The Legacy of Historical Conflict Evidence from Africa

Timothy Besley and Marta Reynal-Querol

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Timothy Besley
LSE and CIFAR

Marta Reynal-Querol
Universitat Pompeu Fabra-ICREA.

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Abstract

This paper exploits variation between and within countries to examine the legacy of recorded conflicts in Africa in the pre-colonial period between 1400 and 1700. There are three main findings. First, we show that historical conflict is correlated with a greater prevalence of post-colonial conflict. Second, historical conflict is correlated with lower levels of trust, a stronger sense of ethnic identity and a weaker sense of national identity across countries. Third, historical conflict is negatively correlated with subsequent patterns of development within countries.

JEL: N47, O43, O55
Keywords: Conflict, Trust, Identity.

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"Acts of violence, oppression, revolt, civil war, and so forth, chequer the history of every African state." (Fortes and Evans-Pritchard (1940, page 16))

1   Introduction

Understanding the causes and consequences of conflict is now a major issue in studying economic development.[1]   However, the relative importance of different factors in generating conflict remains open to debate.   Perhaps the most robust observation is that conflicts are most prevalent in poor and weakly institutionalized countries.   Many factors which make a country susceptible to conflict are, however, slow moving and the two-way causation between conflict and development creates a Gordian knot which is hard to unpick.

Given the weakness of its economic performance in the post-independence period, determinants of conflict in Africa are of particular interest.[2] Moreover, conflict prevalence in Africa is comparatively high; the Armed Conflict Database (ACD) measure of civil conflict based on a threshold of 1000 battle deaths suggests that around 8.5% of country years in Africa since 1950 are conflict years compared to around 5% of country-years in the rest of the world over the same period.

But Africa's history does not begin with colonialism and its legacy. The quote at the start of this paper was an assessment made in 1940 by two leading anthropologists venturing into a comparative analysis of African political organization. As emphasized in Nunn (2008) among many others, slavery and its aftermath was a cornerstone of organized political violence in Africa. But standard efforts to secure and maintain territory and people also provided incentives for conflict, particularly among and within Africa's historical kingdoms.   Historical research on Africa between 1400 and 1700, summarized in Brecke (1999) and based on written sources, confirms that conflict between its peoples is far from new.[3]

Prior to being carved up by colonial powers, Africa was divided into a patchwork of tribal structures and proto-states (historical kingdoms) with heterogeneous political systems.   Some areas were under forms of territorial control which resembled states.

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[1] See Blattman and Miguel (2009) for a comprehensive review.

[2] See Acemoglu and Robinson (2010), Bates (2008a,b), Collier and Gunning (1999) and Easterly and Levine (1997) for discussions of African economic and political development.

[3] See also Reid (2012).

However, other areas were closer to being stateless, some with acephalous forms of political organization.[4] The mantra of colonialism in Africa was "indirect rule", an attempt to control the hinterland by coopting traditional power structures into colonial administration (see, for example, Lugard, 1922). This ensured a degree of continuity between the pre-colonial and post-colonial eras. That said, some traditional power structures were weakened by colonialism while others were strengthened.[5] The biggest impact on political geography was in the form of well-defined borders, initially between the colonial powers and latterly between newly created independent states.

This paper investigates to what extent the post-colonial period saw a legacy from conflicts that are documented to have occurred in pre-colonial times. We use data from Brecke (1999) to locate 91 conflicts in Africa between 1400 and 1700; this period is used since almost all conflicts after 1700 had some European involvement. We find robust evidence that patterns of conflict after countries in Africa gained independence are correlated with having had more historical conflicts within their borders. We also find some evidence supporting the view that the mechanism at work may be a diminution in trust, a stronger sense of ethnic identity and a weaker sense of national identity. All three of these are likely to make it more difficult to establish cohesive states which resolve conflicts of interest in a peaceful manner. Finally, we use data at the sub-national level on conflicts between 1997 and 2010 to show that having had an historical conflict close by is positively correlated with more recent conflict. We also show that it is correlated with a lower level of economic development. These results are robust to controlling for a wide variety of other historical and geographical features of conflict locations.

This paper belongs to an emerging body of research which traces the historical roots of contemporary economic and political outcomes.[6] Acemoglu, Johnson and Robinson (2001) is the landmark contribution which brought to researchers' attention the correlation between historical settler mortality and contemporary income levels and institutions around the world. In similar vein, Banerjee and Iyer (2005) found historical legacies of land tenure systems in India.

This paper is particularly related to a number of recent studies which have looked at persistent effects of African history. Nunn (2008) finds a link between patterns of contemporary development in Africa and the location of slave extraction. Nunn and

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[4] See Murdock (1967) who measures state structures above the local level for different ethnic groups.
[5] See Herbst (2000, Chapter 2) for discussion.
[6] See Nunn (2009) for an overview of such findings.

Wantchekon (2011) trace this to modern day attitudes towards trust in the Afro-barometer survey. And Nunn (2010) finds a correlation between the location of Christian missions and modern day outcomes. Exploiting historical data on political geography, Michalopoulos and Papaioannou (2011) examine the consequences of how Africa was partitioned between colonial powers and find that partitioned ethnic groups suffered greater conflict compared to those which have not been impacted by the border partition. Gennaioli and Rainer (2007) find a link between the nature of the pre-colonial regime and modern day provision of public goods. Michalopoulos and Papaioannou (2012) find a link between pre-colonial political centralization and regional economic development. In common with this paper, they emphasize pre-colonial continuity in the form of political organization in affecting the contemporary performance of African states.

The remainder of the paper is organized as follows. In the next section, we discuss some background issues including our data and measurement. We then discuss between-country evidence in section 3 and within-country (grid cell level) evidence in section 4. Section 5 concludes.

2 Background

In this section, we first discuss some of the background literature and explanations of conflict. Second, we will also introduce our historical conflict data and its sources. And third, we provide a brief overview of African political organization and conflict in the pre-colonial and colonial periods.

2.1 Political Violence

The standard economic approach to political violence looks for factors that explain the costs and benefits of using violence to achieve specific ends, particular in the form of either remaining in power or mounting an insurgency.[7] On this basis, four main hypotheses are frequently proposed to explain why Africa is conflict prone: (i) natural resource dependence, (ii) weak and poorly functioning political institutions, (ii) ethnic fragmentation and polarization and (ii) endemic poverty. We briefly review these four strands of the literature.

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[7]See Fearon (2008) for an excellent overview of the issues and Bates (2008a) for an interpretation of the prevalence of conflict in Africa and its origins.

Benefits from using violence are frequently couched in terms of capturing resources either directly, as in the capture of territory, or through winning political power. Both of these views motivate exploring the link between violence and natural resource rents as discussed in Ross (2004). Early empirical contributions to the literature on conflict such as Collier and Hoeffler (2004) and Fearon and Laitin (2003) find evidence to support this channel.

