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State History and Contemporary Conflict: Evidence from Sub-Saharan Africa

Emilio Depetris-Chauvin - Pontificia Universidad Católica de Chile

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STATE HISTORY AND CONTEMPORARY CONFLICT: EVIDENCE FROM SUB-SAHARAN AFRICA*

Emilio Depetris-Chauvin†

Abstract

I examine empirically the role of historical political centralization on the likelihood of contemporary civil conflict in Sub-Saharan Africa. I combine a wide variety of historical sources to construct an original measure of long-run exposure to statehood at the sub-national level. I then exploit variation in this new measure along with geo-referenced conflict data to document a robust negative relationship between long-run exposure to statehood and contemporary conflict. From a variety of identification strategies, I provide evidence suggesting that the relationship is causal. I argue that regions with long histories of statehood are better equipped with mechanisms to establish and preserve order. I provide two pieces of evidence consistent with this hypothesis. First, regions with relatively long historical exposure to statehood are less prone to experience conflict when hit by a negative economic shock. Second, exploiting contemporary individual-level survey data, I show that within-country long historical statehood experience is linked to people's positive attitudes toward state institutions and traditional leaders.

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†Instituto de Economía e Instituto de Ciencia Política, Pontificia Universidad Católica de Chile. Email: edepetris@uc.cl

1 Introduction

Civil conflict imposes enormous costs on a society. In addition to the lives lost as a direct result of violent confrontations, there may be persistent negative consequences to health and social fragmentation. The economic costs extend beyond short-term disruptions of markets, as conflict may also shape long-run growth via its effect on human capital accumulation, income inequality, institutions, and culture. Not surprisingly, understanding the determinants of civil conflict has been the aim of a growing body of economic literature.[1]

The case of Sub-Saharan Africa has received considerable attention for the simple reason that civil conflict has been especially prevalent in that part of the world. Over two thirds of Sub-Saharan African countries have experienced at least one episode of conflict since 1980. Many scholars have pointed to civil conflict as a key factor holding back African economic development (see, for example, Easterly and Levine, 1997).

In this paper I explore the relationship between the prevalence of modern civil conflict and historical political centralization. Specifically, I uncover a within-country robust negative relationship between long-run exposure to statehood and the prevalence of contemporary conflict. My approach of studying a historical determinant of modern civil conflict is motivated by the empirical literature showing evidence regarding the importance of historical persistence for understanding current economic development (see Galor, 2011; Nunn, 2014; and Spoloare and Wacziarg, 2013 for extensive reviews). My paper draws upon a particular strand of this literature, one which shows that traditional African institutions not only survived the colonial period but continue to play an important role in modern African development (Gennaioli and Rainer, 2007; Michalopoulos and Papaioannou, 2013; and Acemoglu, Reed, and Robinson, 2014).

Why would a long history of statehood matter for contemporary conflict? Similarly to Persson and Tabellini (2009)'s idea of "democratic capital", I argue that an accumulation of experience with state-like institutions may result in improved state capacity over time.[2] Regions with long histories of statehood, therefore, should be better equipped with mechanisms to establish and preserve order. These related institutional capabilities can be manifested, for example, in an ability to negotiate compromises, allocate scarce resources, or mitigate commitment problems; likewise in the existence of traditional collective organizations and legal courts capable of peacefully settling differences over local disputes, or even simply in a stronger police presence and enforcement of property rights (see, among others, Michalopoulos and Papaioannou, 2015; Baldwin, 2013; Hariri, 2012; Schapera, 1970; Fenske, 2014; and Bubb, 2013). Consequently, regions with long histories of statehood should experience less conflict.

[1] Blattman and Miguel (2010) provide an extensive review and discussion of the literature on civil conflict, inclusive of the theoretical arguments and salient empirical findings regarding the causes and consequences of civil conflict.

[2] State capacity can be broadly defined as abilities acquired by a state for implementing a wide range of policies (Besley and Persson 2010).

A key aspect of my approach is to exploit within-country differences in the prevalence of modern conflict and its correlates. I take my empirical analysis to a fine sub-national scale for several reasons. First, conflict in Africa is often local and does not extend to a country's entire territory.[3] Second, there is arguably large within-country heterogeneity in the historical determinants of conflict, including the extent and nature of historical exposure to state institutions. Given that the modern borders in Sub-Saharan Africa were artificially drawn during colonial times without any consideration of previous historical boundaries (Green, 2012), one finds that substantial heterogeneity in location histories and people´s characteristics has persisted within these borders even until today. Consequently, the aggregation of these characteristics at the country level averages out a rich source of heterogeneity. Third, other determinants of conflict previously highlighted in the literature, such as weather anomalies or topography, are in fact geographical and location-specific. Fourth, exploiting within-country variation in deeply-rooted institutions allows me to abstract from country-level covariates, such as national institutions or the identity of the respective former colonial rulers.

Pre-colonial Sub-Saharan Africa comprised a large number of polities of different territorial size and histories of varying degrees of political centralization (Murdock, 1967).[4] At one extreme of the spectrum of political centralization were large states, such as Songhai in modern day Mali, which had a king, a professional army, public servants and formal institutions such as courts of law and diplomats. At the other extreme, there were nomadic hunter-gatherer groups with no formal political heads such as the Bushmen of South Africa. Some centralized polities proved short-lived (e.g., the Kingdom of Butua in modern day Zimbabwe); some mutated over time (e.g., Songhai); and some have persisted until today (e.g., the Kingdom of Buganda). Historically, political centralization has varied even within countries. Consider, for example, the case of Nigeria, where the Hausa, the Yoruba, and the Igbo which represent almost 70 percent of the national population; all have had quite different histories of centralization. Most notably, unlike the Hausa and Yoruba, the Igbo had a very short history of state centralization in pre-colonial time despite having settled in southern Nigeria for centuries.

In order to account for this heterogeneity in historical state prevalence, I develop an original measure at the sub-national level. one I refer to as the State History Index. For this purpose, I combine a wide variety of historical sources in order to identify a comprehensive list of historical states, inclusive of their boundaries and chronologies. In its simplest version, my index measures the fraction of years that a territory had indigenous state-like institutions for the time period 1000 - 1850 CE. I then document a within-country strong negative correlation between my state history index and geo-referenced conflict data. My OLS results are robust to a battery of within-modern countries controls, ranging from

[3]Raleigh et al (2009) argue that civil conflict does not usually expand across more than a quarter of a country's territory.

[4]I define Sub-Saharan Africa geographically as corresponding to the territories contained within the borders of the following countries: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo DRC, Congo, Cote d'Ivoire, Ethiopia, Eritrea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

contemporaneous conflict correlates and geographic factors to historical and deeply-rooted plausible determinants of modern conflict. Moreover, I show that these results are not driven by historically stateless locations, influential observations, the way conflict is coded, or the level of spatial aggregation at which the analysis is conducted.

Given the obvious limitations in documenting historical boundaries in Sub-Saharan Africa, I show that the documented negative relationship between state history and modern conflict still holds using an alternative measure accounting for historical exposure to centralized institutions. To do this, I exploit time and cross-sectional variation from a panel of historical African cities. To the extent that kingdoms and empires tended to have large cities as political centers, I use time-varying proximity to the closest large city during the time period 1000-1800 CE, to construct an alternative measure of the degree of influence of centralized polities. Using this new measure as a proxy for state history, I obtain similar results providing additional support to my main hypothesis. Moreover, using variation from the this new proposed proxy to instrument my original measure of state history, I present 2SLS estimates which are consistent with the idea that measurement error in my state history index introduces a sizable downward bias.

Nonetheless, this uncovered robust statistical association does not necessarily imply causality. Indeed, history is not a random process in which long-run exposure to statehood has been randomly assigned across regions. The historical formation and evolution of states is a complex phenomenon and the factors underlying the emergence and persistence of states may be still operating today. Furthermore, some of those factors are unobserved, which hinders the identification of the causal effect of historical statehood on conflict. Nevertheless, I argue that it is unlikely that my OLS results are fully driven by omitted factors. Following Altonji, Elder, and Taber (2005)'s approach I show that the influence of unobservables would have to be considerably greater than the influence of observables in order to explain away the uncovered correlation.

To determine whether the uncovered empirical relationship between state history and conflict prevalence is, in fact, causal I pursue an instrumental variable approach. Finding a source of exogenous variation in state history for the entire Sub-Saharan region is a difficult task, therefore I focus in a particular country: Uganda. I exploit plausible exogenous variation in the migratory distance from an archaeological site historians have located as the core (that is, Bigo Bya Mugenyi) of the legendary Empire of Kitara during the Bacwezi dynasty -the first known attempt of political centralization in pre-colonial Uganda. Several kingdoms in the region of the great lakes such as Buganda, Toro, Rwanda, Bunyoro, and Ankole claim inheritance from the Bacwezi dynasty. It is believed that the Bacwezi were a ruling pastoral clan, not indigenous to the region, who moved away from Bigo Bya Mugenyi after two generations. I interpret this brief settling of an outsider civilization as constituing the arrival of an innovation (that is, centralized institutions) which later spread to adjacent regions. The migratory distance from Bigo Bya Mugenyi, a deserted savannah wilderness located near the border between the kingdoms of Buganda and Ankole, strongly predicts my measure of state history at the sub-national level. The IV point estimates are qualitatively similar to my previous OLS estimates and suggest that a location's historical exposure to centralized institutions has a strong causal effect on its conflict prevalence.

To further support the argument that state history has left its marks on patterns of contemporaneous conflict, I present two additional pieces of evidence consistent with my main hypothesis. First, I show that regions with relatively long historical exposure to statehood are remarkably less prone to experience conflict when hit by a negative agricultural productivity shock. Second, I present empirical evidence regarding potential underlying mechanisms by exploiting contemporary individual-level survey data for 18 Sub-Saharan countries to show that a long history of statehood is associated with people having positive attitudes towards state institutions. In this sense, I demostrate that people living in areas with a long history of statehood regard key state institutions as trustworthy. I also show that support for local traditional leaders is significantly greater at these locations. These results are reconfirmed using an instrumental variable approach for Uganda. Finally, none of the individual-level results are driven by unobservable ethnic characteristics (i.e., estimates are conditional on ethnic identity fixed effects), a striking result and one suggestive that, with regards to people's opinion about state institutions, the institutional history of the location where people currently live matters a great deal more that the one from whence came their ancestors.

2 Relationship with the Existing Literature

This paper belongs to a vibrant body of work within economics tracing the historical roots of contemporary development. Specifically, my work is related to economic research on the relationship between institutional history and contemporary outcomes; a line of research that originated in Engerman and Sokoloff (1997), and Acemoglu, Johnson, and Robinson (2001). In particular, this paper is related to the literature examining the developmental role of state history (Bockstette, Chanda, and Putterman 2002; Hariri 2012; and Bates 2013). Methodologically, it is related to Bockstette, Chanda, and Putterman (2002) which introduced a State Antiquity Index at the country level.[5] I contribute to the releted literature by constructing an original measure at the sub-national level.

Particularly with respect to Africa, my work is also relevant to works dealing with pre-colonial political centralization's impact on contemporary outcomes (Gennaioli and Rainer, 2007; Huillery, 2009; and Michalopoulos and Papaioannou, 2013, Bandyopadhyay and Green, 2012). More importantly, my work contributes to the line of research on how historical factors have shaped the observed pattern of conflict in Africa during the post-colonial era (Michalopoulos and Papaioannou 2011; and Besley and Reynal-

[5] Bockstette, Chanda, and Putterman (2002) introduced the State Antiquity Index and showed that it correlated with indicators of institutional quality and political stability at the country level.

Querol 2014).[6] Especially relevant to my work is Wig (2013) who finds that ethnic groups with high degree of pre-colonial political centralization and who are not part of the national government are less likely to be involved in ethnic conflicts. While attempting to address a similar question regarding how historical political centralization might prevent conflict, there are three main differences between Wig (2013) and my work. First, unlike Wig (2013) who only focuses on ethnic political centralization as recorded by ethnographers during colonization, I trace the history of statehood further back in time in order to account for differences on long-run exposure to statehood. In doing so, I find that, not only the extensive, but also the intensive margin of the prevalence of historical institutions is crucial for understanding contemporary conflict. Second, I pursue a variety of identification strategies so as to provide evidence suggestive that the relationship between historical centralization and conflict is causal. Third, I provide evidence of potential mechanisms underlying my reduced form findings, by documenting a strong relationship between state history and positive attitudes toward state institutions and traditional leaders.[7]

By documenting the historical persistence of local state capacity, this paper also contributes to recent works showing that societal characteristics, such as cultural traits, technology advancement, or ocuppational heterogeniety may persist for long time (see, among others, Nunn and Wantchekon 2012, Comin, Easterly, and Gong 2010, Voigtländer and Voth 2012, Depetris-Chauvin and Özak 2016). Additionally, by showing how trust in local policy makers is linked to the state history of a particular location, my paper also relates to previous work studying deeply-rooted determinants of different dimensions of trust. In this sense, it has been shown that modern levels of trust can be linked to different historical events such as the slave trade (Nunn and Wantchekon 2012), the historical prevalence of conflict (Besley and Reynal-Querol 2014), historical changes in the ruling nation (Jancec 2013), or even historical climate volatility (Durante 2011) and events that originated during the migration of humans out of Africa tens of thousands of years ago (Arbatli, Ashraf, and Galor 2015). In particular, my results relate to Becker et al (2016) that documents the persistent effect of the Habsburg Empire on people's trust in local public services.

My work contributes to the literature on the interaction between state capacity (or contemporary institutions in general) and conflict (Fearon and Laitin 2003; Besley and Persson 2008, among others).[8] In particular, my paper provides empirical evidence that long history of pre-colonial state capacity at the sub-national level may reduce the likelihood of civil conflict in a region of the world where national governments have limited penetration (Michalopoulos and Papaioannou 2013c). It is worth noting that

[6]Michalopoulos and Papaioannou (2011) exploits a quasi-natural experiment to show that civil conflict is more prevalent in the historical homeland of ethnicities partitioned during the Scramble for Africa. Besley and Reynal-Querol (2014) provides evidence suggestive of a legacy of historical conflict by documenting a positive empirical relationship between pattern of contemporary conflict and proximity to the location of recorded battles that took place during the period 1400 - 1700 CE.

[7]Additionally, I do not restrict my analysis to ethnic conflict, but rather, I consider a broader definition of civil conflict.

[8]In addition to state capacity, the role of cohesive political institutions (Besley and Persson, 2011) has been also empirically studied.

most of the empirical work concerning the link between contemporary institutions (in particular, as pertains to state capacity) and conflict has been conducted across countries. Methodologically, I depart from this approach. Rather than focusing on contemporary institutional differences at the national level, I investigate the role of deeply-rooted institutional characteristics at the sub-national level in shaping state legitimacy and the propensity to engage in conflict. Finally, my work is also methodologically related a recent literature in economics taking a local approach to conflict (Besley and Reynal-Querol, 2014; Harari and La Ferrara, 2012).[9]

3 A New Index of State History at the Sub-national Level

In this section I present an overview of the construction procedure of my new index of state history at the sub-national level. Two dimensions are especially relevant here; the appropiate time period for the computation of the index and the appropiate definition of the geographical location for which the index is calculated. Put another way, I need to define the units of analysis determining the scope of both the extensive and intensive margin of state history.

Time period under analysis. I focus on the period 1000-1850 CE for two reasons. First, the aim of my research is to examine the legacy of indigenous state history, Correspondingly, I restrict my analysis to pre-colonial times. In doing so, however, I am not neglecting the importance of the colonial and post-colonial periods for understandinf contemporary pattern of conflict. In fact, the persistence of most indigenous institutions during and after the period of colonial indirect rule represents an important component of the main argument in this paper. Second, I ignored the period prior to 1000 CE due to the low quality of the relevant historical information, likewise the fact that not much known variation on historical states was evident in Sub-Saharan Africa before then.[10] I then follow Bockstette, Chanda, and Putterman (2002), and divide the period 1000-1850 CE in 17 half-centuries. For each 50 years period I identify all the relevant polities. I consider a polity to be relevant for a given half-century period if it existed for at least twenty six years during the respective fifty-years interval. I then construct seventeen cross sections of the historical boundaries previously identified in pre-colonial Sub-Saharan Africa. Figure 1 displays the evolution of historical map boundaries for the period 1000-1850 CE.

Definition of a geographic unit. My empirical analysis focuses on several different definitions for the sub-national level (i.e: geographical unit of observation). In this paper I focus on districts, counties, the historical homelands of ethnic groups as well as in grid cells of different sizes; these are artificial constructions. Given these different levels of aggregation to compute my index of state history, I begin

[9]In revealing how a deeply-rooted factor relates to contemporary conflict, this paper also connects with recent work done by Arbatli, Ashraf, and Galor (2015), showing that genetic diversity strongly predicts social conflict.

