	FLFP (2)	FLFP (3)	FLFP (4)	FLFP (5)	FLFP (6)
ln(1+Translatlantic/Area)	0.025***	0.024***	0.029***	0.025***	0.037***	0.036***
	(0.007)	(0.006)	(0.008)	(0.006)	(0.008)	(0.008)
ln(1+Indian Ocean/Area)	-0.047*	-0.038	-0.009	-0.043	-0.054	-0.049
	(0.025)	(0.029)	(0.036)	(0.031)	(0.037)	(0.036)
Observations	583,562	563,379	470,183	563,054	386,503	386,317
R-squared	0.16	0.17	0.18	0.18	0.14	0.14
Ethnic Groups	261	243	170	243	241	241
Country-survey FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	No	Yes	Yes	Yes	Yes	Yes
Hist. Part. Agriculture	No	No	Yes	No	No	No
Education	No	No	No	Yes	No	Yes
Polygyny	No	No	No	No	Yes	Yes
Transatlantic std. dev.	1.060	1.073	1.142	1.073	1.056	1.056
Indian Ocean std. dev.	0.139	0.141	0.153	0.141	0.140	0.140
Dep. var. mean unaffected	0.588	0.586	0.589	0.586	0.635	0.635

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *ln(1+Translatlantic/Area)* is the log of one plus the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *ln(1+Indian Ocean/Area)* is the log of one plus the number of slaves exported during the Indian Ocean slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *ln(1+Transatlantic/Area)* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A9: the effect of the slave trade on occupational choices, alternative slave trade measure

	Agriculture (1)	Clerical (2)	Manual (3)	Domestic (4)	High Ranking (5)
ln(1+Translatlantic/Area)	-0.001	-0.000	-0.004	-0.003***	0.030***
	(0.008)	(0.000)	(0.003)	(0.001)	(0.005)
Observations	549,009	549,009	549,009	549,009	549,009
R-squared	0.23	0.02	0.05	0.07	0.14
Ethnic Groups	243	243	243	243	243
Country-survey FE	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes
Transatlantic std. dev.	1.076	1.076	1.076	1.076	1.076
Dep. var. mean unaffected	0.276	0.011	0.061	0.026	0.224

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Agriculture* is an indicator variable taking value one if the respondent is employed in agriculture. *Clerical* is an indicator variable taking value one if the respondent is employed in a clerical job. *Manual* is an indicator variable taking value one if the respondent is employed in a manual job. *Domestic* is an indicator variable taking value one if the respondent is employed as a domestic servant. *High Ranking* is an indicator variable taking value one if the respondent is employed in a higher ranking occupation. *ln(1+Translatlantic/Area)* is the log of one plus the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *ln(1+Transatlantic/Area)* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A10: the marriage market channel, with additional controls

	FLFP (1)	FLFP (2)	FLFP (3)	FLFP (4)	FLFP (5)	FLFP (6)
Translatlantic Trade	0.069***	0.069***			0.045***	0.044***
	(0.014)	(0.014)			(0.009)	(0.009)
Translatlantic Trade Husband			0.021**	0.021**		
			(0.009)	(0.009)		
Observations	109,256	108,241	109,240	108,225	109,239	108,224
R-squared	0.14	0.14	0.18	0.18	0.18	0.18
Ethnic Groups	232	232	228	228	232	232
Country-survey FE	Yes	Yes	No	No	No	No
Country-survey-woman's ethnicity FE	No	No	Yes	Yes	No	No
Country-survey-husband's ethnicity FE	No	No	No	No	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	No	No
Education	Yes	Yes	Yes	Yes	Yes	Yes
Polygyny	No	Yes	No	Yes	No	Yes
Transatlantic std. dev.	0.558	0.559	0.559	0.559	0.558	0.559
Dep. var. mean unaffected	0.652	0.652	0.657	0.657	0.652	0.652