Since the use of violence is generally thought of as a last resort, civil wars are usually rationalized in terms of commitment and/or information problems. The extent of commitment power depends on the institutional structures in place. Besley and Persson (2011) model this as a constraint on the way that the state can be used for private ends which they refer to as "cohesive political institutions". This could be the product of formal veto threats enhanced by Parliamentary democracy or by greater trust between groups which foster more cooperative policy outcomes. This places an emphasis on the role of institutions and/or trust in affecting the likelihood of conflict. The way that citizens identify with the common good versus sectional interests could also be important in shaping how institutions function to mitigate conflict risk.

In Africa, much emphasis is placed on ethnicity as the salient cleavage which leads to polarization and conflict. In this vein, Montalvo and Reynal-Querol (2005a) find evidence that ethnic polarization is positively correlated with conflict. This is consistent with the theoretical approaches of Esteban and Ray (1999), Montalvo and Reynal-Querol (2005b) and Besley and Persson (2011b, Chapter 4).

Endemic poverty reduces the opportunity cost of fighting. When there is unemployment and/or low wages it should theoretically make it easier for each side in a conflict to recruit combatants. This ties to the robust finding in the existing empirical literature that there is a negative correlation between income per capita and the prevalence of conflict; see the discussion in Blattman and Miguel (2009) who also address the issue of reverse causation. Conflict can affect development through a variety of channels including incentives to invest in physical and human capital. It may also affect incentives to invest in state capacities to support investments as emphasized in Besley and Persson (2011).

Most of the existing quantitative research which looks at the link between violence and ethnicity treats the latter as given. However, the question of how individuals identify with groups and are motivated to commit violent acts in the name of furthering that group interest is worthy of explanation and is arguably fluid over time. Recent re-

search has begun to explore the logic of constructivist views of ethnic identity. Ahlerup and Olsson (2011) offer an evolutionary perspective on these issues. Michalopoulos (2011) explains ethnic diversity empirically in terms of variation in regional land quality and elevation. Caselli and Coleman (2011) develop a model of endogenous ethnic identities and conflict. These contributions fit into a nascent interest in the economics of identity pioneered by Akerlof and Kranton (2010). Arguably, the trend over time in many countries has been a move away from identities based on smaller groups such as clans, tribes or ethnicities towards identities forged around nation states. An important issue is to understand how symbolic attachment and ritual can build and sustain attachment to nations or ethnicities (see, for example, Hobsbawm and Ranger, 1983). The role of past conflicts and the way that history portrays them can play a key role in narratives which nurture particular identities.[8]

This paper contributes to a burgeoning literature that looks at the causes and consequences of conflict in Africa at the sub-national level. One of the earliest contributions in this mode is Deininger (2003) who finds that the distance from infrastructure, asset inequality, cash-cropping and lower levels of education increase the likelihood of civil conflict in Uganda. Akresh and de Walque (2010) examine the magnitude of the Rwandan genocide on school attendance. Rohner et al (2011) study the effect of conflict in Uganda in the period 2002-5 on trust and expressions of ethnic and national identity and Ksoll et al (2010) study the disruptive effect of political violence in Kenya on the flower industry. Focusing on the causes of conflict rather than its consequences, Michalopoulos and Papaioannou (2011) show how Africa's partition by colonial powers affects contemporary patterns of conflict.[9]

Such sub-national studies are attractive since they are able to control for common country-level factors. More generally, they emphasize the need to look carefully at within country heterogeneity and remind us that civil conflict and political violence is often geographically specific. Such is the case, for example, with episodes of political violence in advanced countries such as with terrorism in the Basque country or Northern Ireland. Patterns of violence are even quite specific and episodic in weakly institutionalized polities where violence is rife such as Colombia (see Dube and Vargas (2011)).

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[8]For an insightful discussion and critical review of different strands of thinking in this area see Fearon and Laitin (2000).

[9]Looking at evidence from Medieval European Voigtlaender and Voth (2011) show that violence towards Jews shows strong historical persistence.

2.2 Data and Measurement

Our data on historical conflicts in Africa are taken from the conflict catalogue of Brecke (1999). For Africa, the catalogue is based on three main published sources: Ajaye and Crowder (1985), Freeman-Grenville (1973) and McEvedy (1995). The core concept of conflict used is from Cioffi-Revilla (1996) whom defines "(a) war (event) is an occurrence of purposive and lethal violence among two or more social groups pursuing conflicting political goals that result in fatalities, with at least one belligerent group organized under the command of authoritative leadership".[10]

For each violent conflict listed for Africa between 1400 and 1700 we have identified the modern country in which it took place as well as the specific geographical location. Where possible, we have cross-checked each case by reading the history of each war. We focus on the data in the period before 1700 since we are interested in conflicts which predate major European interest in colonizing Africa. Even if there are conflicts that have not been documented, we are confident that the catalogue includes the most important conflicts in Africa that have been written about by historians.[11] However, we are not aware of any similarly comprehensive effort to document historical conflict in Africa with which to compare these data.

Although we focus on Africa, Brecke (1999) covers the universe of documented violent conflicts in which 32 or more people have died at any location in the world since 1400. These extensive data are now being used by a number of researchers to explore the causes and consequences of conflict. For example, Zhang et al (2007) uses this data to explore at a macro scale the effects of climate change on the outbreak of war and population decline in the preindustrial era. Iyigun (2008) uses this comprehensive data set on violent conflict between 1401 and 1700 to show that the incidence of military arrangements between the protestant reformers and Counter-Reformists between 1520 and 1650 depends negatively on the Ottomans' military activity in Europe. Iyigun, Nunn and Qian (2010), use this novel data over the period 1400 and 2000 to look at the determinants of conflicts. They find, as many recent studies which use data on contemporaneous conflict, a link between economic shocks and violent strife. Pinker

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[10]This is based on the mathematician Lewis Fry Richardson's famous base 10 log scale for violent conflicts – see Richardson (1960). The criterion of 32 deaths corresponds to a Richardson score of 1.5.

[11]Of course, the direction of causation could run in the other direction, from contemporary conflict to uncovering historical examples. A salutary example is the controversy begun by Cobbing (1988) over the historiography of the Mfecane and whether it was used to justify colonial oppression.

(2011) uses the conflict catalogue for his wide-ranging analysis of violence in human history.

The data in the conflict catalogue treat multi-year conflicts as by consecutive years in which that threshold of 32 deaths is surpassed. They follow Luard (1987) in using 400 as cutoff since it falls between major dates for the Chinese (1366) and European and American (1492) populations, and demarcates a point before which the quality and extent of data about many parts of the world falls precipitously.

For the between-country analysis, the main variable that we use is the prevalence of violent conflict in a country between 1400 and 1700, specifically the number of years between 1400 and 1700 in which some area within the country is coded as having been in what would now be regarded as an internal conflict. This variable captures the intensity of pre-colonial conflict and has a mean of 5.13 with a range 0 to 91 and a standard deviation of 15.17. As a blunter measure, we also construct a dummy variable that is equal to one if the country has had *any* violent conflict between 1400 and 1700, and zero otherwise.