[10]There are a few known cases of state formation in Sub-Saharan Africa before 1000 CE: the Aksum and Nubian Kingdoms (Nobadia and Alodia) in the Ethiopian Highland and along the Nile river, the Siwahalli city-states in East Africa, Kanem in Western Chad, and Ghana and Gao in the West African Sahel (Ehret 2002).

by constructing the index at a sufficient fine level. Therefore, I divide Sub-Saharan Africa in 0.1 by 0.1 degree pixels (0.1 degree is approximately 11 kilometers at the equator). I then dissolve the compiled historical maps into 0.1 by 0.1 degree pixels taking the value 1 when an historical state intersects the pixel, and 0 otherwise.[11] For a given level of aggregation i, its state history value is determined by:

$$State\,History_i = \sum_{1000}^{1850} \beta_t \times S_{i,t} \qquad \text{with } t = 1000, 1050, 1100, ..., 1850$$

where, $S_{i,t} = \frac{\sum \theta_{p,t}}{P}$ is the score of i in period t, with $\theta_{p,t}$ taking the value 1 if the pixel p is intersected by the map of an historical state in period t, 0 otherwise; and P being the number of pixels in i.[12] The variable β is the discount factor. Since I do not have any theoretical reason for picking a particular discount factor, I base most of my analysis in a discount factor of 1. Figure 2 shows an example of my calculation of the score for East Africa circa 1800, for which the level of aggregation is a grid cell of 2 degree by 2 degree.[13]

Cross-Sectional Variation. Figure 3 displays the cross-sectional variation for my State History Index based on a grid-cell aggregation (with a discount factor of 1). Sub-Saharan Africa is divided into 558 grid cells of 2 degree by 2 degree. Following Bockstette, Chanda, and Putterman (2002), I rescale the index by dividing all the values by the maximum possible value; therefore $State\,History_i \in [0,1]$.[14]

Roughly one third of Sub-Saharan Africa had no state history prior to 1850 CE. State history is most prevalent in the north, particularly in the western part of Sahel, the highlands of Ethiopia, and the region along the Nile River. Notably, proximity to water is a relevant factor for explaining the historical presence of states. In particular, proximity to such major rivers as the Niger, Benue, Senegal, Volta, Congo, and Zambezi Rivers; likewise such great lakes as Lakes Victoria, Tanganyika, Malawi, and Chad correlates with high values on the index. Almost no state history is documented in the African rainforest or Southwest Africa.

[11]The pixel will thus take a value 1 even when two historical states overlap. Put another way, a pixel that is intersected multiple times is only considered once.

[12]Therefore, the score $S_{i,t}$ denotes what fraction of the territory of i is under an historical state in the period t.

[13]There are three crucial and challenging components to the construction of the index. First, my procedure requires the compilation of a comprehensive list of historical states. Second, the boundaries of these historical states must be identified, digitized and georeferenced. Third, I need to account for potential expansions and contractions of those boundaries over time. This last component is an especially difficult task as any attempt to rigorously define state boundaries in pre-colonial Africa is subject to measurement error. I discuss these issues in Appendix A.

[14]Table A.1 in the appendix includes a complete list of polities (with their relevant dates) used in the computation of my index.

4 Empirical Relationship between State History and Contemporary Conflict

4.1 Sources and Description of Conflict Data

In this paper I exploit georeferenced conflict event data in order to construct different measures of conflict prevalence at the sub-national level. The UCDP GED, version 1.5 (November 2012) provides geographically and temporally disaggregated data for conflict events in Africa. [15] Specifically, UCDP GED provides the date and location (in terms of latitude and longitude) of all conflict events for the period 1989-2010. A conflict event is defined as "the incidence of the use of armed force by an organized actor against another organized actor, or against civilians, resulting in at least one direct death in either the best, low or high estimate categories at a specific location and for a specific temporal duration" (Sundberg et al, 2010). The dataset comprises of all the actors and conflicts found in the aggregated, annual UCDP data for the same period. UCDP GED traces all the conflict events of "all dyads and actors that have crossed the 25-deaths threshold in any year of the UCDP annual data" (Sundberg et al, 2010). Note that the 25-deaths threshold is the standard coding used to define civil conflict and that the definition for dyad does not exclusively need to include the state's government as a warring actor. Finally, also note that once a dyad crosses the 25-deaths threshold, all the events with at least one death are included in the dataset; that is, events are included even when they occurred during a year where the 25-deaths threshold was not crossed, likewise regardless of whether they occurred before the year at which the threshold was in fact crossed. The UCDP GED contains 21,858 events related to approximately 400 conflict dyads for the entire African continent. More than 50 percent of those events include the state as one of the warring actors (although about only 10 percent of conflict dyads actually include the state). For the best estimate category, the total fatality count is approximately 750,000 deaths (Sundberg and Melander, 2013).[16]

[15] For a full description of the dataset, see Sundberg and Melander (2013).

[16] There is an alternative georeferenced conflict dataset: ACLED. I prefer UCDP GED over ACLED for several reasons. First, the definition of a conflict event in UCDP GED is restricted to those involving fatalities and adheres to the general and well established definitions given in the UCDP–PRIO Armed Conflict Dataset, which has been extensively used in the conflict literature (see for example, Miguel et al, 2004, and Esteban et al, 2012). Conversely, the definition of a conflict event in ACLED includes non-violent actions such as troop movements, the establishment of rebel bases, arrests, and political protests. Moreover, the definitions of both armed conflict and what actually constitutes an event in ACLED is not fully specified. This is quite worrisome, as it makes harder to assess the potential scopes for measurement errors in the conflict data. Having said that, it should be noted that ACLED data does allow the user to identify battles and other violent events. Second, UCDP GED provides an estimate of number of casualties per event, thus allowing me to calculate an alternative measure of conflict intensity. Third, as Eck (2012) argues, ACLED has higher rates of miscoding. Finally, the UCDP GED provides a larger temporal coverage (22 years versus 14 years for ACLED). Nonetheless, as a robustness check exercise, I show that using ACLED data does not qualitatively affect the main results of my empirical exercise (see Table 5).

4.2 Cross Sectional Evidence

I start my empirical analysis by looking at the statistical relationship between the prevalence of conflict and state history at the 2 by 2 degree grid cell level. The key motivation in having an arbitrary construction (i.e., grid cell) as a unit of observation, as opposed to a sub-national administrative unit or even historical ethnic homelands, is to mitigate concerns related to the potential endogeneity of the borders of those political units. More specifically, the current or historical political borders within modern countries may be a direct outcome of patterns of contemporary conflict or any of its correlates (for instance, ethnic divisions). The average area of a grid cell in my sample is 42,400 square kilometer which represents approximately one tenth of the average size of a Sub-Saharan African country. A reader may wonder why not conducting the analysis at a higher resolution such as 1 by 1 degree. While choosing a smaller grid cell may facilitate the identification of a local effect by unveiling sub-national heterogeneity, it may also introduce some estimation difficulties by exacerbating spatial dependence not only in the dependent variable but also in the covariates of conflict (see Harari and La Ferrara 2013). I hence attempt to balance that trade-off. Nonetheless, in the robustness checks I show that all the results qualitatively hold when carrying the analysis at a higher resolution.[17] [18]

Table A.2 in the appendix presents summary statistics for the 558 grid cells in my sample. A mean conflict prevalence of .189 implies that, during the period 1989-2010, an average grid cell experienced 4 years with at least one conflict event.

I next analyze the empirical relationship between state history and contemporary conflict at the grid cell level. I begin by estimating the following baseline equation:

$$Conflict_{i,c} = \alpha + \beta StateHistory_i + G_i^{'}\Gamma + X_i^{'}\Delta + C_i^{'}Z + \lambda_c + \varepsilon_{i,c} \quad (1)$$

where i and c denote grid cells and countries respectively. The variable $Conflict_{i,c}$ is a measure of conflict prevalence and represents the fraction of years with at least one conflict event during the period 1989-2010 for the grid cell i in country c. The variable $StateHistory_i$ is my new index for state history at the sub-national level i. Hence, β is the main coefficient of interest in this exercise. The vector $G_i^{'}$ denotes a set of geographic and location specific controls. The vector $X_i^{'}$ includes a set of controls to account for the potential direct effects on conflict from temperature volatility, ecological diversity, and a proxy for genetic diversity. $C_i^{'}$ is also a vector and includes potential confounding variables which may be also arguably outcomes of historical state formation. Thus, including these variables may result in a potential bad control problem (see Angrist and Pischke 2009, for discussion). Finally, λ_c is country c fixed effect included to account for time-invariant and country-specific factors, such as

[17] See Tables S.3 to S.6. in online appendix

[18] Additionally, showing that the results hold for different levels of aggregation is a strategy followed by Hariri and La Ferrara (2013) to deal with the so-called Modificable Areal Unit Problem (MAUP).

national institutions, that may affect the prevalence of conflict.[19]

OLS Estimates

Table 1 provides a first statistical test documenting a strong negative correlation between state history and contemporary conflict at the sub-national level. Beneath each estimation of my coefficient of interest, I report four different standard errors. To start with and just for sake of comparison I report robust standard errors that are consistent with arbitrary forms of heterokedasticity. I also report standard errors adjusted for two-dimensional spatial autocorrelation for the cases of 5 degrees and 10 degrees cut-off distances (following Conley, 1999). Finally, I report standard errors adjusted for clustering at the country level. For all the specifications in Table 1 standard errors clustered at the country level are much larger than under the other alternative methods. This pattern holds for all the specifications presented in this paper. Correspondingly, clustering at the country level appears to be the most conservative approach for avoiding over-rejection of the null hypothesis concerning the statistical significance of the coefficient of interest. For the remainder of this paper, I report standard errors and statistics of the hypothesis test that are robust to within-country correlation in the error term.

I now turn to the analysis of the estimates in Table 1. In the first column, I only focus on the statistical relationship between state history and conflict after controlling for country dummies. The point estimate for β suggests a negative correlation between state history and conflict prevalence. In column 2, I add a vector of geo-strategic controls that may also correlate with the historical prevalence of states.[20] Distances to the ocean and to a country's capital are intended to proxy the peripheral location of the grid cell.[21] To further account for the possibility of within-country variation in national state penetration, I also control for terrain's characteristics (i.e: elevation and ruggedness) such as were highlighted in previous literature (see, for example, Fearon and Laitin 2003). Distance to a major river and the density of rivers are also included to account for respective geo-political relevance as main targets for conflict actors. The total area of a grid cell is also included among the controls, as well as an indicator of the number of countries intersecting a grid cell. The latter factor accounts for the fact that conflict is more prevalent near international borders (see, for instance, Michalopoulos and Papaioannou, 2012) whereas

[19] When defining country dummies, each grid cell is assigned to exclusively one country. When one grid cell crosses country borders it is assigned to the country with the largest share of the grid cell. Given the relevance of proximity to international borders as a correlate of conflict, for the remainder of the paper I control for a variable indicating the number of countries intersected by each grid cell.

[20] By geo-strategic dimension I refer to the geographical or geo-political characteristics of the grid cell that could affect the likelihood of conflict through their effects on either the capabilities of the central government to fight insurgency or the benefits accrued by any of the warring actors (for instance, via gaining control of the capital or of major rivers). See appendix B for detailed description of all the variables.

[21] One could argue that the distance to the capital city is an outcome of state history and thus constitute a case of "bad control". Nonetheless, the fact is that most locations of modern capital cities in Sub-Saharan Africa were chosen by respective colonizers as pertained to their needs, and correspondingly do not necessarily overlap with preexisting polities (Herbst, 2000). In addition, the quasi-random draw of modern country borders provides further exogenous variation in terms of the distances to the capital. None of the results in this paper are driven by the inclusion of this vector of geo-strategic controls.

the former factor accounts for the smaller size of coastal grid cells. It is worth noting that most of these controls also help to explain within-country variation in economic development.

All the point estimates (not reported in table to save space) for the geo-strategic controls present the same sign as previously documented in the conflict literature (see, in particular, Harari and La Ferrara 2013 for a cross-sectional analysis based on grid cells). More importantly, the point estimate for β suggests an statistically significant negative relationship between state history and contemporary conflict. Since the standard deviation for the dependent variable (0.232) is very similar to the standard deviation of my state history index (0.227), the interpretation of the coefficient estimates for β in terms of standard deviations is fairly straightforward. One standard deviation increase in state history corresponds to a 0.17-standard deviation reduction in the prevalence of conflict during the period of analysis (roughly one year in the sample period, or one fourth of the mean prevalence of conflict).

I now consider the potential effects of land endowment and the disease environment. Early state development was influenced by the geographic, climatic, demographic and disease environment (Diamond 1997, Reid 2012, and Alsan 2015). I first include, in column 3, a measure of soil suitability for growing cereal crops. This not only positively correlates with early statehood but also with modern population density, an important driver of conflict.[22] In column 4, I then introduce two measures that account for the ecology of malaria (from Conley, McCord, and Sachs 2010) and the suitability for the tsetse fly. The former only weakly correlates with my index of state history in spite of being historically prevalent in Sub-Saharan Africa (Depetris-Chauvin and Weil 2015), while the latter strongly negatively correlates with it (consistently with Alsan 2015). In addition, Cervellati, Sunde, and Valmori (2012) find that persistent exposure to diseases affects the likelihood of conflict by affecting the opportunity cost of engaging in violence. The point estimate for β remains unaltered.

Potential confounding effects of population diversity, ecological diversity, and temperature volatility. Ashraf and Galor (2013a, 2013b) argue that population diversity, as measured by genetic diversity, had a long-lasting effect on the pattern of economic development and ethnolinguistic heterogeneity. Even more importantly, Arbatli, Ashraf, and Galor (2015) show that their measure of population diversity strongly correlates with several measures of social conflict. Unfortunately, no data on genetic diversity at the grid cell level exists. To tackle this problem, I use the fact that the distance from the location of human origin (i.e: Addis Ababa in Ethiopia) is a strong linear predictor of the degree of genetic diversity in a population (Ramachandran et al. 2005; and Ashraf and Galor 2013a).[23] The results in column 1 of Table 2 shows that distance from Addis Ababa displays the expected sign suggesting that population diversity may positively impact conflict. Nevertheless, the point estimate for β is affected remarkably

[22] Data on soil suitability for growing cereal comes from the Food and Agriculture Organization (FAO)'s Global Agro-Ecological Zones (GAEZ) database. The suitability of the soil is calculated based on the physical environment (soil moisture conditions, radiation, and temperature) relevant for each crop under rain-fed conditions and assuming low use of inputs. The suitability measure ranges between 0 (not suitable) to 1 (very suitable).

[23] As argued in Depetris-Chauvin and Özak (2016), the distance to East Africa may capture more general aspects of historical population diversity above and beyond genes, such as linguistic and cultural diversity.

little.

Fenske (2014) shows that ecological diversity is strongly related to the presence of pre-colonial states in Sub-Saharan Africa. Diversity in ecology correlates with such potential drivers of conflict as linguistic or cultural diversity (Michalopoulos 2012, and Moore et al, 2002), or population density (Fenske 2014, Osafo-Kwaako and Robinson 2013). Additionally, herders cope with climate limitations by moving between ecological zones which potentially leads to land-related conflicts with farmers.[24] To account for this potential bias, I follow Fenske (2014) and measure ecological diversity as a Herfindahl index constructed from the shares of each grid's area occupied by each ecological type as per White's (1983) vegetation map of Africa. The point estimate in column 2 of Table 2 shows that ecological diversity does indeed present a statistically significant and positive correlation with contemporary conflict. The negative association between state history and conflict remains statistically strong.

I next consider the potential confounding effect of climate variability in column 3. Ashraf and Michalopoulos (2013) show that historical climatic volatility impacted the timing of the adoption of agriculture, an important determinant of the longevity of statehood. On the other hand, Durante (2011) shows that, within Europe, variation in social trust is driven by historical variation in climate. When I include intertemporal temperature volatility the size of my point estimates decreases by 15 percent (albeit it remains statistically significant).[25] This fact is consistent with the possibility that my hypothesized mitigation effect of state history on contemporary conflict may partially confound higher levels of social trust induced by historical climate variability. Furthermore, I obtain a similar point estimate when controlling for these three confounders in column 4.

Robustness Checks

Considering potential "bad controls" and mediating channels. There are certainly others contemporaneous and historical confounding factors relevant to my analysis. I next show how the point estimate for my variable of interest is affected by the inclusion of additional controls, which arguably could be considered outcomes of a long-run exposure to centralized polities. While not conclusive, changes in my main point estimate when including these controls suggests the existence of mediating channels through which state history impacts modern conflict. I focus on pre-colonial economic prosperity, population density, ethnic fractionalization, slave trade prevalence, proximity to historical trade routes and historical conflict sites, as well as contemporary development (proxied by light density at nights as obtained from satellite images).[26] The main point estimates are displayed in Table 3. I start with pre-colonial

[24] This is a well-documented phenomenon in the conflict literature, in particular for the Sahel region (see Benjaminsen et al, 2012).

[25] I use variation in modern data to proxy historical climatic variation. Ashraf and Michalopoulos (2013) show that spatial variation in temperature volatility remains largely stable over long periods of time. Correspondingly, contemporary climate data can be meaningfully employed as informative proxies for prehistoric ones.

[26] Table S.1 shows that, conditional on country fixed effects, my State History measure is indeed a strong predictor of the "bad controls" proposed in this section.

ethnic controls that account for historical levels of prosperity and economic sophistication.[27] I focus on two sets of ethnicity-level variables. First, I consider the subsistence income shares derived from hunting, fishing, animal husbandry, and agriculture (variables v2 to v5 from Ethnographic Atlas).[28] Second, I consider a variable describing the pattern of settlement. This variable (v30 from the Ethnographic Atlas) is coded in the order of increasing settlement sophistication with values ranging from 1 (nomadic) to 8 (complex settlement). Overall, my point estimate for β does not change (albeit its precision is improved) with the addition of these controls in column 1.

Next I analyze the confounding effect of population density.[29] Unfortunately, there is no detailed historical data on population density at my level of analysis. Using different sources Goldewijk, Beusen, and Janssen (2010) estimate population counts for several centuries with a spatial resolution of 5 min longitude/latitude. Needless to say, these estimates are necessarily rough approximations. I therefore use them as a proxy for within-country variation of population density during pre-colonial times.[30] The point estimates for β remains virtually unaltered. I next construct an ethnic fractionalization variable based on the index introduced in Alesina et al (2003).[31] I compute a fractionalization index using gridded population in 1960. Using population figures from 1960 alleviates concerns of reverse causality from contemporary conflict to population distributions.[32] The point estimates for β remains unaltered when including ethnic fractionalization as a control.[33] I next consider the slave trade.[34] I construct population-weighted averages of slave trade prevalence at the grid cell level using Nathan Nunn's data.

[27] I construct pre-colonial ethnographic measures at the grid cell level based on information derived from the Ethnographic Atlas (Murdock, 1967), combined with the spatial distribution of ethnic groups from Murdock's (1959) map. All these measures are 1960 population-weighted averages of traits of ethnic groups whose historical homelands intersect a given grid cell. I basically follow the procedure described in Alesina, Giuliano, and Nunn (2013). See the appendix for details.