Notes: Standard errors in parentheses, clustered at the ethnicity level (of the female respondent in columns 1,2,5,6, and of the husband in column 3,4). The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *Transatlantic Trade Husband* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group for the woman's husband's ethnicity. Historical controls in column 3 and 4 are measured using the ethnicity of the husband. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A11: the cultural transmission channel, occupational choices

	Agriculture (1)	Agriculture (2)	Clerical (3)	Clerical (4)	Manual (5)	Manual (6)	Domestic (7)	Domestic (8)	High Ranking (9)	High Ranking (10)
Translatlantic Trade	-0.002	-0.000	0.001	-0.000	0.005	0.003	-0.003	-0.001	0.027***	0.032***
	(0.005)	(0.006)	(0.001)	(0.001)	(0.004)	(0.004)	(0.002)	(0.001)	(0.004)	(0.005)
Observations	548,694	376,838	548,694	376,838	548,694	376,838	548,694	376,838	548,694	376,838
R-squared	0.49	0.52	0.09	0.16	0.20	0.25	0.19	0.25	0.27	0.33
Ethnic Groups	243	241	243	241	243	241	243	241	243	241
EA-survey FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Polygyny	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.275	0.326	0.011	0.009	0.061	0.063	0.026	0.017	0.224	0.230

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is at the ethnicity level. *Agriculture* is an indicator variable taking value one if the respondent is employed in agriculture. *Clerical* is an indicator variable taking value one if the respondent is employed in a clerical job. *Manual* is an indicator variable taking value one if the respondent is employed in a manual job. *Domestic* is an indicator variable taking value one if the respondent is employed as a domestic servant. *High Ranking* is an indicator variable taking value one if the respondent is employed in a higher ranking occupation. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A12: the cultural transmission channel, heterogeneous effects in "mover" status

	Mover (1)	FLFP (2)	FLFP (3)	FLFP (4)
Translatlantic Trade	-0.155***	0.059***	0.027***	0.028***
	(0.042)	(0.013)	(0.005)	(0.005)
Translatlantic Trade X Mover		-0.006		
		(0.014)		
Observations	456,461	456,716	456,461	260,187
R-squared	0.77	0.17	0.32	0.33
Ethnic Groups	235	235	235	235
FE	EA-survey	Country-survey	EA-survey	EA-survey
Individual Controls	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes
Distance Homeland	No	No	Yes	Yes
Transatlantic std. dev.	0.569	0.569	0.569	0.548
Dep. var. mean unaffected	0.681	0.593	0.593	0.589

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Mover* is an indicator variable taking value one if the respondent currently lives outside of the ethnic homeland of her ancestors. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. In column 4 the sample is restricted to "movers". *Distance Homeland* is the distance of the respondent's current location from the centroid of the land historically inhabited by her ethnic group. The specification in column 2 also includes the dummy *Mover*. The additional individual and historical controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A13: IV estimates of the effect of the slave trade on occupational choices

	Agriculture (1)	Agriculture (2)	Clerical (3)	Clerical (4)	Manual (5)	Manual (6)	Domestic (7)	Domestic (8)
Second stage:								
Translatlantic Trade	-0.023	-0.022	0.005***	0.003*	-0.013	0.009	-0.000	0.002
	(0.039)	(0.015)	(0.002)	(0.002)	(0.015)	(0.006)	(0.005)	(0.006)
R-squared	0.23	0.49	0.02	0.09	0.05	0.20	0.07	0.19
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.276	0.275	0.011	0.011	0.061	0.061	0.026	0.026
First stage: dependent variable is Transatlantic Trade								
Historical Distance from Coast	-0.00106***	-0.00118***	-0.00106***	-0.00118***	-0.00106***	-0.00118***	-0.00106***	-0.00118***
	(0.00019)	(0.00019)	(0.00019)	(0.00019)	(0.00019)	(0.00019)	(0.00019)	(0.00019)
Observations	549,009	548,694	549,009	548,694	549,009	548,694	549,009	548,694
R-squared	0.70	0.91	0.70	0.91	0.70	0.91	0.70	0.91
Ethnic Groups	243	243	243	243	243	243	243	243
Fixed Effects	Country	EA	Country	EA	Country	EA	Country	EA
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1st stage F-stat	30.51	39.45	30.51	39.45	30.51	39.45	30.51	39.45