When we study conflict at the sub-national level, we take the 120km×120km grids from the Yale University Geographically Base Economic Dataset (G-econ). Since some grids traverse country boundaries, gives 3546 country-grid cells (hereafter simply "grid cells") spread across 49 countries in Africa.[12] For each grid cell in the data, we construct a dummy variable which is equal to one if there has been a conflict in that grid cell in the period 1400-1700 and zero otherwise. For the purposes of this exercise, we identify not only in which modern country this occurred, but also the precise geographical location (latitude and longitude) of the conflict using historical sources.[13] We then GIS code each conflict.[14] Figure 1 plots the 91 conflicts between 1400 and 1700 that

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[12]We use G-econ 3.1; see http://gecon.yale.edu/ for details on the grid construction and available data. The dataset codifies grids that straddle country borders as separate observations. Such grids are therefore smaller than 120km×120km in size.

[13]We use, in particular, Ade Ajayi and Crowder (1985) and Freeman-Grenville (1973).

[14]We use the following rules to locate conflicts:

1. When there is only one place named in the conflict, the conflict is assigned to that place.

2. When there is more than one place named in he description of the conflict but there is information on date at which one group is attacking or defending, we assign the location as the place where the attack is listed as having taken place.

3. If the exact location is not named, we use the name of the conflict (by country, town or group listed as being involved in the conflict). We then search other resources (on line and in libraries) to find the precise location.

4. If the place is listed as a region, we assign the location to be the capital of that region or empire.

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we have located precisely and which we will exploit in this analysis.[15]

We then match these data with information on the location of recent conflicts from the Armed Conflict and Location Event Data (ACLED).[16] These data give a precise GIS code to episodes of conflict in African countries in the years 1997 to 2010.[17] The dataset contains information on the date and location of conflict events, the nature of the event, and the groups involved.

The G-econ data provide a number of additional variables which we use as controls. We augment these with data that we have extracted from historical maps which we detail below.

2.3   Conflict and Political Development in the History of Africa

Prior to the scramble for Africa in the late nineteenth century culminating in the Berlin conference of 1884, Africa was characterized by a patch work of heterogeneous political systems. Some of these were organized authority structures of long-standing including a number of historical kingdoms. Other areas were governed in a relatively stateless fashion. Just as in Medieval Europe, the conflicts that we study were in part a reflection of the process of indigenous state building. This was true, for example, of the Bunyoro-Buganda conflict in modern day Uganda in 1600 or the Songhai-Gourma conflict in modern day Mali in 1488, both of which appear in our data. Civil wars within kingdoms were common too (see, for example, Ben-Amos Girshick and Thornton, 2001). Of course, conflicts in organized political jurisdictions are also more likely to form part of the historical record. Anthropologists who have studied African political history draw a similar conclusion on the importance of territorial war in Africa. For example, Radcliffe-Brown (1940) notes that:

> "Amongst the various different kinds of warfare that can be distinguished, what we may call wars of conquest have been important in Africa, as they have been in Europe. When such war is successful it establishes one people as conquerors over another who are thus incorporated into a larger political society, sometimes in an inferior position as a subject people." (page xix).

A full list of the conflicts that we use and the way we have assigned them to locations is in the Appendix.

[15]There are fewer than 91 dots in the map since a few conflicts take place at the same locations.

[16]See http://www.acleddata.com/

[17]Such precise data is not available for the whole post-colonial period.

This process of territorial consolidation lead, at various points in history, to the emergence of a variety of long-lived African kingdoms whose geographical reach is displayed in the hatched areas in Figure 1.[18] The map identifies 23 historical kingdoms in Africa.[19] Herbst (2000, Chapter 2) argues that these kingdoms found it difficult to consolidate power over wide areas because of the ease with which populations could migrate. Thus, the limits and territorial boundaries of such kingdoms were somewhat porous. Examining the locations of the dots which represent conflict locations, it is apparent that there is link between conflict and belonging to the territory of an historical kingdom. This is confirmed statistically; conflicts are twice as likely to reside in grid cells which belong to historic kingdoms compared to those which do not.

As European powers somewhat reluctantly extended their rule into the African hinterland, significant use was made of pre-colonial power structures in efforts at indirect rule. But this process showed little respect for historic territorial boundaries. This too is apparent in Figure 1 where we have shaded countries according to colonial control by World War I which is largely a reflection of the aftermath of the 1884 Berlin conference. The map confirms that patterns of colonial control did not seem to respect the boundaries of historical kingdoms.

One of the most significant organizational changes in Africa from the colonial period onwards was the creation and maintenance of political jurisdictions with clearly defined boundaries throughout the continent. As discussed in Herbst (2000), colonialism also had a significant effect on the way that the proto-state structures that preceded it operated. Much of this actually weakened existing authority structures that had been created in pre-colonial times.[20] And this may help to explain why the positive role of historical conflicts in state building identified by Hintze (1911) and Tilly (1990) to be sources of European state strength are much less important in an African context.

The end of colonialism ushered in an era of mostly contrived nation state boundaries which therefore bore little relation to indigenous political structures, largely as a reflection of the arbitrariness of the boundaries created by the colonial division of Africa. On independence, most countries launched efforts to build nation states inside

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[18]This is based on maps in O'Brien (1999).

[19]These are Zulu, Merina, Monomotapa, Lozi, Malawi, Kilwa, Lunda, Congo, Luba, Rwanda, Buganda, Ashanti, Yoruba, Ethiopia, Axum, Wolof, Ghana, Mali, Kush, Songhay, Kanem, Classical Egypt and Carthage. Some of the kingdoms of West Africa were overlapping geographically but not temporally.

[20]In fact, there is heterogeneity in the impact depending on initial conditions. It is likely that in the case where societies were initially stateless, colonialism strengethened the state (see, for example, Fortes and Evans-Pritchard, 1940).

these well-defined boundaries broadcasting their intentions through national symbols such as flags, currencies and citizenship regulations. The great challenge, which has so often not been met, is to move beyond symbolism to create functional polities within state borders that can deliver public goods and security to their citizens. Referring to the salience of historical conflict in this process, Bates (2008a) remarks that

> "past conquests by monarchs and warriors created territorial disputes that reverberate to this day and so shape contemporary politics." (page 85)

This, he argues, along with migration to secure agricultural land sow the seeds of modern day political tensions behind much contemporary conflict. A similar sentiment about the importance of history is echoed in Reid (2012) which surveys the history of conflict in Africa from BCE to the present day and remarks that

> "The past was very much present in the organization of violence, even during the revolutionary upheaval of the nineteenth century and the self-consciously modernist struggles of the mid-twentieth century. States and societies sought historical precedent and heroic forebears, both for inspiration and solace, and constructed both oral and written narratives .. for the purpose." (page 10)

It is also clear from his account that a number of historical conflicts are well-documented and potentially salient in modern times.

3   Between-country Evidence

We are interested in whether historical conflict is correlated with the prevalence of civil conflict and other outcomes in a country during its post-independence history. Our basic specification is as follows:

$$y_j = \alpha + \beta c_j + \gamma x_j + \varepsilon_j$$

where y_j is the outcome of interest in country j, α is the intercept, c_j is the historical conflict variable and x_j are other controls which we describe as we go. In all cases, we include dummy variables for each colonizing power.