[28] I omit the category share of income from gathering activities in order to avoid multicollinearity.

[29] Population density is positively correlated with the prevalence of conflict (see, among others, Sundberg and Melander, 2013). The role of population density as a determinant of state formation in pre-colonial Sub-Saharan Africa has been extensively discussed (Bates, 1983; Diamond, 1997; Herbst, 2000; and Osafo-Kwaako and Robinson, 2013).

[30] The use of this proxy can help to illustrate the importance of the bias when including a bad control. Consider for simplicity that conflict (C) is only related to state history (S) and historical population density (P), then the true model I would like to estimate is: $C_i = \beta_0 + \beta_1 S_i + \beta_2 P_i + u_i$. However, I only have data on a proxy for population density in 1700 (P^{1700}) which is a function of both S and P : $P^{1700} = \gamma_0 + \gamma_1 S_i + \gamma_2 P_i + \varepsilon_i$. When regressing C on S and P_{1700}, I am estimating $C_i = \left[\beta_0 - \beta_2 \frac{\gamma_0}{\gamma_1}\right] + \left[\beta_1 - \beta_2 \frac{\gamma_2}{\gamma_1}\right] S_i + \frac{\beta_2}{\gamma_1} P_i^{1700} + \left(u_i - \beta_2 \frac{\varepsilon_i}{\gamma_1}\right)$. Since it is apparent that $\beta_2 > 0, \gamma_2 > 0$, and $\gamma_1 > 0$, the inclusion of this proxy of population density in 1700 would overestimate the negative impact of state history on conflict.

[31] Ethnic fractionalization denotes the probability that two individuals randomly selected from a grid cell will be from different ethnic groups. In order to be consistent throughout the paper my definition of ethnic group is based on Murdock (1959). I thus construct shares of ethnic population using gridded population and the spatial distribution of ethnic groups from Murdock's map. See the appendix for details.

[32] Ethnic heterogeneity is a commonly stressed determinant of conflict (see, among others, Easterly and Levine 1997 and Collier, 1998) and it is likely to be correlated with state history (see Bockstette et al, 2002).

[33] I obtain almost identical results (not shown here) if I use ethnolinguistic fractionalization (i.e: using ethnologue to compute linguistic distances between pair of ethnic groups within a grid) instead of ethnic fractionalization.

[34] Why would the slave trade be important for contemporary conflict? First, Nunn (2008) finds that the slave trade resulted in long-run underdevelopment within Africa. More importantly, historical slave trade has been shown to have had an effect on ethnic fragmentation (Whatley and Gillezeau, 2011b) and individual's mistrust (Nunn and Wantchekon, 2011), both of which are arguably potential drivers of social conflict.

The expected correlation between slave trade prevalence and state history is ex ante ambiguous.[35] The results in column 4 show that the introduction of slave trade prevalence as a determinant of contemporary conflict does not affect the estimation of β. The inclusion of an indicator of historical trade routes intersecting the grid does not affect the results (column 5). I next add the distance to the closest historical battle site during the period 1400-1700 CE. This variable is constructed based on information recorded and georeferenced by Besley and Reynal-Querol (2014) who find a robust correlation between proximity to the location of historical battles and contemporary conflict.[36] The results in column 6 are in line with Besley and Reynal-Querol's (2014) main finding. As expected, the point estimate of my variable of interest slightly increases and remains statistically significant. A one-standard deviation increase in state history is statistically related to a reduction of the prevalence of conflict of 1/5 of its standard deviation. Neither the inclusion of (ln of) light density, as measured in Michalopoulos and Papaioannou (2013), or the inclusion of the previous variables all together affect the statistical significance of my main finding. Indeed, if anything, the inclusion of these potential confounders makes the negative statistical association between state history and contemporary conflict stronger.

On within-country variation. In addition to the reasons exposed above, I follow a within-country approach because the inclusion of country dummies seems to partially account for relevant spatial heterogeinity such as geography. In fact, as is shown in column 9 of Table 3, removing the country dummies does not substantially affect previous results since point estimates in column 9 (from specification without country dummies) and 8 (from specification including country dummies) are not statistically different. Not surprisingly, including country dummies does improve the overall fit of the econometric model as reflected in a substantially larger R-squared.

Intensive and extensive margin of political centralization. In order to argue that what matters most is the intensive margin of exposure to state institutions (the long history) rather than the extensive margin (any state versus no state at all right just prior to the Scramble for Africa), I estimate a new specification in column 1 of Table 4 wherein the state history variable is the state history score for the last period considered in the computation of my index (i.e., 1800 - 1850 CE). The coefficient estimate, albeit negative, is statistically insignificant (p-value = 0.21). Furthermore, I construct a 1960 population-weighted average of the degree of ethnic centralization in the grid cell using the Ethnographic Atlas's variable

[35] On the one hand, Nunn (2008) suggests that slave trade could have been an impediment to pre-colonial state development in Africa. In the same direction, Whatley and Gillezeau (2011a) argues that increasing international demand for slaves might have reduced the incentive to state creation (relative to slave raiding) by increasing the marginal value of people as slaves above their marginal value as tax payers. On the other hand, there exist several historical accounts linking the rise of some African kingdoms to the slave trade (see, for example, Law 1977 for the case of the Oyo Empire, and Reid 2012). For instance, while analyzing the role of warfare, slavery and slave-taking in Yoruba state-building, Ejiogu (2011) documents slave-taking campaigns of Oyo against neighboring Nupe (note that Oyo -which are part of Yoruba - and Nupe share territories within grid cells). I show indeed in Table S.1 that regions with long history of statehood also experience higher prevalence of slave trade.

[36] Given its documented long-lasting effect and considering that violent conflict between and within historical African states was part of the state-building processes in the past (see, among others, Lewis, 1966; Ben-Amos Girshick and Thornton, 2001; Ejiogu 2011; Reid 2012 and Bates 2013), the omission of this control would underestimate the effect of state history on contemporary conflict.

"Jurisdictional Hierarchy beyond the Local Community" which ranges from 1 (no jurisdiction above the village level) to 4 (large state). This variable has been used to document the importance of political centralization for current pattern of development (Gennaioli and Rainer 2007a, and Michalopoulos and Papaioannou 2013). The result in column 2 shows that the correlation between late pre-colonial ethnic centralization and the prevalence of modern conflict is not statistically significant.[37] One can still argue that it is not the long history of a state but its complete absence what explains the uncovered statistical association. In this sense, it may be the case that locations with no history of state whatsoever are located in remote and unpopulated regions, where there has been little national state penetration and where rebel groups can thus operate more easily. In the specification of column 3, I exclude all observations with no state history whatsoever (223 grid cells) and show that my main results are not driven by those locations. The point estimate is very similar and is strongly statistically significant.

Robustness to the size of grid cell. Tables S.2 to S.5 in the online appendix replicate Tables 1 to 4 when the unit of observation is a smaller grid cell of 1 by 1 degree and show that the results are not driven by some artifact of aggregation. Indeed, the results are qualitatively the same and reinforce the idea that long history of statehood at the sub-national level is linked to lower prevalence of conflict. Albeit strongly statistically significant at the standard levels of confidence, all the point estimates are quantitatively smaller than their 2 by 2 degree grid counterparts. This is not surprising since a decreasing coefficient when dissagregating an spatial unit into smaller contiguously units is a well established result in the MAUP literature -See Hariri and La Ferrara (2013)-.[38]

Assessing the extent of bias from unobservables. The point estimates reported so far may still be biased due to unobservable factors that correlate with both contemporaneous conflict and long-run exposure to states. How large would this selection on unobservables need to be (relative to the selection on observables) in order to attribute the entire OLS estimates previously reported to an unobservable selection effect? I follow the intuitive heuristic in Nunn and Wantchekon (2011) based on Altonji, Elder, and Taber (2005) to assess the degree of omitted variables bias by studying the stability of the estimates for β. The underlying idea is that, under the assumption that the selection on observables is proportional to the selection on unobservables, a coefficient that does not change much as one adds controls would suggest that there is little remaining bias. I thus compare the point estimate in the last specification in Table 2 which includes a full set of controls ($\hat{\beta}_1 = -.192$) with the point estimate when including only a basic set of controls (i.e., country fixed effect and geographical controls -$\hat{\beta}_2 = -.177$). The ratio between $\hat{\beta}_1$ and $\hat{\beta}_1 - \hat{\beta}_2$ (the selection on observables) suggests that selection on unobservables would have to be almost 13 times as large as the selection on observables in order to explain away the entire

[37] This apparent statistically insignificant relation may be driven by measurement error in the pre-colonial ethnic centralization variable (which is a transformation of the original measure in the Ethnographic Atlas). Consistently, if I instrument this measure with my State History Index I find a strong negative relationship between pre-colonial ethnic centralization and conflict (the implied estimated coefficient is -0.33 with a p-value = 0.00 - result not shown).

[38] This is due to fact that the aggregation (or dissagregation) process causes variation to increase (decrease) as aggregation decrease (increase) -

statistically relationship between state history and contemporaneous conflict.

Robustness to the choice of conflict measure (dataset, incidence, onset, and intensity). I next show that the main results are robust to the election of the georeferenced conflict dataset and the way conflict is coded. To do so, I focus on six different outcome variables in Table 5. For the first four columns I exploit ACLED dataset which has been argued to present higher rates of miscoding (Eck, 2012). In column 1, the dependent variable accounts for the fraction of years with at least one conflict event as broadly defined in ACLED (i.e; battles, riots, and violence against civilians). In column 2 I only consider battle events recorded in ACLED. For column 3 I consider any violent event (i.e: battles and violence against civilians). Finally, in column 4 I exclusively focus on riots. It is important to note that riots are conflict phenomena that mostly take place in large urban areas where pre-colonial institutions may arguably not be sufficiently salient to prevent them to occur. To explore the possibility that the empirical relation of interest using ACLED dataset is mechanically affected by its riots component in highly urbanized areas, I focus in three different samples: a full baseline sample (Panel A), another one excluding grids with more than 1 million inhabitants (Panel B), and a last one excluding grids where capital cities are located (Panel C). The results in Table 6 shows a clear pattern. For all the conflict indicators but riots I find a negative relationship between conflict and state history. Nonetheless, the results for broader definitions of conflict including riots are statistically much weaker when focusing in the full sample (Panel A) which is consistent with the idea that estimates are noiser when taking considering areas with large prevalence of riots. As I exclude regions with more than one million inhabitants (Panel B) or those including the capital city (Panel C), the association between conflict and state history becomes stronger, more precisely estimated, and of the similar magnitude to the ones shown in Table 3. Reassuringly, I find no statistical association between riots and state history regardless of the sample.

In column 5 of Table 5 I focus on a measure of conflict intensity. The dependent variable is the (log of) number of casualties due to conflict (best estimate in UCDP-GED). The point estimates in the three panels reaffirm the hypothesized negative effect of state history on conflict, regardless of the sample used. My conflict measure under the baseline specification represents the prevalence of conflict violence. It does not make distinction between onset and incidence of violence. That is, this measure does not distinguish a violent event that represents the onset of a new conflict within a dyad from an event that is the continuation of previous confrontations. In column 6 I consider a measure of prevalence of conflict onset (i.e: first confrontation within a dyad). I identify all conflict onsets in the period of analysis and code 1 a grid cell - year observation if at least one onset occurs. As a result, my conflict measure in column 6 indicates whether a grid cell experienced at least one conflict onset during the period of analysis.[39] The point estimates in three panel suggests that, regardless of the sample used, the onset of conflict is strongly and negatively related to long history of statehood.

On the discount factor used in state history. I also show how my OLS estimates are affected by the

[39]Only 149 grid cells experienced at least one conflict onset (out of 417 different conflicts in the period 1989-2010).

election of different discount factors in computing the state history index. In Table S.2 of the online appendix. I report four different specifications with discount rates of 5, 10, 25, and 50 percent. Only when a discount rate of 50 percent is applied, does my coefficient of interest become slightly statistically insignificant under the conventional levels of confidence.[40]

4.3 An Alternative Proxy for Historical Political Centralization and Measurement Error

I construct another independent measure of state history by exploiting information on the location and evolution of more than sixty large African cities during the period 1000 - 1800 CE.[41] To the extent that kingdoms and empires tended to have a large city as political center, I consider proximity to a large city as an indicator of the degree of influence exercised by a centralized power. I introduce this new measure for two reasons. First, to show that the negative statistical association uncovered in the OLS case still holds when using an alternative measure. Second, this new measure overcomes a potential caveat in my original measure of state history which assumed a homogeneous effect of centralization within the boundaries of a historical polity. This assumption had two implications: (1) the introduction of a sharp discontinuity at the boundary, and (2) an inconsistency with the idea that broadcasting power strength may depend on the distance from the political center.

Construction. This measure exploits the time-varying proximity to large cities, as some cities have only exerted influence on their periphery during particular time intervals. For instance, Djenne, in modern Mali, only enters in my panel of cities during the period 1300 - 1600 CE . For each hundred years period, I calculate the shortest distance to the closest city from the centroid of each grid cell. I then calculate the within-grid average of the distances for the entire period of analysis and map them into a 0 to 1 interval, with the grid cell with the minimum average distance taking the value 1.[42]

All specifications in Table 6 include the full set of controls listed in Table 2. In column 1, I present the OLS estimate for the reduced-form conflict and historical proximity to cities. I find the same pattern documented in section 4.2. The historical proximity to cities for the time period 1000 - 1800 CE is negatively and strongly statistically associated to prevalence of modern conflict. The implied economic magnitude for the coefficient is large: one-standard deviation increase in the historical proximity to cities implies more than a one third-standard deviation reduction in the prevalence of contemporary conflict. Table S.6 in the online appendix replicates the analysis for the 1 by 1 degree grid cells and finds qualitatively similar results.

Assessing the bias from measurement error. Under classical measurement error assumption (i.e., the true

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[40] I also checked that no particular country or influential observation is driving the main results -see online appendix.

[41] I define a city as being large if it has more than ten thousand inhabitants. The list of cities comes from Chandler (1987) and Eggiman (2000). See Table S.7 in online appendix.

[42] Figure 2 in online appendix shows the spatial variation for this new measure using cities.

measure of state history does not correlate with the measurement error) the magnitude of the attenuation bias will depend on the reliability ratio, which will be close to the ratio between the variance of the true measure of state history and the variance of the mismeasured state history. I can use the variation from these two alternative measures to investigate the extent of the attenuation bias from measurement error (Of course, a potential bias due to omitted variables may still exist). In columns 2 of Table 6, I report a 2SLS estimate for my state history index when using historical proximity to cities as an instrument. The point estimate (i.e; 0.52) is consistent with the existence of a sizable attenuation bias in my previous results.

4.4 Panel Data Evidence: Weather Induced-Agricultural Productivity Shock, State History, and Conflict

In a comprehensive synthesis of the climate-conflict literature, Burke, Hsiang, and Miguel (2013) argue that there is strong causal evidence linking climatic events to conflict. [43] In this section, I draw upon Harari and La Ferrara (2013) to construct a weather-induced agricultural shock by exploiting information on the spatial distribution of crops, planting and harvesting calendars, and the variability in water balance anomalies across time and space.[44] I hypothesize that locations with a long history of statehood should be better equipped with mechanisms for mitigating the negative effects of weather shocks. To support my hypothesis, I exploit panel data variation (over the period 1989-2010) in the prevalence of conflict, weather-induced productivity shocks, and the interaction of my state history index with those shocks in order to estimate the following equation:

$$Confl_{i,t} = \alpha + \gamma Shock_{i,t} + \delta StateHistory_i \times Shock_{i,t} + W_{i,t}^{'}\Pi + \theta Confl_{i,t-1} + \lambda_i + \nu_t + \varepsilon_{i,c,t} \qquad (2)$$

Where t indexes year. The variable $Confl_{i,c,t}$ takes a value 1 if at least one conflict event occurs in the grid cell i in year t, and 0 otherwise. The variable $StateHistory_i$ is the same as that defined for equation (1). The vector $W_{i,t}^{'}$ includes the year averages of monthly precipitation and temperature deviation from the historical monthly means so as to account for any independent effect that these variables might have on conflict outside of the growing season. The variables λ_i and ν_t denote grid and year fixed effects, respectively. The main coefficient of interest in this exercise is δ. Standard errors are clustered at the grid cell level.

In column 1 of Table 7 I present the OLS estimates for an specification of equation (2) for which $\delta = \theta = 0$. The point estimate suggests an statistically significant positive impact of negative weather

[43] The existence of an income mechanism underlying this causal link has been proposed repeatedly in the conflict literature, but it has not been definitively identified yet. Harari and La Ferrara (2013) present convincing evidence that what drives the observed empirical relationship between weather shocks and conflict in Africa is weather anomalies that occur during the growing seasons of the main local crops.

[44] I discuss the construction of the weather-induced agricultural shock in the online appendix.

shocks on conflict, as has already been documented in the related literature. Adding a lagged dependent variable to account for the dynamics of conflict does not affect the previous result. As expected, conflict in $t-1$ strongly predicts conflict in t.[45] Experiencing an extreme negative shock increases the likelihood of civil conflict by 3.3 percent.[46] In columns 3, I include the interaction between a negative shock and my measure of state history. The estimated coefficient for δ suggests that conditional on experiencing a negative shock, the likelihood of experiencing conflict is 30 percent lower in a grid with the mean value of state history (i.e: 0.16), relative to a region with no history of statehood. Therefore, the negative correlation between the interaction term state history-negative shock and conflict is consistent with the mitigating effect I hypothesize for for state history when a location is hit by a shock.