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is at the ethnicity level. The unit of observation is a female respondent. *Agriculture* is an indicator variable taking value one if the respondent is employed in agriculture. *Clerical* is an indicator variable taking value one if the respondent is employed in a clerical job. *Manual* is an indicator variable taking value one if the respondent is employed in a manual job. *Domestic* is an indicator variable taking value one if the respondent is employed as a domestic servant. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. The top panel shows the second stage estimates of *Transatlantic Trade*, while the bottom panel shows the first stage estimates of *Historical Distance from Coast*. "1st stage F-stat" indicates the value of the Kleibergen-Paap F statistic on the excluded instrument. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A14: IV estimates of the effect of the slave trade, with additional controls

	FLFP (1)	FLFP (2)	FLFP (3)	FLFP (4)	High Ranking (5)	High Ranking (6)	High Ranking (7)	High Ranking (8)
Second stage:								
Translatlantic Trade	0.054**	0.060**	0.052***	0.060***	0.065***	0.083***	0.052***	0.072***
	(0.027)	(0.029)	(0.013)	(0.014)	(0.020)	(0.022)	(0.010)	(0.013)
R-squared	0.18	0.14	0.32	0.33	0.14	0.17	0.27	0.33
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
Dep. var. mean unaffected	0.586	0.635	0.586	0.635	0.224	0.230	0.224	0.230
First Stage: dependent variable is Transatlantic Trade								
Historical Distance from Coast	-0.00106***	-0.00113***	-0.00120***	-0.00128***	-0.00106***	-0.00112***	-0.00118***	-0.00126***
	(0.00019)	(0.00020)	(0.00019)	(0.00020)	(0.00019)	(0.00020)	(0.00019)	(0.00019)
Observations	563,054	386,317	562,766	385,935	548,691	377,271	548,375	376,838
R-squared	0.70	0.70	0.91	0.91	0.70	0.70	0.91	0.91
Ethnic Groups	243	241	243	241	243	241	243	241
Fixed Effects	Country	Country	EA	EA	Country	Country	EA	EA
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polygyny	No	Yes	No	Yes	No	Yes	No	Yes
1st stage F-stat	30.17	31.41	40.12	42.97	30.37	31.60	39.42	42.14

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *High Ranking* is an indicator variable taking value one if the respondent is employed in a higher ranking occupation. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. The top panel shows the second stage estimates of *Transatlantic Trade*, while the bottom panel shows the first stage estimates of *Historical Distance from Coast*. "1st stage F-stat" indicates the value of the Kleibergen-Paap F statistic on the excluded instrument. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.

***, **, * indicate significance at the 1%, 5% and 10% level.

Table A15: the effect of the slave trade on fertility, controlling for education and polygyny

	Number of Children (1)	Number of Children (2)	Number of Children (3)	Number of Children (4)	Age First Birth (5)	Age First Birth (6)	Age First Birth (7)	Age First Birth (8)
Translatlantic Trade	-0.043	-0.032	-0.046***	-0.059***	0.233***	0.232***	0.201***	0.206***
	(0.028)	(0.035)	(0.012)	(0.017)	(0.075)	(0.076)	(0.043)	(0.048)
Observations	563,054	386,317	562,766	385,935	416,756	354,521	416,429	354,093
R-squared	0.65	0.56	0.68	0.61	0.16	0.16	0.24	0.25
Ethnic Groups	243	241	243	241	243	241	243	241
Fixed Effects	Country	Country	EA	EA	Country	Country	EA	EA
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polygyny	No	Yes	No	Yes	No	Yes	No	Yes
Transatlantic std. dev.	0.564	0.564	0.564	0.564	0.560	0.565	0.560	0.565
Dep. var. mean unaffected	1.514	1.689	1.515	1.689	18.596	18.559	18.595	18.558