Core Results The main cross-country results are reported in Table 1. The outcome variable in columns (1) and (2) is the incidence of civil war between independence and 2007 measured using the Armed Conflict Database (ACD). Column (1) controls only for colonial dummies and finds a positive and significant correlation between the intensity of historical conflicts within a country and more recent experience. For each additional year of an historical conflict, the country suffers an extra 0.15 years (or about 2 months) of additional conflict in the post-independence period. Put another way, comparing a country with no history of conflict in the period 1400 to 1700 to one with 60 years of conflict over this period, then our point estimate predicts an additional 10 years of post-independence conflict.

In column (2), we add additional controls: GDP per capita in 1970, latitude, longitude, minimum rainfall, maximum humidity, low temperature, the log of the length of the coastline, a dummy for whether a country is an island, regional variables, measures of natural resource abundance,[21] legal origin, ethnic polarization,[22] proportion of the population that is Muslim, a dummy for yellow fever, and the ruggedness of the terrain. We lose two country observations due to missing data. However, the correlation between post-independence conflict and historical conflict incidence is essentially the same.

The next four columns in Table 1 are motivated by the study of political violence in Besley and Persson (2011a). They argue that, from a theoretical point of view, government repression and conflict are two sides of a coin and should be studied jointly. We follow them and measure repression using Banks' (2005) measure of the extent of purges – i.e., the removal, by jailing or assassination, of opponents considered undesirable by the incumbent government. Column (3) shows that countries with a prior history of conflict are more likely to suffer from this form of political violence too. And this result is robust to adding additional controls (column 4). In columns (5) and (6) we run some ordered logits where the ordered variable takes on the value zero when

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[21]We use the log of diamond, gold and oil production per head of population from Nunn (2008).

[22]Unlike Nunn (2008), we use ethnic polarization rather than ethnic fractionalization. This is because Montalvo and Reynal-Querol (2005a) have found that ethnic polarization rather than fractionalization is correlated with civil conflict. Like them, we use the index first introduced for religious polarization in Reynal-Querol (2002). For N ethnic groups with population share π_i, it is:

$$1 - \sum_{i=1}^{N} \left(\frac{0.5 - \pi_i}{0.5} \right)^2 \pi_i.$$

Esteban and Ray (1994) is the first attempt to provide a precise definition of polarization.

there is no violence, a value of one if there is repression and a value of two if there is conflict. The results also show that there is a significantly higher prevalence of political violence when a country has a history of conflict and that this is robust to including controls.

In column (7), we include the slave trade variable from Nunn (2008) along with population density in 1400.[23] The former is included to guard against the possibility that the between-group breakdown in trust that slavery may have caused is not driving our result. While slavery is positively correlated with subsequent civil conflict, it does not disrupt the correlation with war incidence between 1400 and 1700. Including population density in 1400 as a control addresses the possibility that the correlation between historical war incidence and recent civil war is confounded by a country with more historical conflicts having been more densely populated at the time. In fact, there is no significant correlation between population density in 1400 and recent conflict.

Taken together these results paint a robust picture linking the legacy of conflict in a country in the period 1400-1700 with recent conflict and political violence.[24] Moreover, this effect survives the inclusion of a wide variety of controls.

Income Levels and Institutions Table 2 begins our exploration of possible mechanisms. The theoretical literature on conflict identifies low income as a risk factor and also emphasizes how conflict may reduce incentives to invest and can destroy assets.[25] Columns (1) through (3) in Table 2 explore whether historical conflict is correlated with low income in the post-colonial period. In all three columns, there is a negative correlation between the historical conflict variable and income per capita but it is only significant (at a 10% level) in column 2. The magnitude of the point estimate suggests that a country with a history of pre-colonial conflict at around its mean will have a 5% lower level of per capita GDP in 2000, compare with a country that has had no historical conflicts between 1400 and 1700.[26] The coefficient is similar in size and significance when other controls are included, such as the slave extraction variable of Nunn (2008). This provides some weak evidence that there may be a channel through

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[23]This variable comes from Nunn and Puga (2012). They construct the data using historical population estimates from McEvedy and Jones (1978).

[24]The results are also robust to including the country-level pre-colonial centralization variable of Gennaioli and Rainer (2007).

[25]For evidence on the negative impact on economic activity, see for example, Abadie and Gardeazabal (2003), Besley and Mueller (2010), Blomberg and Hess (2002), Collier (1999), Goldin and Lewis (1975) and Zussman, Zussman and Orregaard Nielsen (2008).

[26]The mean of the left hand side variable is 5 years so the effect is calculated as $5 \times (-0.01 \times 100)$.

economic effects but it is quite possible that this is simply a reflection of the fact that the higher prevalence of post-colonial conflict identified in Table 1 is also having a negative effect on the economy rather than via a direct effect from historical conflict.

In columns (4) and (5) of Table 2, we look to see whether historical conflict is correlated with two popular contemporary measures of the quality of the institutional environment: expropriation risk and the strength of checks and balances. In column (4), the dependent variable is the ICRG measure of expropriation risk which Acemoglu, Johnson and Robinson (2001) argue is the channel through which settler mortality affects modern day per capita income. We find no significant correlation between this variable at the country level and historical conflict. Column (5) chooses the extent of checks and balances from the PolityIV data which Besley and Persson (2011) argue is a plausible way of capturing institutional cohesiveness. Here, we use a cut-off value of five and above on the executive constraints scale of one through seven. Again, we find no significant correlation between this variable and historical conflict at the country level. While the measures of institutions here are quite crude, these findings are not particularly encouraging to the view that historical conflict creates a problematic institutional legacy.

Trust and Identity   Table 3 uses the Afrobarometer survey to look at whether there is an historical legacy of conflict in shaping contemporary attitudes. This could well be the case if the way that conflicts are reported across generations affects feelings towards particular groups due to historical rivalries. It may also, for the same reason, weaken attachments to nation states whose boundaries were largely created as a legacy of colonialism. Such things are likely to matter in affecting the way that institutional arrangements for peaceful resolution of conflict operate. Given any formal rules of the game, beliefs and the way that they affect a willingness to trust or cooperate may assist in generating a negotiated outcome rather than resorting to violence.

The Afrobarometer is a household level survey which explores a host of attitudinal questions among the citizens of African countries. The data that we use here are those collected for 2008 (round 3 of the survey). These surveys are available for 18 countries: Benin, Botswana, Cape Verde, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, Zimbabwe. And there is a total of 25397 respondents. Each national survey tries to be representative of the population and interviews are conducted in local languages.

However, it does avoid conducting surveys in areas where conflicts are currently active.

We look first at inter-group trust where the survey asks how much the respondent trusts people from other groups. Answers are given on a four point scale where zero is "not at all", one is "just a little", two is "somewhat" and three is "a lot". We use this categorical variable as our dependent variable. The result is shown in column (1) of Table 3 where there is a negative correlation between trust and historical conflict. The specification that we use controls for a wide range of personal and country characteristics which are listed in the notes to the Table. We also control for colonial and regional dummies as well as GDP per capita at the country level. The standard errors are clustered by country.[27]

In columns (2) and (3), we look at a different variable from the Afrobarometer which reports self-ascribed identity. We create two dummy variables from the survey: the first is equal to one if an individual reports only having feelings about their ethnic identity compared to all other feelings of identity and a second dummy variable which takes the value one if an individual expresses only a sense of national identity.[28] The results of regressions using these dummies as dependent variables are reported in Table 3. Column (2) shows that there is a positive and significant correlation between having only a sense of ethnic identity and the extent of historical conflict within a country. The opposite is found for a sense of national identity in column (3). Once again, we control for a wide variety of personal characteristics, and all control variables that we use in table 1 and 2. These results are consistent with the idea that ethnic and national identities are in part constructed by salient historical events.