Other interaction effects. I next consider a set of different cross-sectional characteristics that, when interacting with weather shocks, may partially account for the previously documented result. This set of characteristics includes light density at nights (proxy of regional development), soil suitability for cultivating cereals, pre-colonial agricultural dependence, and historical temperature volatility. The inclusion of these interaction terms separately (see Table S.8 in online appendix) or jointly (in column 4 in Table 7) does not undermine the statistical significance of the negative coefficient for the interaction term state history-weather shock.[47]

4.5 Identifying a Causal Relationship: Uganda and the Legacy of the Bacwezi Dynasty

The robust positive correlation between state history and conflict prevalence that I document above is consistent with my hypothesis that improved local state capacity may prevent conflict. However, these results can be also explained by other hard-to-account factors that correlate with historical selection into centralized polities and unobserved drivers of conflict. For example, if the reason underlying the formation and persistence of states in the past was the historical presence of a more peaceful people, and that population´s characteristic continues to persist until now, it could explain the negative correlation documented in the previous section. In an ideal set up, I would need as good as randomly assigned exogenous variation in state history. This variation could come from an instrument that correlates with the longevity of statehood but does not correlate with any characteristic of the location that could affect the prevalence of conflict. Unfortunately, different states arise for very different reasons so finding a fundamental that strongly predicts the longevity of statehood while satisfying the exclusion restriction

[45] Including the lagged dependent variable along with fixed effects introduces a bias known as Nickell bias. Nonetheless, this bias is a function of the number of periods and decreases substantially when it is greater than 15.

[46] Note that by doing computing $\hat{\gamma}/(1-\hat{\theta})$ one come up with the medium-run impact of a shock on conflict. Applying this formula to the estimates in column 2, I find that the medium-run impact is 0.015, which means that an extreme negative shock increases the likelihood of conflict by 5% over the medium run (approximately one third of the unconditional probability of experiencing conflict).

[47] Locations with a higher light density at night, better cereal suitability, and a higher pre-colonial dependence on agriculture are more prone to experience conflict when hit by a shock. Conversely, locations with higher temperature volatility are less prone to experience conflict after a shock. (see Table S.8 in online appendix).

for all of my Sub-Saharan sample would be a difficult task. Focusing on a particular region or country, however, would facilitate this task. I therefore focus on Uganda.

I borrow from Bandyopadhyay and Green (2012) who instrument pre-colonial centralization (as defined in Murdock, 1959) with the distance to the Iron Age site of Bigo bya Mugenyi which historians believe was the capital of the Kitara Empire during the Bacwezi dynasty. Little is known with certainty regarding the legendary Kitara Empire and the Bacwezi dynasty (Bandyopadhyay and Green 2012). Although archaeological discoveries in the region provide evidence of the existence of an urban center and a highly organized society around the 14th century, what happened to that society remains an enigma (see Chrétien 2003 and Dunbar 1965). It is believed that the Bacwezi were a ruling pastoral clan not indigenous to the region, one that most likely arrived from the north. Its dynasty lasted only for two generations (Dunbar 1965). Several kingdoms in the region find their origins in that society (Doyle 2006). In fact, what is known about the Kitara Empire comes from the oral traditions of subsequent kingdoms such as Ankole, Buganda, Bunyoro, Toro, and Rwanda. More importantly, scholars point to the Bacwezi dynasty as the first attempt of centralized political organization in pre-colonial Uganda.

Provided the Bacwezi were not indigenous to Bigo bya Mugenyi and left a short-period after their arrival, the distance to Bigo bya Mugenyi captures the potential historical proximity to the exogenous origin of centralization in pre-colonial Uganda. Intuitively, one can interpret the brief settling of the Bacwezi as the exogenous arrival of an innovation or random shock (i.e; a pattern of political organization) which later spread to adjacent regions. Today, Bigo bya Mugenyi is a deserted savannah wilderness located in Mawogola county near the border between the kingdoms of Buganda and Ankole. It is approximately 200 kilometers west of both Kampala and Mengo, the capital of Uganda and the Kingdom of Buganda, respectively. I exploit the migratory distance from Bigo bya Mungenyi, which plausibly uncorrelates with other factors affecting the tendency of modern populations to engage in violence, as an instrument for state history.[48] Nonetheless, in the instrumental variable exercises that follow, I control for a set of variables that may correlate with the distance to Bigo bya Mugenyi such as the quality of the soil, the distance to Kampala, the distance to Lake Victoria, the ethnic composition of the location, and other historical measures discussed below.

The left panel in Figure 4 displays the variation in state history in Uganda at the county level. The highest values of the index are for those locations under the influence of the historical Kingdoms of Buganda (west of Kampala), Bunyoro (next to Lake Edward), and Ankole (on Uganda's border with Rwanda and Tanzania). The lowest values of the index are in the Acholiland (the northern part of the country, close to the border with Sudan) and the eastern part of Uganda. The same figure also depicts the location of Bigo bya Mugenyi, within a black circle. The right panel in Figure 4 shows the strong negative unconditional correlation between state history and the migratory distance to Bigo bya Mugenyi.

[48] The migratory distance to Bigo bya Mugenyi is constructed based on Özak (2012a, 2012b), who calculated the walking time cost (in weeks) of crossing each square kilometer by land. The algorithm implemented takes into account the topographic, climatic, and terrain conditions, as well as human biological abilities (Özak 2012a).

In Table S.9 in the online appendix I replicate Table 1 for a sample of 153 counties in Uganda. The OLS point estimates are very similar to the ones documented in Table 1. I now turn to the instrumental variable exercise in Table 8. In column 1 of Panel A, I only include the baseline controls, as in column 4 in Table 2. The point estimate suggests a strong negative causal effect of state history on modern conflict: a one-standard deviation increase in state history (equivalent to 200 years of statehood) corresponds to 0.5-standard deviation decrease in conflict prevalence (2.5 years of conflicts over the period 1989-2010). The migratory distance to Bigo bya Mugenngyi may confound with the distance to Lake Victoria, which was an important center of trade and economic activity. In column 2 I show that my previous point estimate is not affected when including the distance to this body of water. In column 3 I add the three potential confounders previously analyzed in Table 2 (i,e; distance to Addis Ababa, ecological diversity, and intertemporal temperature volatility) and show that the previous results remain unaltered. Many of the conflict events in modern Uganda took place in the northern territories. Although the northern part of Uganda does indeed present lower values of state history, it is possible that there are other omitted factors that vary at the regional level. In column 4 I include region fixed effects. Although the point estimate is smaller, I still find an statistically significant strong effect. Although ethnic composition at the district level may be endogenous to state history, I show in column 5 that differences in ethnic composition across 56 districts of Uganda are not driving the statistical results. When I include all the previous controls combined, I still get very strong results: a one-standard deviation increase in state history causes approximately a 0.4-standard deviation decrease in conflict prevalence. Finally, panel B in Table 8 shows that there is a strong first-stage regardless of the specification estimated.

5 Identifying Potential Mechanisms at Work: State History and Attitudes Toward State Institutions

It has been stressed that the lack of legitimacy of state institutions represents an underlying cause of the prevalence of civil conflict in Sub-Saharan Africa.[49] Authority gaps undermine the institutional capacity of a state to rule by consent rather than coercion. States with low levels of legitimacy tend to devote more resources towards retaining power than effective governance, which even further undermines their popular support and increases the likelihood of political turnover (Gilley, 2006). Trust in state institutions has been proposed as a good indicator of legitimacy in Sub-Saharan Africa (Hutchison and Johnson 2011) and is conceived as reflecting individual confidence in those institutions (Newton 2007). Trust in institutions has been associated with peaceful conflict resolution (Hoffman 2002) and the establishment of cohesive political institutions such as might generate non-violent outcomes (Besley and Reynal-Querol 2014). Intuitively, a political institution considered trustworthy should increase the

[49]For instance, a legitimacy score accounts for almost 50% of the State Fragility Index computed by the Center for Systemic Peace. Moreover, the operational definition of fragility in the index is associated with state capacity to manage conflict.

probability of compliance on the part of adversaries once a negotiated settlement is reached.

I argue that the inheritance of a strong local state capacity from long term exposure to centralized institutions should foster perceptions of legitimacy and trust. Hence, local state history should positively impact individual trust in local state institutions. In this section, I document a strong positive relationship between state history and individual trust in local policy makers. I pay particular attention to traditional leaders. Colonization did not eliminate several important pre-colonial obligations of the African traditional leaders. Michalopoulos and Papaioannou (2015) document the strong influence of traditional leaders in governance of the local communities. In particular, local traditional leaders still play an important role in allocating land and the resolution of local disputes (Michalopoulos and Papaioannou 2015). Nonetheless, the manner in which they still exercise public authority varies across and within countries (Logan, 2013). I present strong and robust evidence that within-country differences in state history can explain the level of popular support for local traditional leaders. Additionally, I show that the findings in Michalopoulos and Papaioannou (2015) regarding the strong influence of traditional leaders can be explained by the longevity of pre-colonial institutions. That is, I document a strong link between state history and individuals' perception on the influence of traditional leaders governing the local community.

I base my analysis on the Round 4 of Afrobarometer for 2008 and 2009 (henceforth, Afrobarometer 4) which includes twenty countries in Sub-Saharan Africa.[50] The Afrobarometer 4 relies on personal interviews conducted in local languages, where the questions are standardized so that responses can be compared across countries (Afrobarometer, 2007). These questions asses, among other topics, individuals attitudes toward democracy, markets, and civil society. The original sample size in Afrobarometer 4 is over 26,000 respondents. Cape Verde and Lesotho are not included in my analysis.[51] Additionally, locations I was unable to georeference, and individuals who could not be matched with ethnic names in Murdock's (1959) map were removed from the sample.[52] The final sample consists of 22,527 respondents from 1,625 districts and 221 different ethnic groups under Murdock's (1959) classification.[53]

5.1 State History and Trust in Local Policy Makers

I examine the statistical relationship between attitudes toward local institutions and state history by estimating different specifications of the following equation:

[50] The countries included are Benin, Botswana, Burkina Faso, Cape Verde, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. All these countries but Benin, Burkina Faso, Cape Verde, and Malawi experienced violent conflict events during the period 1989-2010.

[51] I exclude Lesotho and Cape Verde from my analysis for several reasons. I exclude Cape Verde because it was not taken into account in the original computation of my state antiquity index; because no question on traditional leaders were asked during round 4 of the Afrobarometer; and because of the difficulties matching the ethnicities of the respondents with Murdock's data. I exclude Lesotho due to difficulties matching ethnicities.

[52] My georeferencing work is built upon previous work of Stelios Michalopoulos.

[53] 320 ethnicities are originally self-reported in my sample.

$$Attitude_{i,e,a,d,r} = \alpha + \beta SH_d + I_i^{'}\Gamma + A_a^{'}\Delta + D_d^{'}E + \eta_r + \theta_e + \varepsilon_{i,e,a,d,r} \quad (3)$$

where i, e, a, d, and r index individuals, ethnicity, the enumeration area (village), district, and region (within a country), respectively. The variable SH_d represents the state history measure calculated for the homeland of the ethnic group historically predominant in the district.[54] The vector $I_i^{'}$ denotes a set of the respondents' characteristics such as age, age squared, ten education level dummies, five living condition dummies, an unemployment status dummy, and a gender dummy.[55]

The vector $A_a^{'}$ denotes a set of enumeration area-level covariates including an urban dummy and variables capturing the existence of the provision of public goods.[56] It is conceivable that individuals who are more satisfied with the local provision of public goods will tend to trust in local policy makers more. In addition, Gennaioli and Rainer (2007b) argue that the history of state centralization had an impact on the quality of the public provision of local government. I add these potentially endogenous controls in order to argue that the hypothesized impact of state history on attitudes is not completely mediated by the better provision of public goods. Nonetheless, it is worth noting that the introduction of public good provision dummies has little impact on the estimation of the main coefficient of interest.

The vector $D_d^{'}$ is a set of district-level variables accounting for differences in development, which includes distance to the capital city, infant mortality, and per capita light density (in logs).[57] Finally, η_r and θ_e are region and ethnicity of the respondent fixed effect. Since the main variable of interest, i.e: SH_d, varies at the ethnic homeland level, I adjust the standard errors for potential clustering at that level.

OLS results. In Table 9, I present the baseline results for four different outcome variables. I focus on three different questions regarding trust. The question asked is "How much do you trust in each of the following?" followed by a list of specific policy makers. I recoded each original answer to a 5-point scale where 1 is "not at all" and 5 is "a lot". Following the methodology in Logan (2013), I coded the answers "don't know" at the mid-point. I construct a meassure of trust in local policy makers by taking the average between trust in local councilors and trust in traditional leaders. Additionally, I also focus on exclusively trust in traditional leaders, and finally on trust in a national institution: the President (or Primer Minister). Finally, in order to document the persistence of traditional pre-colonial institutions, I also focus on individuals' perception about the influence of traditional leaders in governing the local

[54] The geographic distribution of historical ethnic homelands is taken from Murdock (1959).

[55] The education variable takes value ranging from 0 (no formal schooling) to 10 (post-graduate). The living condition variable corresponds to a self assessment by the respondent and takes a value renging from 1 (very bad) to 5 (very good). Unemployment and gender are dummy variables and take value 1 if the respondent is unemployed and male, respectively. The Afrobarometer 4 does not include information on the occupations of respondents.

[56] I introduce six dummies indicating the presence of police, a school, electricity, piped water, a sewage system, and a health clinic. Note that an enumeration area or village is the lowest order administrative unit available in Afrobarometer 4.

[57] Bandyopadhyay and Green (2012) show that ethnic pre-colonial centralization positively correlates with level of development at the sub-national and individual levels in Uganda. Nonetheless, the addition of the vector $D_{d,c}^{'}$ has little impact on the the estimation of β.

community.[58]

All specifications include each respondent's ethnic group fixed effect, region fixed effect, an individual-level, village-level, and district-level controls. It is worth discussing the rational for the inclusion of ethnic fixed effect: First, I want to capture those ethnic-specific factors that may both affect attitudes and correlate with my state history index at the location level. Second, I want to emphasize that it is the history of a location where people live rather than the history of the people what matters the most for the legitimacy of the local policy makers. I am able to identify β, even after the introduction of ethnic fixed effects, because almost half of the individuals in my sample are not currently living in the historical homeland of their ancestors. Thus, the estimated coefficient for β would represent the average statistical relationship between the state history of the location and attitude towards local institutions held by individuals living outside the historical homeland of their ethnic groups.

There is a statistically significant positive relationship between the state history of the location and individual's trust in local policy makers (Column 1 in Table 9). I find a similar pattern when focusing exclusively on trust in traditional leaders. The point estimate in column 3 suggests that people living in a location with long history of statehood perceive local traditional leaders as having a great deal of influence with respect to local issues. This result confirms previous findings in the literature documenting the persistence and importance of pre-colonial institutions in today's Sub-Saharan Africa. I do not find any statistical relationship between the state history of the location and trust in a country´s President (or Prime Minister). This result supports my hypothesis that an improved local state capacity (derived from historical exposure to centralized institutions) should impact attitudes toward local policy makers, not just any policy maker.[59]

Additional district-level controls. In the online appendix I consider an additional set of district-level controls. I examine the potential confounding effects of historical slave trade prevalence, proximity to historical trade routes, and temperature volatility.[60] [61] The results in Table S.10 show that the addition of these controls slightly increases the size of the point estimate reported in Table 9.[62]

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[58] The individuals answered the question "How much influence do traditional leaders currently have in governing your local community?". The variable is coded on a 5-point scale from 1 (none) to 5 (great deal of influence). Again, I coded the answer "don't know" at the mid-point.

[59] Results displayed in Table 9 do not depend on the inclusion of any of the village-level, district level, or public good provision controls.

[60] Nunn and Wantchekon (2011) show that individuals from ethnic groups strongly affected by the slave trade in the past are less trusting today. In particular, such individuals trust the local councils less. I argued above that the relationship between the history of state formation and the prevalence of slave trade is ambiguous. Nonetheless, if any kind of relationship exists (regardless of its direction), omitting the impact of the slave trade would introduce a bias in the estimation of my coefficient of interest.

[61] I construct the weighted average for slave trade prevalence in a district based on the historical exposure to slave trade of all the ethnic groups reported in the survey for that district. Proximity to historical trade routes is the geodesic distance from the district's centroid to the closest trade route. Intertemporal temperature volatility is calculated for a 100-km radius buffer around the centroid of each district.

[62] Adding these controls separately lead to similar results.

Internal versus External Cultural Norms. I attempt to distinguish between the state history of the place where people live and the state history of their ancestors in terms of what matters most regarding people's opinion about local policy makers. For that purpose I also construct the average state history of each respondent's ethnic groups based on the historical distribution of ethnic homelands (from Murdock 1959). The first specification in column 1 of Table 10 includes ethnic fixed effects and suggests that people living in areas with long histories of statehood remarkably trust more in local policy makers. In column 2 I remove the fixed effects at the ethnic level and include fixed effects for the predominant ethnic group where the respondent lives while focusing on the average state history of the respondent's ethnic group. I do not find any statistically significant association between long history of statehood at the ethnic level and trust in local policy makers. If I do not include any of the aforementioned fixed effects and run a horse race between the two measures of state history (column 3 in Table 10), I find that only the state history of the location matters for trust in local institutions. These are indeed striking results since ethnicity is arguably one of the most relevant vehicles for cultural norms. Therefore, the strong positive impact of state history of the predominant ethnic group on trust (even when holding the ethnic characteristics fixed) and the apparent nonexistent statistically association between the individual ethnic-based state history measure (when holding the predominant ethnic group characteristics fixed) strongly suggests that it is the long run exposure to the statehood of a location, rather than the history of the ancestors of the people living at that location, what determines individuals' beliefs about local state legitimacy.

Why do individuals whose ancestors were not indigenous to the location where they currently live trust in local policy makers? An individual, independent of her ethnic origin, learns about the quality of the local institutions and forms her perception regarding the legitimacy of these institutions based on her finite number of interactions with those institutions. She is affected in the short run by the accumulated stock of learning of the current local institutions (improved state capacity from historical exposure). That is, the long-run exposure that matters most is the exposure experienced by local institutions.