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Number Children* is the respondent's number of children ever born. *Age First Birth* is the respondent's age at first birth. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Table A16: IV estimates of the effect of the slave trade on fertility

	Number of Children (1)	Number of Children (2)	Age First Birth (3)	Age First Birth (4)
Second stage:				
Translatlantic Trade	-0.370***	-0.171***	0.937***	0.547***
	(0.117)	(0.049)	(0.250)	(0.130)
R-squared	0.63	0.67	0.11	0.20
Transatlantic std. dev.	0.564	0.564	0.560	0.560
Dep. var. mean unaffected	3.015	3.015	18.596	18.596
First Stage: dependent variable is Transatlantic Trade				
Historical Distance from Coast	-0.00107***	-0.00120***	-0.00108***	-0.00121***
	(0.00019)	(0.00019)	(0.00020)	(0.00019)
Observations	563,379	563,092	416,965	416,639
R-squared	0.70	0.91	0.69	0.91
Ethnic Groups	243	243	243	243
Fixed Effects	Country	EA	Country	EA
Individual Controls	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes
1st stage F-stat	30.30	40.15	30.54	39.85

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Number Children* is the respondent's number of children ever born. *Age First Birth* is the respondent's age at first birth. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. The top panel shows the second stage estimates of *Transatlantic Trade*, while the bottom panel shows the first stage estimates of *Historical Distance from Coast*. "1st stage F-stat" indicates the value of the Kleibergen-Paap F statistic on the excluded instrument. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero. ***, **, * indicate significance at the 1%, 5% and 10% level.

Table A17: IV estimates of the effect of the slave trade on women's empowerment

	Share HH Decisions (1)	Share Violence (2)	Share Violence (3)	Rights Politics (4)	Rights Politics (5)	Rights General (6)	Rights General (7)
Translatlantic Trade	0.086***	-0.069***	-0.057	0.043	-0.143	0.145	0.078
	(0.029)	(0.026)	(0.044)	(0.086)	(0.092)	(0.108)	(0.125)
R-squared	0.26	0.21	0.10	0.07	0.07	0.10	0.09
Transatlantic std. dev.	0.567	0.570	0.564	0.536	0.536	0.540	0.538
Dep. var. mean unaffected	0.451	0.336	0.198	4.031	3.578	4.081	3.712

First stage: dependent variable is Transatlantic Trade

Historical Distance from Coast	-0.00119***	-0.00116***	-0.00088***	-0.00086***	-0.00086***	-0.00085***	-0.00085***
	(0.00021)	(0.00021)	(0.00023)	(0.00015)	(0.00015)	(0.00015)	(0.00015)
Observations	337,994	426,485	163,173	40,394	40,536	24,215	24,389
R-squared	0.71	0.70	0.71	0.71	0.71	0.72	0.72
Ethnic Groups	223	225	189	275	275	261	262
Sample	DHS	DHS	DHS	Afrobarometer	Afrobarometer	Afrobarometer	Afrobarometer
Gender	Female	Female	Male	Female	Male	Female	Male
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1st stage F-stat	31.55	31.01	14.34	32.62	32.89	30.32	32.40

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *Share HH Decisions* is the share of household decisions for which the respondent answers that she has a say. *Share Violence* is the share of questions for which the respondent answers that, in that specific case, violence against a wife is justified. *Rights Politics* is the respondent's agreement with the fact that men and women should have equal rights to be elected to political office. *Rights General* is the respondent's agreement with the statement that women should be treated as men. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. The top panel shows the second stage estimates of *Transatlantic Trade*, while the bottom panel shows the first stage estimates of *Historical Distance from Coast*. "1st stage F-stat" indicates the value of the Kleibergen-Paap F statistic on the excluded instrument. Controls are described in Table 1. "Dep. var. mean unaffected" is the mean value of the dependent variable for the subsample of observations for which *Transatlantic Trade* is equal to zero.
***, **, * indicate significance at the 1%, 5% and 10% level.