Taken together, the results in columns (1) to (3) in Table 3 give credence to the view that memories of the documented historical conflicts that we use here reduce trust between groups as well as affecting citizens' sense of identity. That said, it is possible that is mostly a reflection of contemporary rather than historical conflict, especially given that we have already shown that such conflicts are positively correlated. To gain some reassurance that the effect is due to documented historical conflicts, columns (4), (5) and (6) repeat the specifications in columns (1) through (3) while including the left hand side variables from Table 1 (the prevalence of post-colonial civil conflict) as a right hand side variable in explaining trust and identity. The historical conflict

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[27]The results are robust to using an ordered logit specification. Similar results are found for trust in the local council, neighbors, family and within-group.

[28]The underlying variable takes on five possible values: ethnic identity only, ethnic identity more than national identity, national and ethnic identities equally, national identity more than ethnic identity and national identity only.

variables remain significant and of similar magnitude while contemporary conflict is not significant except in column (5). This suggests that it is the historical conflict variable which matters in explaining these attitudes. This reinforces the idea that historical conflicts are still salient. Moreover, taken together with the results in Table 2, they are suggestive that it is historical conflicts which are more important in shaping attitudes than contemporary conflict even though the latter is correlated with historical conflict.

Summing Up These results provide some encouragement to the view that historical conflict in the period 1400-1700 has a legacy at the country level both in terms of conflict and attitudes. That said, the effects uncovered so far have been identified from cross-country variation. This raises the usual concern that historical conflict is correlated with some other (omitted) country level variable. This can be addressed by operating at a lower level of aggregation and looking at within-country variation exploiting the variation in conflict across regions.

4 Within-country evidence

We now turn to looking at evidence which exploits the more precise location of recent and historical conflicts. Specifically, we will exploit only within-country variation and include a country fixed effect to capture common factors such as the level of development, political institutions and any aspects of post-independence history which might affect conflict and patterns of development. We will then look for a correlation between historical conflict and both contemporary conflict and the level of economic development in regions of a country.[29]

For this exercise, we use the grid cells whose construction we described in section 2.2 above. We construct a dummy variable that captures whether the grid cell had a conflict located in it between 1400 and 1700. Our core empirical specification is:

$$y_{j\ell} = \mu_j + \beta d_{j\ell} + \gamma x_{j\ell} + \varepsilon_{j\ell} \tag{1}$$

where $y_{j\ell}$ is the outcome measure in grid cell ℓ in country j, μ_j is a country fixed effect,

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[29]We cannot use the Afrobarometer data to look at trust and identity at the grid level that we use since these surveys explicitly avoid conflict areas and hence we would not get a representative picture for our purposes.

$d_{j\ell}$ is either our old conflict dummy which is equal to one if there was an historical conflict in grid cell ℓ in country j,[30] and $x_{j\ell}$ are other grid cell controls. Standard errors are clustered at the country level. Throughout, we use the log of population density in a grid cell as a control since both of our outcome measures are likely to be strongly related to this. Other control variables in $x_{j\ell}$ are described as we introduce them with their sources/construction documented in the text and/or in footnotes.

We use two different outcome measures. The first is a dummy variable which is equal to one if grid cell ℓ in country j is the site of a conflict between 1997 and 2010 as reported in the ACLED data. The second captures the level of economic development in a grid cell. Since good data on income per capita are difficult to find at the grid cell level, we follow Henderson, Storeygard and Weil (2011) and use luminosity at night as a proxy for development. The satellite night light data are available from the National Oceanic and Atmospheric Administration.[31] Specifically, we use these data to calculate the natural log of the average luminosity at night per km^2 at the grid cell level.[32]

Core Results The core results are reported in Table 4. Column (1) shows that having a conflict in the grid cell makes it 15% more likely that there was a conflict in the same grid cell between 1997 and 2010. Population density, as we would expect, is positively correlated with conflict.[33] Column (2) show that this finding is robust to including some additional basic geographic and climate controls from the G-econ data: distance to coast, elevation ruggedness, average temperature, average precipitation and area. However, the point estimate on the historical conflict variable falls to 10%. The coefficients on the additional controls (not reported) show that conflict is more

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[30]We find broadly similar results if we explore how the effect varies with distance by constructing a series of dummy variables based on the percentiles in the distance distribution from an historical conflict: 0-10%, 10-25%, 25-50%, 50-75%, 75-90% and 90-100%. (Having a conflict in the grid itself would register on this measure as being at 0% in the distance distribution.) In this case, the omitted category in the results below will be furthest distance away from the historical conflict (90-100%).

[31]These data has been used recently by Rohner, Thoenig and Zilibotti (2011) and Michalopoulos and Papaioannou (2012).

[32]The variable is measured in 2007. We use the data on average visible stable lights and cloud free coverages, exploiting the "cleaned " and "filtered" version of the data which contains the lights from cities, towns, and other sites with persistent lighting, including gas flares. Ephemeral events, such as fires are not used. The background noise is identified and replaced with values of zero. The variable that we use ranges from 1-63. Using ArcGIS we calculate the light density at night for each grid cell in our data.

[33]The correlation with between historical and contemporary conflict holds even if population density is not used as a control.

prevalent where there is rough terrain, possibly because rebel forces are better able to mount insurgencies in such locations.

Column (3) of Table 4 gives the core specification with our proxy for economic development as the outcome. Here, we find that having an historical conflict in the grid cell reduces the (log of) the average light density in the grid cell by 8%. Population density also has a strong positive correlation with light density at night. Column (4) shows that this result is robust to including our core controls.

Thus, we have a positive correlation between historical conflict and contemporary conflict and a negative correlation with economic development.

Robustness We now explore the robustness of the core findings by including a number of different controls. Many of these relate to concerns about other variables that historical conflict could be correlated with while others reflect recent findings from research explaining patterns of economic development in Africa. We report symmetric sets of results where conflict is an outcome (Table 5) and light density at night is an outcome (Table 6). In both tables, we include the log of population density and the basic geographic and climate controls from G-econ which were included in columns (2) and (4) in Table 4.