Do individuals living in districts with relatively long historical exposure to statehood generally trust more? The results in Table 11 suggest that my previous results were not just picking up a higher level of generalized trust. Respondents living in areas with a long history of statehood do not trust more in their compatriots (column 1), their relatives (column 2), other people (column 3), or politicians in general (column 4).[63] All the coefficients are not statistically different from zero under the usual levels of confidence. In fact, all the point estimates are of a relatively small magnitude.

[63] Trust in politicians is the first principal component of each individual's trust level in the president -or Prime Minister-, the parliament -or national assembly-, and opposition political parties. Adding separately each of these components of this measure lead to similar results (not shown).

5.2 State History and Attitude Toward Local Policy Makers in Uganda

In this section, I analyze the empirical relationship between state history at the district level and individuals' attitudes toward local policy makers in Uganda. I focus on a measure of state history at the district level as opposed of looking at the predominant ethnic group level as in my previous analysis for two reasons. First, Murdock's map, which was used in my previous analysis, only displays approximately twenty ethnic homelands in Uganda. Using the averages of my measure of state history for this small amount of units masks informative heterogeneity within those borders. Nonetheless, using this level of observation leads to similar qualitative results although the first stage for the IV case is somewhat weaker. Second, using observations at the district level in Uganda allows me to exploit a richer set of covariates (such as poverty rates and population counts).

OLS results. Before turning into a discussion of the IV results I report OLS point estimates in Table 12. In the first four columns I focus on trust in local policy makers as a dependent variable and show how the OLS point estimates are affected when adding different sets of controls. In the first column I only include individual-level controls and region fixed effects.[64] There is a positive statistically significant correlation between state history at the district level and trust in local policy makers. The point estimate does not change if I add two controls for the suitability of the soil for pasture and growing cereals (column 2). When I add district level controls (i.e; population, poverty rate, and an urban indicator) the point estimate increases in size and the standard errors slightly decrease.[65] Including a set of public good provision dummies slightly decreases the size of the previous point estimates. In column 5 and 6 I focus on attitudes toward traditional leaders and find a positive correlation between state history and trust in and the perceived influence of traditional leaders, albeit these correlations are not statistically significant at standard levels of confidence.

IV results. In Table 13 I shows the IV point estimates for the three specifications in columns 4 through 6 in Table 12. I find a strong positive relationship between state history and the three outcomes, namely, trust in local policy makers, trust in traditional leader, and perceived influence of the traditional leader . The IV point estimates are much larger than in the OLS case.

*Additional robustness check*s. In Table S.11 in the online appendix I show that the results are not driven by the distance from Kampala or Lake Victoria. The results are also qualitatively similar when I take into account whether the respondent is Acholi or lives in Acholiland. Being the respondent from the Ganda ethnic group (which is linked to the Buganda Kingdom and is the politically strongest Ugandan group), or the district within which a higher share of Ganda people live does not affect my main conclusions for any of the three outcome variables. The results are also robust to the inclusion of ethnic fractionalization at the district level, the historical exposure to the slave trade for respondent's ethnic group, the proximity

[64] Adding ethnic fixed effects does not qualitatively affect the outcome of this analysis. I choose not to focus on this specification because more than 70 percent of the respondents in Uganda still live in the homeland of their ancestors.

[65] People from urban and populous areas tend to show less support for local institutions.

to historical trade routes, or intertemporal temperature volatility.

Does the distance to Bigo bya Mugenyi impact other dimensions of trust? In Table 14, I present a placebo test in line with that in Table 11. My instrument does not statistically relate to other dimensions of trust different from that specificically related to local policy makers. That is, the migratory distance to Bigo bya Mugenyi does not explain trust in relatives, acquaintances, compatriots, politicians in general or the President (or Primer Minister).

Is conflict an outcome or a mediating channel? The documented negative relationship between state history and trust in local institutions is consistent with my hypothesis that trust in (and the legitimacy of) local policy makers, in particular traditional leaders, is one of the potential channels through which a long exposure to centralized institutions may help to mitigate conflict. However, an alternative explanation is also possible. Long exposure to institutions may mitigate conflict (independent of the initial level of local institutions' legitimacy), such that this good institutional performance is what shapes the legitimacy of the local institutions. In other words, the documented positive effect of state history on trust would be due to state history mitigating conflict. In fact, Rohner, Thoenig, and Zilibotti (2013) argue that the prevalence of conflict in Uganda has eroded generalized trust.

If conflict is the mediating channel in my story one should expect to observe two empirical patterns: first, there shoulf be a negative relationship between conflict prevalence and state history (This has been already documented in the cross-sectional analysis); and second, the effect of state history on trust should become smaller once accounting for the influence of conflict on trust. In Table 15, I show that none of my IV point estimates are substantially affected by the inclusion of a measure of conflict prevalence at the district level.[66][67] These results provide evidence consistent with a direction of causality runing from state history to trust and then to conflict prevalence. Moreover, it is worth noting that I do not find any impact for state history on generalized trust which is the type of trust more likely to be affected by conflict (as argued by Rohner, Thoenig, and Zilibotti, 2013).

6 Conclusion

This paper adds to a growing literature in economics that seeks to better understand the role that historical factors play in shaping contemporary development outcomes. In particular, it contributes to the understanding of the developmental role of institutions by rigorously looking at the empirical relationship between state history and the prevalence of conflict at the sub-national level. For this purpose, I introduce of a novel index of state history at the sub-national level. I uncover a strong negative statistical

[66] I measure the prevalence of conflict at the district level using the same exact procedure as used in the grid-cell analysis.

[67] An additional interesting pattern arises when including conflict prevalence in my specifications: although the point estimates are not statistically significant at the standard level of confidence, a higher prevalence of conflict negatively correlates with trust in local policy makers (This point estimate becomes statistically significant if I exclude state history from the specification), but positively correlates with trust in traditional leaders.

relationship between my state history index and the prevalence of modern conflict. This relationship is robust to several confounding factors. Although I cannot rule out the possibility that unobservables are partially accounting for this statistical association, I argue that the influence of those factors would have to be substantially greater than the documented influence of observed factors in order to explain away my main result.

To determine whether this relationship is causal, I pursued an instrumental variable strategy. Due to the difficulty of finding a credible source of exogenous variation for state history in all Sub-Saharan Africa, I focus on Uganda. I exploit plausible exogenous variation in the distance to the archaeological site of Bigo Bya Mugenyi which historians have identified as the core of the Bacwezi dynasty; the first known attempt of political centralization in pre-colonial Uganda. Since it is believed that the Bacwezi were a ruling pastoral clan, not indigenous to the region, and which moved away from Bigo Bya Mugenyi after two generations, I interpret this brief settling as the arrival of an innovation which later spread to adjacent regions. The IV point estimates suggest a strong negative causal effect of state history on conflict prevalence.

I also exploit panel data variation in the prevalence of conflict, weather-induced productivity shocks, and the interaction of my state history index with those shocks to document that locations with relatively high historical exposure to state capacity are remarkably less likely to experience conflict when hit by a negative agricultural productivity shock.

I then turn to specific potential mechanisms and examine an explanation for the uncovered relationship. By exploiting individual-level survey data, I show that state history can be linked to people's positive attitudes towards state institutions. In particular, I show that key state institutions, along with traditional leaders, are regarded as more trustworthy by people living in areas with long histories of statehood. These OLS results uncovered for 18 Sub-Saharan countries are reconfirmed using an instrumental variable approach for Uganda.

Given that identifying a causal effect of the historical presence of statehood on contemporary conflict is a difficult task, I present empirical evidence that hard-to-account-for factors manifested in differences in long-run exposure to centralized institutions crucially matters for understanding contemporary conflict. I discuss and rule out several potential confounding factors that are also consistent with my empirical findings. I also present a variety of identification strategies that suggest a causal interpretation of my findings. In sum, in this paper I provide additional empirical evidence that history can have a long-lasting effect on modern outcomes.

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FIGURES

Figure 1: Evolution of Historical Map Boundaries (1000 - 1850 CE)

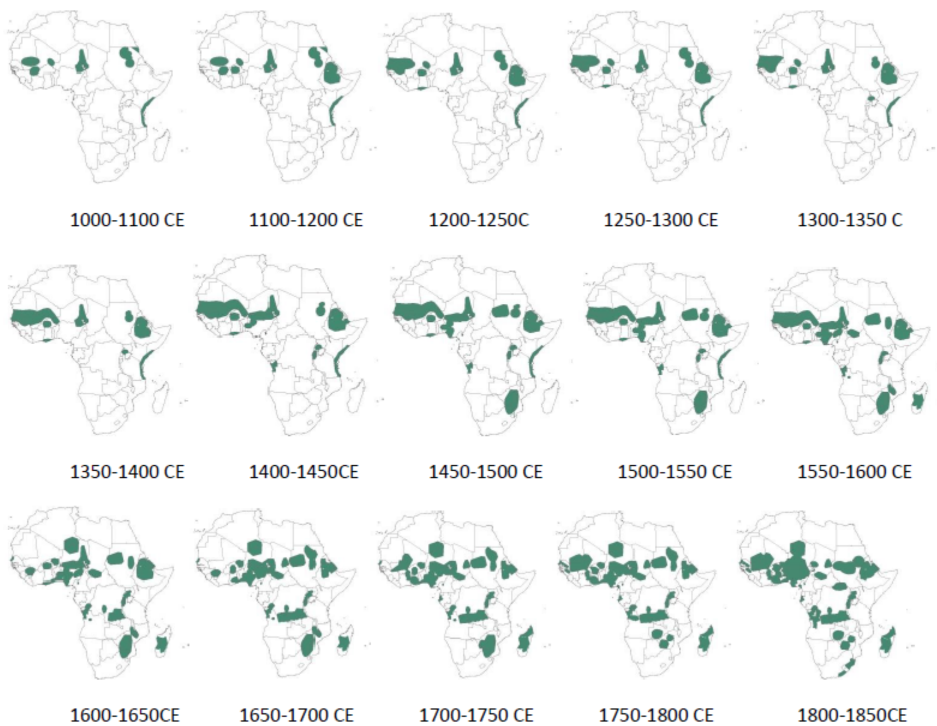


Figure 2: Example of Score Calculation. East Africa 1800 - 1850 CE

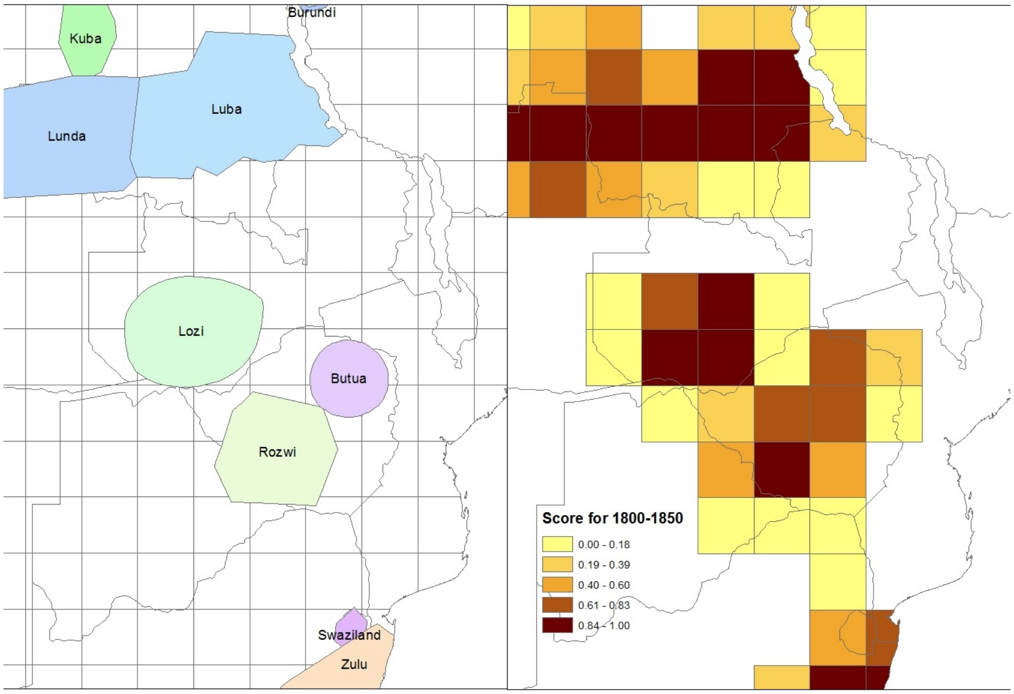


Figure 3: Spatial Distribution of State History Index

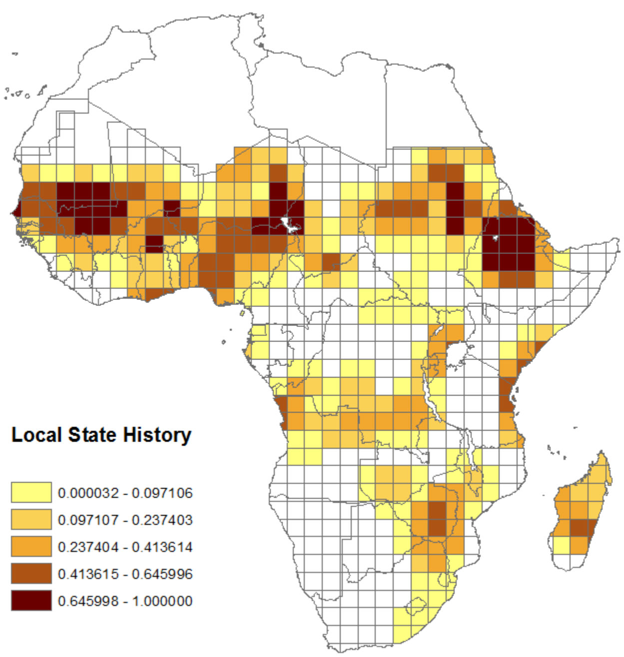
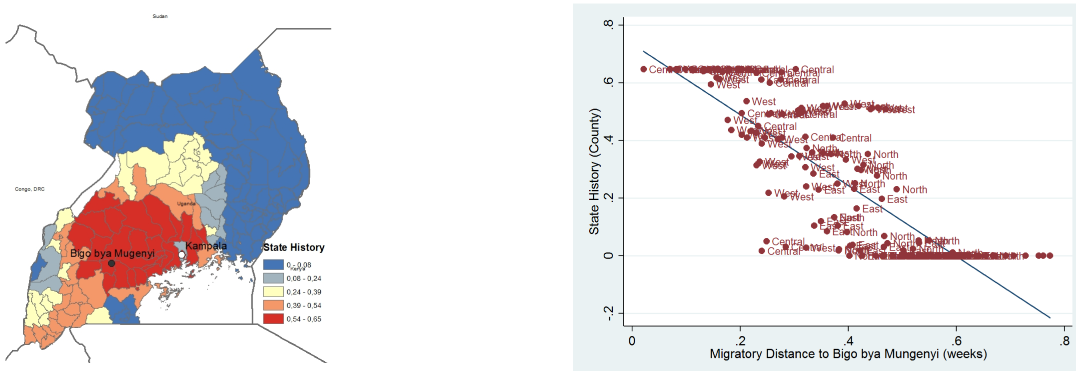


Figure 4: State History in Uganda and Distance to Mugenyi



TABLES

Table 1: OLS Estimates - Baseline Specification

Dependent Variable: Conflict Prevalence 1989-2010				
	(1)	(2)	(3)	(4)
State History 1000 - 1850 CE	-0.109**	-0.177***	-0.182***	-0.195***
robust s.e.	(0.045)	(0.049)	(0.048)	(0.048)
spatially adjusted s.e (5 degrees)	(0.054)	(0.059)	(0.057)	(0.058)
spatially adjusted s.e. (10 degrees)	(0.063)	(0.070)	(0.065)	(0.067)
s.e. clustered at country level	(0.075)	(0.079)	(0.070)	(0.078)
Geo-strategic Controls	No	Yes	Yes	Yes
Cereal Suitability	No	No	Yes	Yes
Disease Environment	No	No	No	Yes
Observations	558	558	558	558
R-squared	0.349	0.420	0.441	0.446

*** p<0.01, ** p<0.05, * p<0.1 (robust case). The unit of observation is a grid cell. Dependent Variable is Conflict Prevalence 1989-2010 defined as fraction of years with at least one conflict event. All the specifications include country dummies. The geo-strategic controls are distance to ocean, distance to major river, distance to capital, river density, mean elevation, ruggedness of terrain, total area and number of countries intersected by the grid. Cereal suitability represents the soil suitability for cultivating cereals. Disease environment controls include malaria ecology in early 20th century and TseTse fly suitability

Table 2: OLS Estimates - Potential Confounding Effects

	Dependent Variable: Conflict Prevalence 1989-2010			
	(1)	(2)	(3)	(4)
State History 1000 - 1850 CE	-0.205**	-0.210***	-0.168**	-0.192***
	(0.077)	(0.075)	(0.067)	(0.065)
Distance to Addis Ababa	-0.136			-0.108
	(0.083)			(0.081)
Ecological Diversity		0.138**		0.110**
		(0.051)		(0.050)
Temperature Volatility			-0.056***	-0.045***
			(0.014)	(0.016)
Observations	558	558	558	558
R-squared	0.459	0.459	0.470	0.487

Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid cell. All specifications include country dummies, Geo-strategic controls, Cereal Suitability control and Disease Environment controls. This basic set of controls is described in Table 1. Distance to Addis Ababa proxies for population diversity. The longer the distance to Addis Ababa, the lower the population diversity. Ecological diversity is a Herfindhal index based on vegetation types from White (1983). Temperature volatility represents the intertemporal standard deviation of monthly data. Temperature data is from the period 1978-2010 and proxies for historical figures.