Duration of the shock.

I examine whether a longer exposure to the transatlantic slave trade led to a larger long-run effect on FLFP.

To perform this test, we can compare ethnicities from which very similar number of slaves were exported, but whose lengths of exposure differ. In other words, we would like to compare, for example, ethnicity A to ethnicity B, which exported a very similar number of slaves, but one was exposed to the transatlantic slave trade for 100 years and the other for 300 years. Then, if ethnicities exposed for more centuries are characterized by higher FLFP, this would suggest that the length of exposure to the shock matters; if instead we find that these ethnicities are not significantly different in terms of FLFP, this would suggest that the duration of exposure *per se* has no significant effect on the persistence of the shock.

The raw slave trade data contain information on exposure to the transatlantic slave trade during specific centuries: in the 1600s, in the 1700s, and in the 1800s (no ethnic group in my sample was exposed to the transatlantic slave trade before the 17th century). While finding ethnic groups with a very similar magnitude of exposure, and yet with a different length of exposure is challenging, we can approximate this in the following way. I restrict the analysis to the 120 ethnic groups in my sample with a non-zero number of slaves exported during the transatlantic slave trade. I then group them on the basis of the magnitude of the exposure to the shock: in the first subset we have ethnicities with a value of the transatlantic slave trade variable of less than 1, in the second subset we have ethnicities with a value between 1 and 2, and so forth.[58] I then focus on the 5 subsets that have variation in the length of exposure to the slave trade. Each of these subsets include ethnic groups with exposures to the slave trade that were similar in magnitude, but different in duration. For example, four ethnicities have a value of the export measure between 2 and 3; however, two of these ethic groups (the Gurma and the Nupe) were exposed to the shock for 2 centuries, while the other two ethnic groups (the Susu and the Temne) were exposed for 3 centuries.

To perform the test, I estimate a regression where I include 5 dummies for the 5 subsets described above, and where the variable of interest is *Length Exposure*, which measures the number of centuries of exposure to the transatlantic slave trade (it takes values from 1 to 3). First, in column 1 of Table A17, I show that even in this smaller subsample of observations we still find a significant and positive effect of the number of slaves taken from a woman's ethnic group on her likelihood of being employed. In

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[58]To perform this exercise, I take advantage of the full distribution of the slave trade export measure, and I do not use the winsorized version of the variable as in the main analysis. As it is clear in what follows, since I will be comparing ethnicities with similar levels of exposure, the presence of outliers in the slave trade export measure is not a concern for this exercise.

column 2 I show the estimated coefficient on *Length Exposure*, which is not statistically significant. I take these results as suggestive evidence that, conditional on the magnitude of the shock, the length of exposure to the transatlantic slave trade does not matter in explaining current variation in FLFP.

Table A18: Does the duration of the historical shock matter?

	FLFP (1)	FLFP (2)
Translatlantic Trade	0.034**	
	(0.014)	
Length Exposure		0.016
		(0.013)
Observations	343,922	343,922
R-squared	0.15	0.16
Ethnic Groups	113	113

Notes: Standard errors in parentheses, clustered at the ethnicity level. The unit of observation is a female respondent. *FLFP* is an indicator variable taking value one if the respondent was ever employed in the last 12 months. *Transatlantic Trade* is the number of slaves exported during the transatlantic slave trade normalized by the area of land historically inhabited by the ethnic group. *Length Exposure* measures the number of centuries in which the respondent's ethnic group was exposed to the transatlantic slave trade. Both columns include country-survey fixed effects, age fixed effects, a dummy for the respondent being married, a dummy for the respondent being Muslim, a dummy for the respondent being Christian and a dummy for the respondent living in a urban location, and the number of slaves exported during the Indian Ocean slave trade normalized by the area of land historically inhabited by the ethnic group. Column 2 includes fixed effects for the magnitude of the exposure of the ethnic group to the transatlantic slave trade, as explained in the main text.
***, **, * indicate significance at the 1%, 5% and 10% level.

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