We begin with conflict as an outcome. In column (1) of Table 5, we add an additional control to reflect a concern that conflicts in history were mainly around urban centres and hence historical conflict is proxying for this. It may also be the case that such conflicts were more likely to have been recorded. To look at this, we include a dummy variable which is equal to one if the grid cell contained a city in 1400.[34] This variable is positive and significant increasing the probability of there being a recent conflict in the grid cell by 14%. The specification in column (1) of Table 5 also includes dummies for whether grid cells are located in the domain of an historical African kingdom where violent conflict was also more likely to have been organized and documented. To investigate this, we used the historical maps of pre-colonial African kingdoms in the period 1500-1800 to locate each grid cell in an historical kingdom. Thus, we are able to calculate whether each grid cell is inside the area of influence of an historical African kingdom and use this to construct a dummy variable which is equal to one if the grid cell is located in a particular historical kingdom and zero otherwise. The historical kingdom dummies are strongly significant with a p-value of

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[34]This is a dummy variable that has value 1 if there was a city with a larger population of 20,000 in 1400, and zero otherwise. Underlying data are from Chandler (1987).

0.000.[35] However, the core correlation between having an historical conflict in the grid cell and more recent conflict remains.

Another natural concern is that our core correlation is confounded by omitting persistent ethnic polarization. To examine this, we construct a measure of ethnic polarization at the grid cell level using data on ethnicity using Geo-referencing of Ethnic Groups (GREG).[36] These data provide information on the spatial distribution of ethnic groups which we can use to calculate the distribution of ethnic groups in each grid cell. We then construct an ethnic polarization measure in the same way as Montalvo and Reynal-Querol (2005a). Column (2) shows, in line with the results in Montalvo and Reynal-Querol (2005), that polarization is positively correlated with conflict; if a grid cell goes from the minimum polarization to the maximum, the probability of conflict increases by around 8 percentage points.[37] But importantly, given our focus, the core correlation with having an historical conflict in the grid cell remains of similar size and significance.

Column (3) adds a measure of slave extraction at the grid cell level using the data in Nunn (2010).[38] This is positively correlated with recent conflict as we also found in Table 1, although it is not statistically significant at the grid cell level. The core correlation with having an historical conflict in the grid cell remains.

Column (4) addresses the concern that conflicts may be predominantly near to the *current* capital city so that having a conflict in the grid cell is really just a proxy for

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[35]Positive and significant dummies are found for Zulu, Kilwa, Luba, Rwanda, Buganda and a negative and significant effect for Merina, Malawi, Lunda, Axum, Kush. The remaining dummies are not significant different from zero, i.e. not different from parts of Africa that are not classified as parts of any historical kingdom.

[36]This data project geo-references ethnic groups around the world. (See Weidmann et al, 2010.) Relying on maps and data drawn from the classical Soviet Atlas Narodov Mira (ANM), the dataset employs geographic information systems (GIS) to represent group territories as polygons. The features in the GREG dataset are polygons representing the settlement regions of groups, according to the ANM. Using this information we calculate indices of ethnic polarization at the grid cell level. ANM refers to data on ethnic groups in 1960.

[37]The results are robust if instead we construct ethnic polarization based on Murdock (1959). This is based on the geographical oocation of ethnic groups on 1800. For these data, we make use of the GIS coding of the data by Nathan Nunn available at:

http://www.economics.harvard.edu/faculty/nunn/data_nunn

[38]To construct slave extraction at the grid level, we combine information on the distribution of ethnic groups from Murdock (1959) with the information on slave exports, the number of people taken as slaves by each ethnicity between 1400 and 1900, from Nunn and Wantchekon (2010). We first calculate slaves per km^2 for each ethnic group. Since Murdock provides information on the geographical location of the ethnic groups, we then calculate for each grid the km^2 of the grid belonging to each ethnic group. For each grid cell, we can calculate the total slaves exported multiplying the total km^2 of the grid belonging to an ethnic group by the slaves per km^2 of this ethnic group.

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this. When we include whether the capital city is in the grid cell, we find that having a more recent conflict is 15% more likely. And being closer to the capital in the distance distribution also predicts being more likely to have a conflict in the grid cell. However, even after introducing these controls, the correlation between contemporaneous and historical conflict at the grid cell level remains positive and significant, with the size of the effect being similar.

Column (5) of Table 5 includes the jurisdictional hierarchy variable used in Michalopoulos and Papaioannou (2012) averaged at the grid cell level. This variable, based on data in Murdock (1967), measures the strength of political organization above the local level in the pre-colonial period; it is an ordered variable with range between 0 and 4.[39] Once again the core correlation between historical conflict and more recent conflict remains and is similar in both size and significance to the core result.

Column (6) in Table 5 adds additional economic controls. From the G-econ data, we include the share of income generated from minerals. To get a handle on more historic economic activities, we use the historical maps to classify regions according to their principal economic activities in the 1500-1800 period.[40] This addresses a potential concern that historical conflict variable proxies for persistent economic differences between areas which provoke conflict. We include these economic activity dummy variables in column (6). Finally, we include the value of light density at night in 1992 as a right hand side variable. This is measured prior to the period for which we are measuring contemporary conflict. The historical economic activity variables are strongly jointly significant with a p-value of 0.000.[41] The size of the coefficient on having an historical conflict remains of similar magnitude.

Finally, column (7) includes all of the controls from columns (1) through (6) simultaneously. Only ethnic polarization among the additional remains significant.

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[39]A value of 0 means a stateless society; a value of 1 denotes petty chiefdoms and 2 paramount chiefdoms. Values 3 and 4 denotes large states. Murdock (1967) measures this for 1270 ethnic groups. We use the data from Michalopoulos and Papaioannou (2012) whose painstaking work matches 534 ethnicities to 490 ethnic homelands. To construct a grid-country level measure, we use the fraction of the grid belonging to each ethnic group matched by Michalopoulos and Papaioannou (2012). Given that data on some ethnicities are missing, we assume that all groups for which we have no information are stateless. The results are robust to normalizing instead so that the weights on populations for which we do have data sum to one.

[40]The activities are growing/producing/mining bananas, barley, camels, cattle, coconuts, copper, cotton, donkeys, ensete (a type of banana), fish, goats, gold, honey, horses, iron, ivory, leather, millet, palm oil, plantain, raffia cloth, rice, salt, sorghum, timber, wheat, and yams.

[41]A positive and significant effect is found for regions producing barley, goats, honey, gold, ivory, plantain, and timber with a negative and significant effect for camels, cattle, fish, leather and raffia cloth.

However, having a conflict in the grid cell now makes it 8% more likely that there was some form of conflict in the 1997 to 2010 period.[42]

Table 6 runs through a similar array of robustness checks for our economic development outcome measure. The core finding from Table 4 is robust to all of the additional controls from Table 5; having an historical conflict in the grid cell reduces light density at night by around 10%.