Table 3: OLS Estimates - Additional Controls

	Dependent Variable: Conflict Prevalence 1989-2010								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
State History 1000 - 1850 CE	-0.209***	-0.206***	-0.195***	-0.184***	-0.193***	-0.210***	-0.227***	-0.238***	-0.174***
	(0.060)	(0.062)	(0.065)	(0.065)	(0.066)	(0.065)	(0.062)	(0.061)	(0.062)
Additional Control	Precolonial Prosperity	Pop Dens. in 1700	Ethnic Fraction	Slave Trade	Hist Trade Routes	Dist. Hist Conflict	Light Density	All	All
Coefficient Add. Control	Prob > F	0.010***	0.058	-0.004	0.001	-0.009	0.046***	Prob > F	Prob > F
	[0.44]	(0.003)	(0.044)	(0.005)	(0.035)	(0.007)	(0.014)	[0.000]	[0.000]
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Observations	558	558	558	558	558	558	558	558	558
R-squared	0.491	0.521	0.489	0.488	0.487	0.492	0.519	0.549	0.371

Robust standard errors clustered at the country level in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The unit of observation is a grid cell. The full set of controls are: distance to ocean, distance to major river, distance to capital, river density, mean elevation, ruggedness of terrain, total area and number of countries intersected by the grid, cereal suitability, malaria ecology in early 20th century, TseTse fly suitability, distance to Addis Ababa, ecological diversity and temperature volatility. See Tables 1 and 2 for details.

Table 4: OLS Estimates - Intensive vs Extensive Margin of Political Centralization

Dependent Variable: Conflict Prevalence 1989-2010			
	(1)	(2)	(3)
State History Score 1800 CE	-0.049		
	(0.038)		
Ethnic Centralization (v33 Eth. Atlas)		0.001	
		(0.016)	
State History 1000 - 1850 CE			-0.191***
			(0.050)
Sample	Full	Full	State History > 0
Observations	558	558	329
R-squared	0.470	0.467	0.512

Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid cell. All specifications include country dummies and the full set of controls listed in table 2. State History Score 1800 CE represents the fraction of grid which was under a centralized state during the period 1800-1850 CE. Ethnic Centralization is 1960-population weighted average of Ethnographic Atlas's variable v33 (Jurisdictional Hierarchy Beyond Local Community) ranging from 1 to 5 (Large States).

Table 5: OLS Estimates - Robustness to Alternative Conflict Definitions

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	All Conflicts	Battles	Violence	Riots	Log of Casualties	Conflict Onset
	Panel A: Full Sample (N=558)					
State History 1000 - 1850 CE	-0.080	-0.132**	-0.107	0.054	-1.517**	-0.268**
	(0.081)	(0.065)	(0.078)	(0.083)	(0.699)	(0.100)
R-squared	0.559	0.591	0.572	0.471	0.534	0.410
	Panel B: Reduced Sample, excluding grids with capital city (N=517)					
State History 1000 - 1850 CE	-0.123**	-0.151***	-0.131**	0.020	-1.768***	-0.267***
	(0.056)	(0.048)	(0.056)	(0.029)	(0.565)	(0.075)
R-squared	0.590	0.625	0.608	0.462	0.553	0.426
	Panel C: Reduced Sample, excluding grids with >1 mill. inhab. (N=378)					
State History 1000 - 1850 CE	-0.168**	-0.153**	-0.182**	-0.023	-1.857*	-0.243***
	(0.082)	(0.071)	(0.077)	(0.035)	(0.913)	(0.068)
R-squared	0.597	0.648	0.648	0.340	0.593	0.433
Dataset	ACLED	ACLED	ACLED	ACLED	UCDP-GED	UCDP-GED

Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid cell. All specifications include country dummies and the full set of controls described in tables 2 and 3. Conflict measures in columns 1,2,3,4, 5 and 6 represent the fraction of years with at least one conflict event in grid. ACLED data comprises the period 1997-2010. Conflict onset is defined as the first event within a dyad.

Table 6: Historical Proximity to Cities and Contemporary Conflict

Dependent Variable: Conflict Prevalence 1989-2010	(1)	(2)
	OLS	2SLS
Historical Proximity to Cities	-0.413***	
	(0.120)	
State History 1000 - 1850 CE		-0.520***
		(0.145)
Instrument		Proximity to Cities
F-Statistic First-Stage		33.90
Observations	558	558
R-squared	0.477	0.133

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The unit of observation is a grid cell. Each specification includes country dummies. All the specifications include the full set of controls listed in table 2.

Table 7: Conflict, State History, and Weather Shocks -Panel Data Evidence (1989-2010)

Dependent Variable: Conflict Prevalence (1 if at least one conflict event in grid-year)				
	(1)	(2)	(3)	(4)
Negative Weather Shock	0.015***	0.011***	0.016***	0.012
	0.005	0.004	0.004	0.017
Shock*State History 1000 - 1850 CE			-0.031*	-0.051***
			0.017	0.018)
Lagged Conflict		0.275***	0.275***	0.274***
		0.017	0.017	0.017
Shock*Additional Interacted Control	No	No	No	Yes
Observations (558 grids) [years]	12,276 [22]	11,718 [21]	11,718 [21]	11,718 [21]

OLS estimates.Robust standard errors clustered at the grid level in parentheses.*** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid-year. All specifications include grid and year fixed effects. Log of yearly precipitation and deviation of yearly temperature are also included (not reported). The additional interacted controls in column 4 are light density, cereal suitability, agricultural pre-colonial dependence, temperature volatility (P-value for joint significance is 0.00)

Table 8: IV Estimates - Conflict in Uganda

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: IV Point Estimate. Dependent Variable: Conflict Prevalence						
State History 1000 - 1850 CE (County level)	-0.348***	-0.310*	-0.253**	-0.220*	-0.327***	-0.264***
	(0.119)	(0.162)	(0.119)	(0.130)	(0.108)	(0.0836)
Panel B: First Stage. Dependent Variable: State History (County level)						
Migratory Distance to Bigo bya Mugenyi	-0.842***	-0.877***	-0.981***	-0.787***	-0.972***	-1.037***
	(0.129)	(0.189)	(0.211)	(0.166	(0.204)	(0.207)
F-Statistics	42.75	21.52	26.81	22.40	22.64	25.22
Distance to Lake Victoria	No	Yes	No	No	No	Yes
Confounders	No	No	Yes	No	No	Yes
Region FE	No	No	No	Yes	No	Yes
Ethnic Shares	No	No	No	No	Yes	Yes

Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a county in Uganda (153 observations). Migratory distance to Bigo bya Mugenyi is calculated based on Özak (2012a). All specifications include the full set of controls included in table 1. Confounders controls are distance to Addis Ababa, ecological diversity, and intertemporal temperature volatility. Ethnic shares are calculated at the district level using Afrobarometer 5. Table S.9 in online appendix shows OLS results analogue to table 1.

Table 9: State History and Attitudes Toward Local Policy Makers (18 Countries in Afrobarometer 4)

	(1)	(2)	(3)	(4)
Dependent Variable	Trust Local	Trust Leader	Leader Influence	Trust President
State History 1000 - 1850 CE	0.297**	0.227*	0.368***	0.141
(Predominant Ethnic Group in District)	(0.127)	(0.128)	(0.131)	(0.140)
Observations	22,516	22,528	22,115	22,533
R-squared	0.194	0.187	0.185	0.225

OLS Estimate. Robust standard errors clustered at the historical ethnic homeland level in parentheses. *** p<0.01, **p<0.05, * p<0.1. The predominant ethnic group is defined by intersecting district's coordinates with historical homelands as reflected in Murdock (1959). For columns (1), (2), and (4) the dependent variable is based on the response to the questions "How much do you trust in local councilors / traditional leaders/ president ?" Answers follow a 5-point scale where 1 is "not at all" and 5 is "a lot". Trust in local policy maker is the average for local councilors and traditional leaders. The leader influence variable is based on the question "How much influence do traditional leaders currently have in governing your local community?" The variable is coded in a 5-point scale from 1 (none) to 5 (great deal of influence). The state history variable is calculated for the historical ethnic homeland (based on Murdock's map) in which the respondent currently lives. All specifications include respondent's ethnic group fixed effect, region fixed effect, individual-level controls, village-level controls, and district-level controls. Individual-level controls are age, age squared, unemployed dummy, male dummy, 5 living conditions dummies, 10 education level dummies. Village controls are 6 indicators for public good provisions: police station, school, electricity, piped water, sewage, and health clinic. District controls are distance to the capital of the country, infant mortality, per capita light density at nights, and urban indicator.

Table 10: Internal vs External Factors

Dependent Variable: Trust in Local Policy Makers			
	(1)	(2)	(3)
State History 1000 - 1850 CE	0.297**		0.295**
(Predominant Ethnic Group in District)	(0.127)		(0.140)
State History 1000 - 1850 CE		-0.0108	0.0024
(Ethnic Group of Respondent)		(0.048)	(0.053)
Ethnic Group of Respondent FE	Yes	No	No
Predominant Ethnic Group FE	No	Yes	No
Observations	22,516	22,516	22,516
R-squared	0.194	0.201	0.1831

OLS Estimate. Standard errors in column 1 and 3 (column 2) are clustered at the historical ethnic homeland level (respondent's ethnic group level). *** p<0.01, **p<0.05,* p<0.1. The predominant ethnic group is defined by intersecting district's coordinates with historical homelands as reflected in Murdock (1959). All specifications include region fixed effect, individual-level controls, village-level controls, and district-level controls. See table 9 for details

Table 11: State History and Other Dimensions of Trust

	Dependent Variable: Trust in			
	Compatriots	Relatives	Other People	Politicians
	(1)	(2)	(3)	(4)
State History 1000 - 1850 CE	-0.00555	0.0727	-0.0205	0.104
(Predominant Ethnic Group in District)	(0.0880)	(0.0801)	(0.110)	(0.148)
Observations	22,454	22,774	22,684	22,705
R-squared	0.166	0.178	0.171	0.215

OLS Estimate. Robust standard errors clustered at the historical ethnic homeland level in parentheses. *** p<0.01,**p<0.05, * p<0.1. The predominant ethnic group is defined by intersecting district's coordinates with historical homelands as reflected in Murdock (1959). The dependent variable is based on the response to the question "How much do you trust in " compatriots/relatives /other people/politicians?" Answers follow a 5-point scale where 1 is "not at all" and 5 is "a lot". The state history variable is calculated for the historical ethnic homeland (based on Murdock's map) in which the respondent currently lives. All specifications include respondent's ethnic group fixed effect, region fixed effect, individual-level controls, village-level controls, and district-level controls. See table 9 for details.

Table 12: Trust in Local Policy Makers and State History in Uganda

	Trust in Local Policy Maker				Traditional Leader	
	(1)	(2)	(3)	(4)	(5)	(6)
					Trust	Influence
State History 1000 - 1850 CE (District)	0.593*	0.597*	0.713**	0.688**	0.974	0.839
	(0.335)	(0.346)	(0.324)	(0.338)	(0.768)	(0.783)
Soil Suitability	No	Yes	Yes	Yes	Yes	Yes
District Controls	No	No	Yes	Yes	Yes	Yes
Public Good Provision Dummies	No	No	No	Yes	Yes	Yes
Observations	2,413	2,413	2,413	2,413	2,413	2,413
R-squared	0.031	0.031	0.032	0.034	0.049	0.072

OLS Estimate. Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The state history variable is calculated at the district level. All the specifications include individual-level controls and region fixed effect. Individual-level controls are age, age squared, unemployed dummy, male dummy, 5 living conditions dummies. Soil suitability includes suitability for growing cereals and suitability for pasture (FAO's GAEZ database). District controls are population in 2002, poverty rate in 2002, and urban indicator. Public good provisions dummies denote the the existence of police station, school, electricity, piped water, sewage, and health clinic at the village level. See Table 9 for definitions of dependent variables.

Table 13: IV Estimates. State History and Attitudes Toward Local Policy Makers

	(1)	(2)	(3)
Dependent Variable	Trust Local Policy Maker	Trust Traditional Leader	Traditional Leader Influence
State History 1000 - 1850 CE (District)	1.589**	4.606***	3.672**
	(0.655)	(1.330)	(1.643)
First-Stage Statistic	17.01	17.01	17.01

Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1 The state history variable is calculated at the district level. All specifications include individual-level controls, region fixed effect, soil suitability for cereals and pasture, district level controls, and public good provision dummies. The instrument is the migratory distance to Bigo Bya Mugenyi and is calculated based on Özak (2012a). N = 2,413

Table 14: Placebo Test. Distance to Mugenyi and Other Dimensions of Trust

	Dependent Variable: Trust in				
	(1)	(2)	(3)	(4)	(5)
	Relatives	Other People	Compatriots	Politicians	President
Migratory Distance to Bigo bya Mugenyi	0.344	-0.0841	0.403	-0.385	-0.190
	(0.286)	(0.422)	(0.550)	(0.376)	(0.386)
Observations	2,411	2,404	2,406	2,413	2,413
R-squared	0.066	0.087	0.086	0.165	0.142

OLS Estimate. Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Migratory distance to Bigo Bya Mugenyi is calculated based on Özak (2012a). All specifications include individual-level controls, region fixed effect, soil suitability for cereals and pasture, district level controls, and public good provision dummies. See Table 11 for definitions of dependent variables. N = 2,413

Table 15: State History, Attitudes, and Conflict Prevalence

	Dependent Variable: Trust in			
	Local Policy Maker		Traditional Leader	
	(1)	(2)	(3)	(4)
State History 1000 - 1850 CE (District)	1.589**	1.454**	4.606***	4.875***
	(0.655)	(0.637)	(1.330)	(1.474)
Conflict Prevalence (District)		-0.455		0.909
		(0.303)		(0.854)
First-Stage Statistic	17.01	14.58	17.01	14.58

IV Estimates. Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The instrument is migratory distance to Bigo Bya Mugenyi and is calculated based on Özak (2012a). All specifications include the full set of controls in table 12. See Table 9 for definitions of dependent variables. N = 2,413.

Appendix A: Construction of the Index

Identifying historical states. I use a wide variety of sources to identify the historical maps of states in pre-colonial Sub-Saharan Africa for the period 1000-1850 CE. Identifying what constituted a state in Africa's remote past is not an easy task. Historical records are incomplete and at times the demarcation between tribes and kingdoms is unclear. Furthermore, the heterogeneity in political structures was very large in pre-colonial Africa. Nonetheless, my operative definition of states includes city-states, kingdoms, and empires and is built upon the conception of a centralized power exercising influence over some periphery. That is, a historical state is the result of the amalgamation of smaller settlement units in a relatively large unit of territory ruled by centralized political head. I consider the existence of an army as a necessary but not sufficient condition to constitute a state. For instance, the Galla people (also known as Oromo) in modern Ethiopia developed states only two hundred years after conquering Ethiopian soil (Lewis, 1966). Before founding the five Gibe kingdoms, Galla people were governed at the village level. Although militarily coordinated in the competition against neighboring kingdoms, each local group remained independent under its own leader. I thus only consider the Galla's polities once the Gibe kingdoms were established in the late eighteenth century. Note that my notion of a state is not necessarily a proxy for societal complexity.[68] Non-political centralized complex societies such as the Igbo in modern Nigeria, which had a complex system of calendars (Oguafo) and banking (Isusu), are not here considered as historical states. In fact, only after forming a trade confederacy in the late 17th century, do I consider the Aro, a subgroup of the Igbo, as constituting a state and thus to be included in the computation of my index.

The starting point then was to identify the historical states referenced in version 3.1 of the State Antiquity Index introduced in Bockstette, Chanda, and Putterman (2002). I complement this initial list with a variety of additional sources (Ajayi and Crowler 1985; Barraclough 1979; Vansina 1969; McEvedy 1995; Murdock 1967; and Ehret 2002). Once having completed the list of all the polities taken into account when computating of my state history index, I document the approximate dates of founding and decline of each polity. Table A.1 includes the complete list of polities (with their relevant dates) used in the computation of my index. Note that I only consider indigenous states in my analysis. Therefore, I do not consider foreign states such as the Portuguese colony on the coastal strip of Angola (which was present for more than four hundred years) or occupations such as that of Morocco's of Songhai' territory at the beginning of the seventeenth century.

Compilation of historical maps. The following task was to identify, digitize and georeference the maps of the historical states indicated on the list. Some of the maps were already digitized and some of them were also georeferenced.[69] When a map of a given polity was available for more than one period of time, I took all of them into account for my analysis. This helped me to partially account for expansions and contractions of states' respective geographic influence over time.[70] Some judgment was needed when

[68] Note also that being stateless does not imply either an absence of laws or existence of a small societies. The Nuer of the Souther Sudan and the Tiv of Nigeria serve as good examples.

[69] For instance, some maps from McEvedy's (1995) Atlas of African History were already digitized and georeferenced by AfricaMap, a project developed by the Center for Geographic Analysis at Harvard. After checking for inconsistencies in the original sources and correcting irregularities in the border drawings, I also considered some maps digitized by the ThinkQuest Project of The Oracle Education Foundation.

[70] For instance, I was able to document how the political influence of Songhai's people evolved over my period of analysis.

two sources disagreed regarding the boundaries of a historical state for a similar period. I generally went with the map I found to be more reliable.[71]

Major sources of measurement error. Any attempt to rigorously define state boundaries in pre-colonial Africa is doomed to imperfection for several reasons. Indigenous historical records are scarce in Sub-Saharan Africa; and most of the modern reconstruction of African history relies upon the accounta of travelers, traders and missionaries (particularly during the nineteenth century), transmissions from oral history, or the analysis of archaeological sites. Furthermore, this scarcity of historical records becomes exacerbated the further south or away from the coast one looks. Most importantly perhaps, there existed almost no indigenous map making in pre-colonial Africa (Herbst, 2000). Regardless of the problems due to a lack of historical records, the extension of authority to the periphery in pre-colonial Africa was itself irregular, contested, and weak. As argued by Herbst (2000), boundaries were, as a consequence, reflective of the difficulty of broadcasting power from the center. Therefore, the lines of demarcation for the boundaries of any historical state are, by their very nature, inevitably imperfect. Nevertheless, while bearing in mind the aforementioned caveat, documenting imperfect boundaries provides at least a useful starting point for my empirical analysis. There is no question that the imperfection in the demarcation of boundaries represents a source of measurement error affecting my econometric analysis. Yet, there is little reason to believe that this particular measurement error correlates with the true measure of state history. Correspondingly, this represents a case of classical errors-in-variables that should introduce an attenuation bias in the OLS estimates of the relationship between historical state prevalence and conflict.

An additional source of measurement errors in my state history variable will result from the introduction of an upper bound when computing the index. When considering only historical states as of 1000 CE, I am excluding years of state history in regions with long histories of statehood. For instance, I ended up omitting about 250 years of the Ghana empire in West Africa. Likewise, the Kingdom of Aksum, which existed during the period 100-950 CE, and was located in modern day Eritrea and Ethiopia, is not considered in the computation of the state history index. Since locations with some state history before 1000 CE tend to present high values in my index, the introduction of the bound in the period of analysis for its computation results in the underestimating some regions' long run exposure to statehood. I, therefore, introduce an additional upward bias in the OLS estimates. It is precisely the need of alleviating biases resulting from measurement error in my data what provides a key motivation for the implementing the instrumental approach discussed in the paper.

Figure 1 includes the first Songhai polity (pre-imperial) which flourished during the period c.1000-c.1350CE around the city of Gao. Its expansion is consistent with the establishment of the Songhai Empire between c.1350 CE and c.1600CE; likewise with the late formation of the Dendi Kingdom as a result of Morroco's invasion and the empire's ensuing decline circa 1600 CE.

[71] In some cases I made my decision based on a map's consistency with natural borders, like majors rivers or elevations.

Table A.1: List of Historical States

	Date of Establishment (1)	Date of Unestablishment (2)
Dongola (Makuria)	b 1000	1314
Alwa	b 1000	1500
Kanem Empire	b 1000	1387
Kingdom of Ghana	b 1000	1235
Pre-imperial Mali	b 1000	1230
Pre-imperial Songhai (Gao)	b 1000	1340
Siwahili city-states3	b 1000	1500
Mossi States	1100	a 1850
Ethiopia (Abyssinia)	1137	a 1850
Akan (Bonoman)	1200	1700
Imperial Mali	1200	1600
Buganda	1300	a 1850
Songhai Empire	1340	1590
Wollof Empire	1350	1549
Bornu-Kanem	1387	a 1850
Kingdom of Congo	1390	a 1850
Kingdom of Bamum	1398	a 1850
Yoruba (Oyo)	1400	a 1850
Nupe Kingdom	1400	a 1850
Darfur (Daju-Tunjur until c1600, then Sultanate of Darfur)	1400	a 1850
Hausa States	1400	1800
Adal Sultanate	1415	1577
Mwenemutapa (Kingdom of Mutapa)	1430	1760
Benin Empire	1440	a 1850
Kingdom of Butua (Butwa)	1450	1683
Kingdom of Rwanda	1500	a 1850
Bunyoro-Kitara	1500	a 1850
Kingdom of Merina	1500	a 1850
Maravi Kingdom	1500	1700

Table A.1: List of Historical States (continuation)

	Date of	
	Establishment	Unestablishment
	(1)	(2)
Kingdom of Idah (Igala)	1500	a 1850
Kwararafa	1500	1700
Nkore Kingdom (Ankole)	1500	a 1850
Kotoko Kingdom	1500	a 1850
Mandara Kingdom (Wandala)	1500	a 1850
Funj Sultanate	1504	1821
Kingdom of Bagirmi (Baguirmi Sultanate)	1522	a 1850
Kingdom of Ndongo (Angola)	1530	1670
Kingdom of Jolof (Senegal)	1550	a 1850
Kingdom of Menabe	1550	a 1850
Awsa (Aussa Sultanate since c1730)	1577	a 1850
Luba Empire	1585	a 1850
Air Sultanate	1591	a 1850
Dendi Kingdom	1591	a 1850
Teke (Anziku Kigdom)	1600	a 1850
Kingdom of Dahomey	1600	a 1850
Kuba Kingdom (Bushongo)	1625	a 1850
Wadai (Ouaddai Empire)	1635	a 1850
Lunda Empire	1665	a 1850
Kingdom of Burundi	1680	a 1850
Rozwi Empire	1684	1834
Aro trading confederacy	1690	a 1850
Kindom of Boina	1690	1808
Ashanti Empire	1700	a 1850
Kingdom of Orungu (Gabon)	1700	a 1850
Kong Empire	1710	a 1850
Bamana Empire (Segu)	1712	a 1850
Imamate of Futa Jallon	1725	a 1850
Lozi Kingdom	1750	a 1850
Mbailundu	1750	a 1850
Calabar (Akwa Akpa)	1750	a 1850
Kaarta (Baambara in Nioro)	1753	a 1850

Table A.1: List of Historical States (continuation)

	Date of Establishment (1)	Date of Unestablishment (2)
Imamate of Futa Toro	1776	a 1850
Gibe States	1780	a 1850
Xhosa	1780	a 1850
Azande Kingdom	1800	a 1850
Swaziland (House of Dlamini)	1800	a 1850
Ovimbundu (4)	1800	a 1850
Yaka (4)	1800	a 1850
Borgu States	1800	a 1850
Sokoto Caliphate	1804	a1850
Zulu Kingdom	1816	a1850

Note: (1) b stands for before. (2) a stands for after. (3) Mogadishu, Mombasa, Gedi, Pate, Lamu, Malindi, Zanzibar, Kilwa, and Sofala. (4) approximate date.

Appendix B: Variable Definitions (Cross-section of Grid Cells)

Conflict Prevalence: fraction of years with at least one conflict event in the grid cell during the period 1989-2010. Own calculation based on UCDP GED, version 1.5 (November 2012).

Area: total land area of the grid cell (in square kilometers).

Distance Ocean: log of distance from the centroid of the grid cell to the nearest ocean (in hundred of kilometers).

Distance Major River: log of distance from the centroid of the grid cell to the nearest major river (in hundred of kilometers). Own calculation based on EMEA_rivers dataset from ArcGis Online.

River density: total density of rivers intersecting the grid cell. Own calculation based on EMEA_rivers dataset from ArcGis Online.

Distance Capital: log of distance from the centroid of the grid cell to the capital city of the country to which the grid cell was assigned (in kilometers).

Mean elevation: within-grid average elevation of the terrain (in meters above the sea level). Own calculation by taking within-grid average across original pixels in source dataset. Data comes from National Oceanic and Atmospheric Administration (NOAA) and U.S. National Geophysical Data Center, TerrainBase, release 1.0, Boulder, Colorado. Available at http://www.sage.wisc.edu/atlas/data.php?incdataset=Topography

Ruggedness: within-grid average ruggedness of the terrain across 30-by-30 arc-second cells. Ruggedness measure comes from Nunn and Puga (2012).

Number of Countries in Grid: total number of countries that are intersected by the grid cell. South Sudan is included in Sudan.

Cereal Suitability: within-grid average cereal suitability of the soil from Food and Agriculture Organization (FAO)'s Global Agro-Ecological Zones (GAEZ) database.

Tse-tse Fly Suitability: within-grid average predicted suitability for tse-tse flies from FAO/IAEA.

Malaria Ecology in early 20th century: within-grid average of average malaria ecology for the time period 1901-1905. Original data from Conley, McCord, and Sachs (2010).

Distance to Addis Ababa: log of the shortest distance (in 100km) from centroid of the grid to Addis Ababa.

Ecological Diversity: Herfindahl index constructed from the shares of each grid's area that is occupied by each ecological type on White's (1983) vegetation map of Africa.

Ethnic Fractionalization in 1960: this variable is computed at the grid level i with the following formula: $F_i = 1 - \sum_{g=1}^{n} \alpha_{i,g}^2$. Where $\alpha_{i,g}$ is the fraction of total population in grid cell i that live in the portion of the historical homeland of group g that is intersected by the grid i. Population counts are from 1960 and comes from UNEP GRID Sioux Falls (Nelson 2004). The spatial distribution of ethnic groups is based on Murdock's (1959) map.

Population Density in 1700: People per squared kilometer in 1700. Population data comes from Goldewijk, Beusen, and Janssen (2010).

Pre-Colonial Variables: the following variables are 1960 population-weighted averages of traits of ethnic groups whose historical homelands intersect a given grid cell. The weights are the aforementioned $\alpha_{i,g}$ (see definition of Ethnic Fractionalization). Pre-colonial dependence variables denote subsistence income shares derived from hunting, fishing, pastoralism, and agricultural (variables v2, v3, v4, and v5 in the Ethnographic Atlas (1967) respectively). Pre-Colonial Settlement Pattern denotes the level of settlement complexity (variable v30 from Ethnographic Atlas). A previous matching between ethnic territories (as displayed in Murdock (1959)'s map) and ethnic traits was needed for the computation of the population-weighted averages. Most of the ethnic traits come from the Ethnographic Atlas and were complemented with information in Atlas Vorkolonialer Gesellschaften (i.e: german for Atlas of Precolonial Societies). Matching was based on previous work by Fenske (2014), Nunn and Wantchekon (2011), and the Atlas Vorkolonialer Gesellschaften.

Slave Trade Prevalence: original slave prevalence data comes at the ethnic level (Nunn and Wantchekon, 2011). The total number of slaves taken from a grid cell i, S_i, is imputed by doing: $S_i = \sum_e \theta_{i,e} S_e$ where e indexes ethnic group, $\theta_{i,e} = \frac{POP_{i,e}}{POP_e}$, and *POP* are 1960 population counts.

Historical Trade Routes: Indicator taking value of 1 if at least one historical trade route recorded by Brince (1981)'s "An Historical Atlas of Islam" intersects the grid.

Distance to Historical Conflict: log of shortest distance (in 100km) from centroid of grid to historical battle georeferenced in Besley and Reynal-Querol (2014).

Light Density: log of 0.01 + within-grid average luminosity. Following Michalopoulos and Papaioannou (2013), average luminosity is calculated for the time period 2007-2008.

Table A.2: Summary Statistics -Grid Cells-

Variable	Mean	Std. Dev.	Min	Max
Conflict Prevalence	0.19	0.23	0.00	1.00
State History 1000 - 1850 CE	0.16	0.23	0.00	1.00
Area (square km)	42367	12239	122	49231
Distance Ocean (logs)	1.197	1.584	-6.91	2.82
Distance Major River (logs)	0.967	1.23	-6.55	2.74
Distance Capital (logs)	6.19	0.79	3.21	7.55
River Density	5.72	3.966	0.00	28.04
Mean Elevation (m)	616.5	425.4	-4.6	2221.9
Ruggedness	66583	78892	960	540434
Cereal Suitability	0.28	0.17	0.00	0.71
TseTse Fly Suitability	0.34	0.40	0.00	1.00
Malaria Ecology early 20th Century	5.71	4.90	0.00	18.52
Ethnic Fractionalization in 1960	0.45	0.27	0.00	1.00
Population Density in 1700	3.19017	6.46	0.00	73.17
Pre-Colonial Hunting Dependence	0.96	0.91	0.00	4.00
Pre-Colonial Fishing Dependence	0.72	0.72	0.00	5.21
Pre-Colonial Pastoralism Dependence	3.15	2.39	0.00	9.00
Pre-Colonial Agricultural Dependence	4.46	2.12	0.00	8.41
Pre-Colonial Settlement Pattern	4.77	2.23	1.00	8.00
Slave Trade (log of Slave Exports/Area)	4.31	4.19	0.00	14.36
Distance to Historical Conflict ('00 km)	5.74	3.50	0.09	16.79
Ecological Diversity (Herfindhal Index)	0.32	0.23	0.00	0.75
Distance to Addis Ababa (logs)	0.91	0.68	-3.62	1.81

Note: Sample Size is 558 grid cells.

ONLINE APPENDIX TO "STATE HISTORY AND CONTEMPORARY CONFLICT: EVIDENCE FROM SUB-SAHARAN AFRICA"

Emilio Depetris-Chauvin *

THIS ONLINE APPENDIX IS NOT INTENDED FOR PUBLICATION

Additional Robustness Checks for Cross-Section Conflict-State History

On the discount factor. In this additional robustness check I explore how my OLS estimates are affected by the election of different discount factors to compute the state history index. I report in columns 1 to 4 of Table S.1 results for four different specifications with discount rates of 5, 10, 25, and 50 percent. For the sake of comparison, I report both the point estimates and the beta standardized coefficients. All the specifications include the full set of controls as in Table 2. Only when a discount rate of 50 percent is applied, my coefficient of interest is slightly statistically insignificant under the conventional levels of confidence. Two facts are worth to note. First, the higher the discount rate, the lower the statistical significance of the coefficient for the corresponding state history measure. Second, the beta standardized coefficient is also decreasing on the discount rate suggesting indeed that history has an influence on conflict. For instance, the beta standardized coefficient when the discount rate is 0 (i.e., -0.20, not show in Table S.1) is more than 50 percent larger that for the case in which the discount rate is 25 percent.

Excluding countries and influential observations. I sequentially estimate the specification in column 3 of Table 3 by excluding one country at a time. All the thirty seven different point estimates fall in the interval [-0.13, -0.22], being Ethiopia the exclusion that produces the lowest coefficient. All coefficients are statistically significant at the 1 percent level (see Figure 1 in this appendix). There is one main reason for the somehow relative weaker result when excluding Ethiopia: it presents some locations with very high values of the state history index; locations for which my state history may be underestimating their true long-run exposure to statehood.[1] Excluding those locations reduce the upward bias in the OLS estimate due to the measurement error from bounding the period of analysis above the year 1000 CE.[2]

*Pontificia Universidad Católica de Chile. Email: edepetris@uc.cl

[1] Some polities were founded several centuries before 1000 CE.

[2] I estimated additional specifications in which I excluded all the observations with some exposure to states during the period 1000-1100 CE. Consistently with the existence of measurement error from bounding the analysis above 1000 CE introducing

The same pattern arises when excluding another country with long history of states before 1000 CE (i.e: Ethiopia). Finally, the strong negative statistical association between state history and conflict persists when excluding influential observations. In this vein, I follow the standard practice of estimating β when excluding all the observations for which $|DFBETA_i| > \frac{2}{\sqrt{N}}$, where N is the number of observations and $DFBETA_i$ is the difference between the estimate of β when the observation i is excluded and included (scaled by standard error calculated when this observation is excluded). The point estimate is -0.16 (statistically significant at the 1 percent level -results not shown-).

Construction of Weather-Induced Productivity Shock

I construct a weather-induced productivity shock to the agricultural sector in two main steps which I explain in detail below. In the first step I construct five crop-specific weather shocks. In the second step I aggregate these shocks into one indicator. As in Harari and La Ferrara (2013), I construct my weather shocks using the Standardized Precipitation-Evapotranspiration Index (SPEI) developed by Vicente-Serrano et al (2010).

Drought index. The SPEI is a multiscalar drought index, which considers the joint effects of temperature and precipitation on droughts (Vicente-Serrano et al 2010). The SPEI is based on the climatic water balance equation which depends on total precipitation and the capacity of the soil to retain water (i.e: evapotranspiration). Formally; the water balance equation for a given month t:

$$D_t = Prec_t - PET_t,$$

where $Prec_t$ and PET_t are precipitation and potential evapotranspiration (both in mm), respectively. The PET need to be estimated using different climate inputs (such as temperature, cloud cover, and wind speeds) of which temperature is the most relevant. This water balance (deficit or superavit) can be aggregated at different scales k (i.e: number of months). Then, a given D_t^k is fitted to a Log-logistic distribution to obtain the $SPEI_t^k$ for a given month t and scale k over which water deficits/superavits accumulate. Since the SPEI is a standardized variable (with mean value of zero and standard deviation of 1), it can be compared over time and space (Vicente-Serrano et al, 2010) regardless of the election of k and t.[3] Low and negative values of the SPEI denote relative high water balance deficits (Droughts).

As discussed in Harari and La Ferrara (2013), the original SPEI series are based on CRU TS3.0 data which relies on gauge data. This poses a problem in the context of Sub-Saharan Africa where gauge data (in particular historical data) is scarce, then highly interpolated, and potentially endogenous to the

an upward bias, the beta standardized coefficient slightly decreased about 10 percent (albeit they remained strongly statistically significant -results not shown-) when I excluded those observations.

[3] In other words, the SPEI is measured in units of standard deviation from the historical average of the water balance (i.e: average over the period for which input climatic variables are available).

existence of conflict. I therefore recalculate all the necessary SPEI series using more reliable climate data from ECMWF ERA-Interim dataset (Dee et al., 2011) and the NOAA 20th century reanalysis (Earth System Research Laboratory, NOAA, U.S. Department of Commerce, 2009), and the R package provided by the authors of the original index. In the appendix I provide the details for the calculation of all the SPEI series used to create my weather shock variable.

Crop-specific weather shocks. I focus on five staple crops: sorghum, millet, cassava, groundnuts, and maize. According to Schlenker and Lobell (2010), these crops are among the most relevant nutritional sources of calories, protein, and fat in Sub-Saharan Africa. They are also among the most relevant staple crops in terms of production (Depetris-Chauvin et al, 2012). In addition, these crops are highly dependent on rain. Although rice and wheat are also very relevant for this region, I excluded them from my analysis because they are highly irrigated (Schenkler and Lobell, 2010).[4] I then follow the main strategy in Harari and La Ferrara (2013). For each grid cell and each of the five aforementioned crops I identify the planting and harvesting months.[5] Therefore, I identify the length of the growing season (k) and the harvest month (t) for each crop in each grid-cell.[6] Hence, for a given year, $SPEI_{t_{c,i}}^{k_{c,i}}$ represents a weather shock specific to the crop c in grid i.