Summing Up This within-country evidence paints a picture which is consistent with the collective wisdom of the literature linking conflict and economic outcomes.[43] Taken together, Tables 5 and 6 suggest that our core findings on historical conflicts and their correlation with contemporary conflict and economic development is a robust one. Africa's conflict proneness is frequently cited as a significant factor in reinforcing the poverty of many parts of the region. And the results suggest that there may be a historical legacy from conflict on development in addition to those historical factors that have been emphasized in recent research such as slavery and pre-colonial political centralization. Moreover, the identification of this effect from within-country variation means that we are controlling for institutions at a national level.[44]

5 Conclusions

This paper has shown that there is a correlation between historically recorded conflicts in Africa between 1400 and 1700 and the more recent experience of civil conflict (and political violence). This relationship is robust to exploiting between-country and

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[42]We also conducted two other unreported robustness checks using available historical variables. The main aim with these was to check that these additional variables are not potentially ommitted variables which are correlated with historical conflict. First, we checked whether our main finding is robust to controlling for the number of Christian missions in the locality using data from Nunn (2010). He identifies three types of missions: Protestant, Catholic and British and Foreign Bible Society Missions, showing historical persistence in conversion to Christianity. We use Nunn's map to locate missions in our grid cells and include whether there is any mission in a grid cell as a control in explaining the location of contemporary conflicts. Only Protestant missions are (positively) correlated with recent conflict and the core result is robust. Second, we used data on early European explorer routes between 1768 and 1894 used in Nunn and Wantchekon (2011). Here we use the map to locate exploration routes within our grids to have a sense of which conflicts are in more or less historically remote locations. We created a dummy variable if any early explorer route passed through the grid and include this in the regression explaining conflict at the grid level.We found no significant correlation between this variable and contemporary conflict. However, our core result is robust.

[43]See the discussion in Blattman and Miguel (2009).

[44]This source of variation is also exploited in Michalopoulos and Papaioannou (2012).

within-country variation as well as to including a wide variety of controls. Country level attitudes also appear to have been influenced by conflict. We have also found evidence that the regional pattern of development within countries is correlated with the pattern of historical conflict. Hence the findings are consistent with the view that historical conflict has both a political and economic legacy.

Even if the historically recorded conflicts on which we base the empirical analysis is incomplete, it seems likely that the conflicts identified by it are among the most salient to current citizens. And this explains why such recorded historical conflicts are negatively correlated with trust and a sense of national identity and positively correlated with identifying most strongly with an ethnic group. This follows a long tradition in social science which sees identities as important social categories with real consequences. More generally, the findings add further fuel to the idea that some phenomena that we see in the world today are, at least in part, the product of historical legacies. Moreover, the results are consistent with other recent research on the peristence of civil war. Fearon and Laitin (2012) show that extra-state wars before 1945 are strongly related to civil war after 1945.

One reaction of the findings could be to create a sense of despair that much of what we see is historically determined and hence not easily amenable to manipulation. But that conclusion is too bleak. To the extent that there are headwinds in the face of progress which are due to historical legacies, it is better to understand them than to ignore them. The need to embed our theories of institutional change in an understanding of social structures shaped by history opens up many possibilities for research and for providing policy advice which is appropriately tailored to the particular circumstances in which it is given.

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TABLE 1:
Political Violence

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Dependent variable	(1) Civil war incidence	(2) Civil war incidence	(3) Purges	(5) Purges	(6) Conflict (ordered variable)	(7) Conflict (ordered variable)	(8) Civil war incidence
War incidence 1400-1700	0.15*** (0.05)	0.13** (0.06)	0.002*** (0.0005)	0.002*** (0.00)	0.06*** (0.02)	0.07* (0.04)	0.10** (0.05)
Other controls		Yes		Yes		Yes	Yes
Slave exports							0.86*** (0.32)
Population Density in 1400							1.07 (1.23)
Colonial dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	49	47	49	48	49	48	47
R^2	0.3045	0.7843	0.4380	0.4847			0.8440
Pseudo-R^2					0.1058	0.1699	

Notes: Robust standard errors in parentheses (*** 1% significant, ** 5% significant, * 10% significant). Sample is all African countries for which data is available. Other controls are as described in text.

TABLE 2:
GDP and Institutions

Dependent varible	(1) GDP per capita in 2000	(2) GDP per capita in 2000	(3) GDP per capita in 2000	(4) Expropriation Risk	(5) Checks and Balances
War incidence 1400-1700	-0.01	-0.01*	-0.01	0.00	-0.00
	(0.005)	(0.005)	(0.006)	(0.010)	(0.004)
Other controls		Yes	Yes		
Slave exports			-0.07*		
			(0.04)		
Population Density in 1400			-0.08		
			(0.13)		
Colonial dunnies	Yes	Yes	Yes	Yes	Yes
Observations	49	48	48	35	47
R-squared	0.1424	0.8947	0.9127	0.9358	0.6694

Notes: Robust standard errors in parentheses (* 1% significant, ** 5% significant, * 10% significant). Other controls as described in text.

TABLE 3 :

Trust and Identity

Dependent variable	(1) Inter group	(2) Ethnic Identity	(3) National Identity	(4) Inter group	(5) Ethnic Identity	(6) National Identity
War incidence 1400-1700	-0.01*** (0.002)	0.001* (0.0006)	-0.02*** (0.001)	-0.02*** (0.001)	0.002*** (0.0005)	-0.02*** (0.001)
Civil war incidence				-0.01* (0.007)	0.003**^* (0.001)	-0.001 (0.002)
Colonial dummies	Yes	Yes	Yes	yes	Yes	Yes
Observations	17419	17564	17564	17419	17564	17564
R-squared	0.1095	0.0417	0.13564	0.1095	0.0417	0.1385

Notes: Robust standard errors clusterd by country in parentheses (* 1% significant, ** 5% significant, * 10% significant). Regressions are individual level and controls for age, age squared, gender, education, occupation, religion, living conditions, district level ethnicity. We also include all country controls of table 1 and 2.

TABLE 4:

Conflict and Light Density in Grid Cells: Core Results

	(1)	(2)	(3)	(4)
Dependent variable	Conflict 1997-2010	Conflict 1997-2010	Log of light density in 2007	Log of light density in 2007
Historical conflict in grid	0.15***	0.10***	-0.08**	-0.08**
	(0.04)	(0.04)	(0.03)	(0.03)
Log of population density	0.08***	0.09***	0.06***	0.06***
	(0.01)	(0.02)	(0.01)	(0.02)
Geographic and climate controls		Yes		Yes
Country dummies	Yes	Yes	Yes	Yes
Observations	3496	3378	3388	3282
R-squared	0.3942	0.4478	0.3844	0.4151

Notes: Robust standard errors clustered by country in parentheses (*** 1% significant, ** 5% significant, * 10% significant). Variable descriptions are explained in text. Geographical and climate controls are: distance to coast, elevation, ruggedness, average temperature and average precipitation., and area.