Weather-Induced Agricultural Productivity Shock. I create an aggregate weather-induced agricultural productivity shock for each grid i and year T by doing:

$$NegativeWeatherShock_{i,T} = -\sum_{c}\theta_{c,i} \times SPEI_{t_{c,i},T}^{k_{c,i}}$$

where $k_{c,i}$ and $t_{c,i}$ are growing season length and harvest month for crop c in grid i, respectively. $\theta_{c,i}$ are the normalized harvest shares for each crop c in grid i.[7] There are two main departures from Harari and La Ferrara (2013) regarding the methodology implemented to create the shock. First, instead of focusing in the main crop (in term of harvested area) within a set of twenty six possible crops, I focus on the five most popular rainfed crops for Sub-Saharan Africa and use their relative importance (in terms of harvested area) to weight them in the aggregation within a grid cell. Second, Harari and La Ferrara (2013) define weather shock as the fraction of consecutive growing season months presenting an SPEI of 4 months of accumulation (scale 4) that is one standard deviation below the historical mean.They do mention that their results are robust to different time scales. I am less agnostic regarding the relevant scale (i.e: the number of months over which water deficits/superavits accumulate) and force it to be determined by the length of each growing season, instead.[8] My approach allows for a more parsimonious definition of shocks and makes possible the distinction between moderate and extreme drought events.[9]

[4]Since spatial variation in irrigation technologies is expected to be highly correlated with weather variation, including highly irrigated-crops would underestimate the statistical relationship between crop-specific weather shocks and conflict.

[5]All the information on crop calendars comes from Mirca 2000. See appendix for details.

[6]In some regions a crop may have two growing seasons within a year; I focus only in the primary season.

[7]The shares of areas harvested for each crop are calculated based on M3-Crops. See appendix for details.

[8]I thank Santiago Bergueria -one of the authors of the SPEI- for this suggestion.

[9]For instance, between an SPEI value of -1 and -3.

Additional Robustness Checks for Panel on Conflict-State History

Inclusion of interaction effects separately. In the last column of Table 5 of the manuscript I considered set of interaction effects of the weather shcok with different cross-sectional characteristics. This set of characteristics includes light density at nights (proxy of regional development), soil suitability for cultivating cereals, pre-colonial agricultural dependence, and historical temperature volatility. In this robustness check I show how point estimates for the main coefficient of interest is affected when including each interaction term separately. All the specifications in Table S.3 include both year and grid fixed effects as well as the log of yearly precipitation and the deviation of yearly temperature. All the point estimates for the interaction shock-state history are statistically significant and with the expected sign. Results in Table S.3 also suggest that locations with higher light density at night, better cereal suitability, and higher pre-colonial dependence on agriculture are more prone to experience conflict when hit by a shock. On the contrary, locations with higher temperature volatility are less prone to have conflict. The inclusion of these interaction terms does not wash away the statistical significance of the negative coefficient for the interaction term state history and weather shock.

FIGURES

Figure 1: Sensitivity of Estimates to Exclusion of Countries

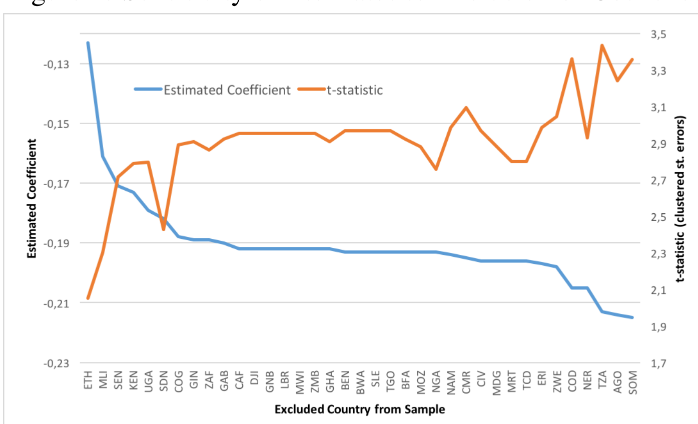
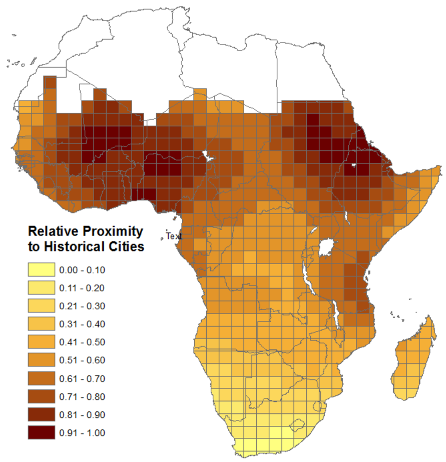


Figure 2: Alternative Measure Using Historical Cities



TABLES

Table S.1: Relationship Between State History and Set of Potential Mechanisms (Conditional on Country Dummies)

	Dependent Variable							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-Colonial Dependence on Agriculture	Pre-Colonial Settlement Complexity	Population Density in 1700	Hist Trade Routes	Dist. Hist Conflict	Slave Trade	Ethnic Fraction	Light Density
State History 1000 - 1850 CE	1.911***	2.620***	2.901**	0.245***	-3.583***	2.586*	0.130*	1.587***
	(0.605)	(0.796)	(1.327)	(0.078)	(0.812)	(1.453)	(0.074)	(0.306)
Observations	558	558	558	558	558	558	558	558
R-squared	0.590	0.591	0.496	0.586	0.616	0.707	0.284	0.521

Robust standard errors clustered at the country level in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The unit of observation is a grid cell. Each specification includes country dummies.

Table S.2: Sensitivity of Main Results to Election of Discount Factor

Dependent Variable: Conflict Prevalence 1989-2010	(1) 5% Discount	(2) 10% Discount	(3) 25% Discount	(4) 50% Discount
Discounted State History 1000 - 1850 CE	-0.168**	-0.147**	-0.100*	-0.069
	(0.063)	(0.062)	(0.057)	(0.050)
Beta coefficient	-0.176	-0.161	-0.121	-0.094
Observations	558	558	558	558
R-squared	0.484	0.481	0.475	0.472

Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid cell. All the specifications include the full set of controls listed in table 2.

Table S.3: Replication of Table 1 for Grids of Smaller Size (1° by 1°)

Dependent Variable: Conflict Prevalence 1989-2010	(1)	(2)	(3)	(4)
State History 1000 - 1850 CE	-0.055***	-0.063***	-0.071***	-0.074***
robust s.e.	(0.013)	(0.013)	(0.013)	(0.013)
s.e. clustered at country level	(0.025)	(0.025)	(0.021)	(0.022)
Geo-strategic Controls	No	Yes	Yes	Yes
Cereal Suitability	No	No	Yes	Yes
Disease Environment	No	No	No	Yes
Observations	2,131	2,131	2,131	2,131
R-squared	0.287	0.309	0.335	0.339

*** p<0.01, ** p<0.05, * p<0.1 (robust case). The unit of observation is a grid cell. Dependent Variable is Conflict Prevalence 1989-2010 defined as fraction of years with at least one conflict event. All specifications include country dummies. The geo-strategic controls are distance to ocean, distance to major river, distance to capital, river density, mean elevation, ruggedness of terrain, total area and number of countries intersected by the grid. Cereal suitability represents the soil suitability for cultivating cereals. Disease environment control include malaria ecology in early 20th century and TseTse fly suitability.

Table S.4: Replication of Table 3 for Grids of Smaller Size (1° by 1°)

	Dependent Variable: Conflict Prevalence 1989-2010								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
State History 1000 - 1850 CE	-0.080***	-0.070***	-0.069***	-0.069***	-0.072***	-0.081***	-0.081***	-0.099***	-0.046**
	(0.020)	(0.019)	(0.019)	(0.018)	(0.019)	(0.021)	(0.018)	(0.019)	(0.019)
Additional Control	Precolonial Prosperity	Pop Dens. in 1700	Ethnic Fraction	Slave Trade	Hist Trade Routes	Dist. Hist Conflict	Light Density	All	All
Coefficient Add. Control	Prob > F	0.000	0.021	0.000	0.016	-0.006**	0.022***	Prob > F	Prob > F
	[0.000]	(0.000)	(0.018)	(0.003)	(0.011)	(0.002)	(0.004)	[0.000]	[0.000]
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Observations	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131	2,131
R-squared	0.371	0.363	0.363	0.362	0.363	0.369	0.396	0.409	0.200

Robust standard errors clustered at the country level in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The unit of observation is a grid cell. The full set of controls are: distance to ocean, distance to major river, distance to capital, river density, mean elevation, ruggedness of terrain, total area and number of countries intersected by the grid, cereal suitability, malaria ecology in early 20th century, TseTse fly suitability, distance to Addis Ababa, ecological diversity and temperature volatility. See Tables 1 and 2 for details.

Table S.5: Replication of Table 4 for Grids of Smaller Size (1° by 1°)

Dependent Variable: Conflict Prevalence 1989-2010	(1)	(2)	(3)
State History 1800 CE	-0.012		
	(0.012)		
Ethnic Centralization (v33 Eth. Atlas)		0.001	
		(0.006)	
State History 1000 - 1850 CE			-0.060***
			(0.016)
Sample	Full	Full	State History > 0
Observations	2,131	2,131	1,171
R-squared	0.354	0.353	0.408

Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid cell. All specifications include country dummies and the full set of controls listed in table 2. State History Score 1800 CE represents the fraction of grid which was under a centralized state during the period 1800-1850 CE. Ethnic Centralization is 1960-population weighted average of Ethnographic Atlas's variable v33 (Jurisdictional Hierarchy Beyond Local Community) ranging from 1 to 5 (Large States).

Table S.6: Replication of Table 6 for Grids of Smaller Size (1° by 1°)

Dependent Variable: Conflict Prevalence 1989-2010		
	(1)	(2)
	OLS	2SLS
Historical Proximity to Cities	-0.150***	
	(0.041)	
State History 1000 - 1850 CE		-0.169***
		(0.046)
Instrument		Proximity to Cities
F-Statistic First-Stage		168.74
Observations	2,131	2,131
R-squared	0.357	0.344

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The unit of observation is a grid cell. All specifications include country dummies and the full set of controls listed in table 2.

Table S.7: Historical Cities Used in Alternative Measure

City	**Source**	**Date**	**City**	**Source**	**Date**
Saint-Denis	Eggimann	1800	Agades	Chandler	1600-1700
Zimbabwe	Chandler	1300-1400	Zagha	Chandler	1200
Port Louis	Chandler	1800	Dongola	Chandler	1000-1500
Kilwa	Eggimann	1200-1700			
Loanda	Chandler, Eggimann	1600-1800	**Non-Sub-Saharan Cities**		
Sao Salvador	Chandler, Eggimann	1500	Qus	Chandler	1000-1400
Loango	Chandler, Eggimann	1700-1800	Asyut	Chandler, Eggimann	1200-1800
Calabar	Eggimann	1800	Giza	Eggimann	1800
Gbara	Chandler	1600-1800	Bulaq	Chandler	1000-1800
Benin	Chandler, Eggimann	1600-1800	Tanta	Chandler	1800
Whydah	Chandler, Eggimann	1800	Mahalla el Kubra	Eggimann	1800
Lagos	Eggimann	1800	Damanhour	Eggimann	1800
Allada	Chandler	1600	Alexandria	Chandler, Eggimann	1000-1800
Kumasi	Chandler, Eggimann	1700-1800	Damietta	Chandler, Eggimann	1200-1800
Abomey	Chandler, Eggimann	1700-1800	Marrakech	Chandler, Eggimann	1200-1800
Bonga	Chandler	1700-1800	Tripoli	Chandler	1500-1800
Ife	Eggimann	1800	Azammur	Chandler	1500
Oyo	Chandler, Eggimann	1400-1800	Meknes	Chandler, Eggimann	1300-1800
Freetown	Eggimann	1800	Rabat-Sale	Chandler	1000-1800
Zaria	Chandler, Eggimann	1600-1800	Taza	Chandler	1500
Massenya	Eggimann	1600-1800	Tlemcen	Eggimann	1300-1800
Kebbi	Chandler, Eggimann	1800	Kairwan	Chandler	1000-1800
Kano	Chandler, Eggimann	1200-1800	Oran	Chandler	1500-1800
Gondar	Chandler, Eggimann	1700-1800	Tanger	Eggimann	1800
Katsina	Chandler	1600-1800	Ceuta	Chandler	1200-1400
Segou	Eggimann	1700-1800	Tagaste	Chandler	1500-1600
Sennar	Chandler, Eggimann	1600-1800	Constantine	Eggimann	1400-1800
Jenne	Chandler	1300-1600	Algiers	Eggimann	1500-1800
Axum	Chandler, Eggimann	1000-1800	Bejaia	Eggimann	1200-1800
Soba	Chandler	1000-1300	Tunis	Chandler, Eggimann	1300-1800
Gao	Chandler	1000-1500	Annaba	Eggimann	1800
Timbuktu	Chandler, Eggimann	1000-1800			

Table S.8: Panel Data Analysis - Additional Interaction Terms

	Dependent Variable: Conflict Prevalence (1 if at least one conflict event in year)			
	(1)	(2)	(3)	(4)
Shock* State History 1000 - 1850 CE	-0.040**	-0.033*	-0.046***	-0.030*
	(0.017)	(0.017)	(0.017)	(0.017)
Negative Weather Shock	0.040***	-0.000	-0.012*	0.027***
	(0.010)	(0.005)	(0.006)	(0.007)
Lagged Conflict	0.275***	0.275***	0.274***	0.275***
	(0.017)	(0.017)	(0.017)	(0.017)
Additional Interacted Control	Light Density	Cereal Suitability	Agric. Pre-Colonial Dep.	Temp. Volatility
Shock*Additional Interacted Control	0.007***	0.058***	0.007***	-0.004**
	(0.003)	(0.017)	(0.001)	(0.002)
Observations (grids) [years]	11,718 (558) [21]	11,718 (558) [21]	11,718 (558) [21]	11,718 (558) [21]

OLS estimates. Robust standard errors clustered at the grid level in parentheses.*** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a grid-year. See appendix for details regarding the weather shock and additional interacted controls. All specifications include grid and year fixed effects. Log of yearly precipitation and deviation of yearly temperature are also included (not reported)

Table S.9: Conflict in Uganda - OLS Estimates

	Dependent Variable: Conflict Prevalence 1989-2010			
	(1)	(2)	(3)	(4)
State History 1000 - 1850 CE (county level)	-0.177**	-0.265***	-0.228***	-0.238***
	(0.0669)	(0.0840)	(0.0724)	(0.0829)
Geo-strategic Controls	No	Yes	Yes	Yes
Cereal Suitability	No	No	Yes	Yes
Disease Environment	No	No	No	Yes
Observations	153	153	153	153
R-squared	0.083	0.545	0.593	0.609

Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The unit of observation is a county. See Table 2 for description of controls.

Table S.10: State History and Attitudes Toward Local Policy Makers. Additional Controls

	Dependent Variable			
	Trust Local (1)	Trust Leader (2)	Leader Influence (3)	Trust President (4)
State History 1000 - 1850 CE	0.348**	0.274*	0.398***	0.187
(Predominant Ethnic Group in District)	(0.136)	(0.147)	(0.139)	(0.141)
Average Slave Trade Prevalence in District	0.0351	0.0411	-0.0140	-0.0160
	(0.0559)	(0.0614)	(0.0586)	(0.0648)
Distance to Historical Trade Routes from District	0.00327	-0.000797	0.00874	0.0219*
	(0.0104)	(0.0127)	(0.0142)	(0.0120)
Temperature Volatility District (100 km Buffer)	5.91e-07	1.25e-06**	1.05e-06*	6.47e-07
	(4.88e-07)	(5.98e-07)	(5.65e-07)	(6.46e-07)
Observations	22,838	22,851	22,437	22,856
R-squared	0.174	0.172	0.179	0.204

OLS Estimate. Robust standard errors clustered at the historical ethnic homeland level in parentheses. *** p<0.01, **p<0.05, * p<0.1. See Table 12 for definitions of dependent variables. The state history variable is calculated for the historical ethnichomeland (based on Murdock's map) in which the respondent currently lives. All specifications include respondent's ethnic group fixed effect, region fixed effect, individual-level controls, village-level controls, and district-level controls. Controls are described in Table 9. See main text for description of additional controls reported in this Table.

Table S.11: Trust and State History in Uganda. Additional Controls

Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Trust Local	1.299*	1.447**	1.248**	1.186**	1.550**	1.445**	1.355**	1.365**	1.327**	1.530**
	(0.727)	(0.671)	(0.575)	(0.570)	(0.623)	(0.608)	(0.578)	(0.601)	(0.625)	(0.642)
Trust Leader	4.337***	4.724***	4.449***	4.424***	4.357***	4.285***	4.045***	3.912***	4.162***	4.719***
	(1.485)	(1.619)	(1.344)	(1.356)	(1.298)	(1.255)	(0.985)	(1.123)	(1.213)	(1.441)
Leader Influence	4.133**	4.206**	3.155**	3.084*	3.507**	3.421**	3.266**	3.072**	3.015**	3.597**
	(2.017)	(2.139)	(1.583)	(1.602)	(1.448)	(1.466)	(1.315)	(1.360)	(1.301)	(1.613)
Additional Control	Distance to Kampala	Distance to Lake Victoria	Acholi	Acho-liland	Share Ganda	Ganda	Fraction.	Slave Trade	Trade Routes	Temp. Volatil-ity
F Statitics First-Stage	16.85	15.53	14.77	14.06	14.84	17.13	21.17	18.04	17.88	16.42

Note: This Table displays instrumental variable estimated coefficients for state history at the district level. Coefficients in a given row correspond to regressions with the same dependent variable (listed at the left). Each column represents a different specification depending on the additional control (listed at the bottom). Robust standard errors clustered at the district level in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$ The state history variable is calculated at the district level. All specifications include individual-level controls, region fixed effect, soil suitability for cereals and pasture, district level controls, public good provision dummies, and (log) distance to Kampala. Acholi indicates if respondent is Acholi. Acholiland indicates if respondent lives in Acholiland. Share Ganda is the fraction of Ganda People living in district and is calculated based on respondent's ethnicitydeclared in the Afrobarometer 4. Ganda indicates if respondent is Ganda. Ehtnic fractionalization is calculated at the district level based on ethnicities reported in the Afrobarometer 4. Slave Trade reportes Nunn's (2004) measure for the ethnicity of the respondent. See main text for description of additional controls.

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