TABLE 5: **Conflict in Grid Cells (Robustness)**

|	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Historical Conflict in Grid	0.10***	0.11***	0.10***	0.09***	0.09**	0.08**	0.08**
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
City in 1400	0.14***						0.09
	(0.09)						(0.08)
Pre-colonial kingdom dummies	Yes						Yes
(p-value)	(0.000)						(0.000)
Ethnic polarization		0.08***					0.08***
		(0.03)					(0.03)
Slave exports			0.003				0.002
			(0.006)				(0.005)
Capital City in Grid				0.15****			0.08
				(0.06)			(0.06)
Distance to capital 0-10%				-0.10*			-0.07
				(0.05)			(0.06)
Distance to capital 10-25%				-0.14***			-0.10*
				(0.05)			(0.06)
Distance to capital 25-50%				-0.12**			-0.08
				(0.05)			(0.05)
Distance to capital 50-75%				-0.07**			-0.05
				(0.04)			(0.04)
Distance to capital 75-90%				-0.006**			-0.04
				(0.03)			(0.03)
Jurisdictional Hierarchy					0.007		0.002
					(0.01)		(0.01)
Log of Light density in 1992						0.12*	0.01
						(0.06)	(0.06)
Mineral sahare						-0.09	-0.07
						(0.08)	(0.08)
Economic activity dummies(p-value)						Yes	Yes
						(0.00)	(0.00)
Country dummies & Table 4 Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3377	3378	3183	3378	3275	3249	3160
R-squared	0.4605	0.4507	0.4413	0.4525	0.4499	0.4607	0.4678

Notes: Robust standard errors clustered by country in parentheses (* 10% significant, ** 5% significant, * 10% significant). Variable descriptions are explained in text. Other controls are as in Table 4: log of population density, distance to coast, elevation, ruggedness, average temperature, average precipitation and area

TABLE 6: **Light Density in Grid Cells (Robustness)**

	(1)	(2	(3)	(4)	(5)	(6)	(7)
Historical Conflict in Grid	-0.09**	-0.08**	-0.086**	-0.11***	-0.09**	-0.11***	-0.11***
	(0.04)	(0.03)	(0.03)	(0.03)	(0.04)	(0.02)	(0.02)
City in 1400	0.22**						0.02
	(0.09)						(0.03)
Pre-colonial kingdom dummies	Yes						Yes
(p-value)	(0.00)						(0.00)
Ethnic polarization		-0.006					0.01
		(0.02)					(0.01)
Slave exports			0.004				0.004
			(0.004)				(0.003)
Capital City in Grid				0.23***			0.01
				(0.04)			(0.03)
Distance to capital 0-10%				-0.08			-0.07*
				(0.05)			(0.04)
Distance to capital 10-25%				-0.10*			-0.07*
				(0.04)			(0.03)
Distance to capital 25-50%				-0.10**			-0.07**
				(0.04)			(0.03)
Distance to capital 50-75%				-0.10***			-0.07***
				(0.04)			(0.02)
Distance to capital 75-90%				-0.06**			-0.05***
				(0.03)			(0.01)
Jurisdictional Hierarchy					0.02		-0.00
					(0.01)		(0.00)
Log of light density in 1992						0.52***	0.51***
						(0.05)	(0.04)
Mineral share						-0.21***	-0.20***
						(0.07)	(0.06)
Economic activity dummies(p-value)						Yes	Yes
						(0.00)	(0.00)
Country dummies & Table 4 Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3281	3282	3183	3282	3275	3249	3160
R-squared	0.4538	0.4152	0.4194	0.4402	0.4180	0.7182	0.7431

Notes: Robust standard errors clustered by country in parentheses (* 10% significant, ** 5% significant, * 10% significant). Variable descriptions are explained in text. Other controls are as in Table 4: log population density, distance to coast, elevation, ruggedness, average temperature, average precipitation and area
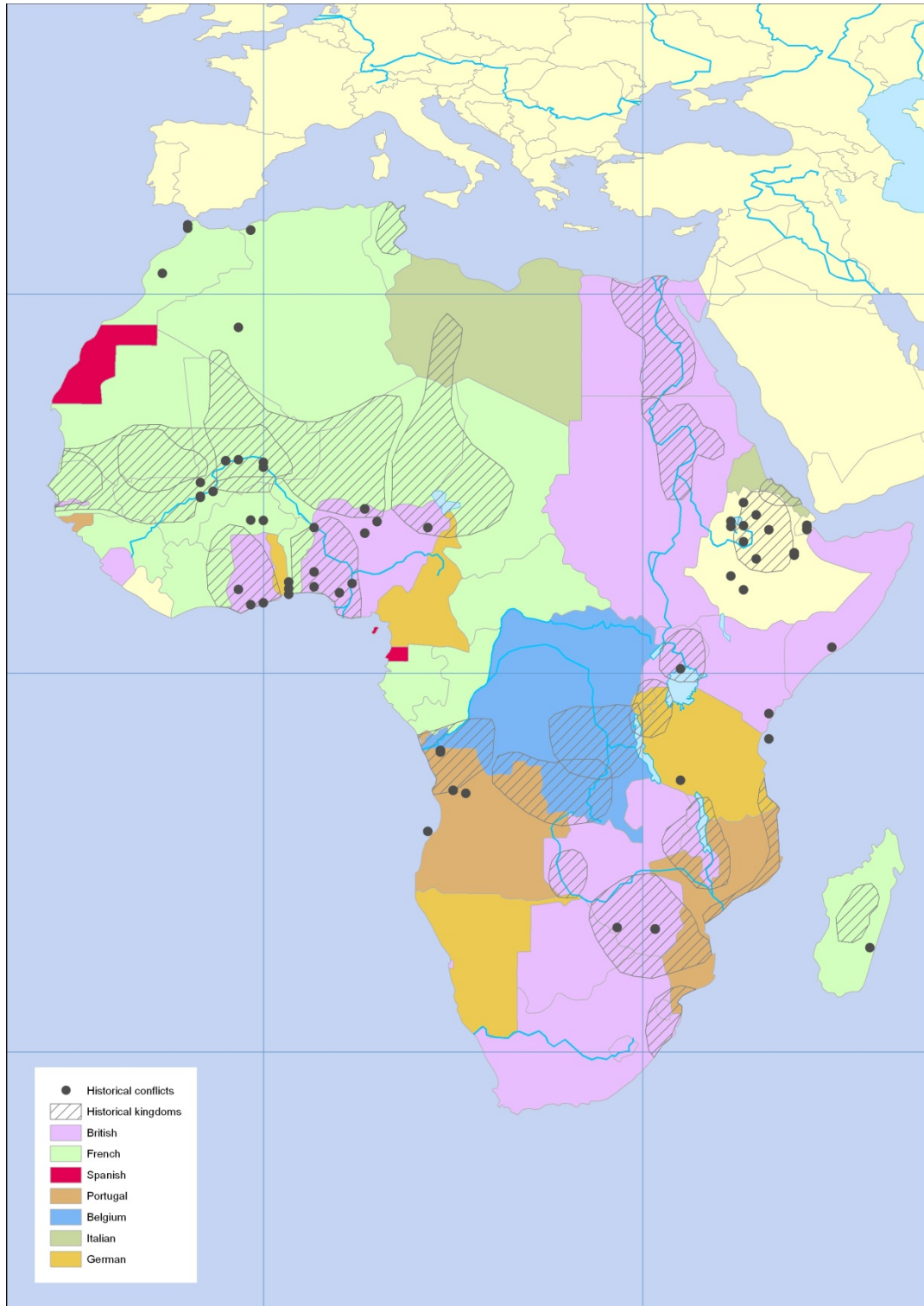
Figure 1:

Conflicts, Colonialism and Kingdoms in Africa

Notes: Historic conflicts are from Brecke (1999) as described in the text and are for the period 1400 to 1700. Colonialism by modern country is for the period preceding World War I. Historic kingdoms are for the period 1500-1900 and based on maps in O'Brien (1999).