Did Good Leaders Produce Bad Institutions in Africa?

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In this article, I document that contemporary political development in Africa is strongly associated with the pre-colonial ethnic institutional background of the first national leaders. Using either direct measures of democracy and/or covariates of political participation from anthropological records, I show that the political legacy of the first African heads of states who inherited egalitarian and democratic norms from their ancestors has been autocracy. This statistical relationship is not only robust to an array of control variables including economic, geographic and historical factors, but potential endogeneity concerns that may undermine its validity are also addressed. Finally, exploring the potential mechanisms at play, I provide evidence that the natural resource potential of certain countries may have diverted their first national leaders away from their ancestral institutional heritage. (JEL D72, N47, Z1)

Keywords: Africa, Ethnicity, National Leaders, Critical Junctures.

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"When the chief limps, all his subjects limp also"

– African Proverb.

A glance at recent works on comparative development reveals that, while the interest in the proximate determinants of income is still vivid in the literature, the trajectory of the intellectual curiosity has progressively shifted towards examining the fundamental causes of economic prosperity. At the core of this inquiry, the empirically well-grounded and quite intuitive institutional hypothesis identifies incentive-driven societal actions and political organizations as the ultimate causes of economic development[1]. Beyond their importance for economic outcomes, institutions are also thought to have a long-lasting effect and an intrinsically durable characteristic. For example, the seeds for democracy at the state level today may have been sowed before industrialization at the village level (Giuliano & Nunn, 2013). Or, the prevalence of an adverse pathological environment in former colonies may have induced the introduction of extractive institutions, which is probably the source of contemporary poor institutional settings (Acemoglu et al., 2001). Proponents of the institutional view have also suggested that disruptive societal choices and/or historical events – known as *critical junctures* – may have embarked countries in different economic and political trajectories[2]. Nonetheless, a fewer consensus has emerged from the literature on the specifics that trigger such dichotomous paths. As some authors have supported that initial wealth (or the lack of it) may have initiated diverging development trajectories (Engerman & Sokoloff, 2002), others have insinuated that dissimilar paths may follow a major political break such as independence (Acemoglu et al., 2008) or the end of Cold War (Villalón & Huxtable, 1998).

In this analysis, I contribute to the literature on critical junctures by exploring a new avenue: the qualitative profile of the African national leaders at independence. Since, it has been suggested that "*at birth of new polities, leaders mold institutions*", I argue that the leadership options faced by African nations at independence, along with the intrinsic characteristics of these leaders, may have been a critical step in subsequent political development[3]. More specifically, combining a novel dataset on the ethnic affiliation of the earliest heads of states in Africa with

[1] See Acemoglu et al. (2005) for a review.

[2] Collier and Collier (1993), Acemoglu and Robinson (2012), among others, discuss the concept of critical junctures and its relevance for institutional and economic outcomes.

[3] The quote is from Putnam et al. (1994) who attributes it to Montesquieu.

anthropological information, I document that the first "big men" who inherited traditional egalitarian and democratic norms seem to have been the ones who transmitted non-democratic practices to their contemporary countrymen. Although this result seems counter-intuitive and at odds with previous empirical findings that support an intergenerational transmission of democracy (Giuliano & Nunn, 2013), the historical and political context of Africa may offer some plausible and testable explanations.

In the African context, this shift in the transmission of institutional capital from local ethnic groups to contemporary states via the fathers of independence is understandable in several regards. For example, it has been argued that early statehood, which was often accompanied with ethnic institutional development, may have been an impediment to contemporary political development (Hariri, 2012). Also, as suggested by Englebert (2000), the discrepancy between pre-colonial and post-colonial states in Africa may have incentivized the emergence of non-democratic institutional rules as a strategy to cope with legitimacy issues. For example, Hastings Banda, a member of the relatively egalitarian Chewa ethnicity from Malawi, ended up being President for life while holding several ministerial cabinets such as agriculture, foreign affairs, justice, and natural resources among others (Jackson & Rosberg, 1982).

Without systematically rejecting the transmission channels mentioned above, I contend that the prospects of accessibility to new resources, which often characterized the formation of new colonial territories beyond ethnic nations, may have diverted certain rulers from their ethnic institutional norms. In particular, I show that anticipated resource opportunity – as proxied by proven oil reserves – is one potential channel through which pre-colonial ethnic institutional capital did not materialize into contemporary inclusive national polity (Tables 7 and 8).

Relying on the institutional profile of the national leaders at independence to investigate consecutive political development in Africa may entail some endogeneity issues. In particular, political organizations and societal traits of certain ethnic groups may predispose their descendants to be more competitive in the race for power. Or, it could be the case that unobserved or hard-to-account-for ethnic characteristics may drive the statistical association between leaders' institutional profile and political change. To deal with these potential simultaneity or omission concerns, I employ different empirical strategies. First, as in Hariri

(2012), I use the time that has elapsed between the Neolithic Revolution and independence as an instrument for pre-colonial ethnic institutional features of the first leaders.[4] Because the transition from nomadic lifestyle to sedentariness could be a relevant proxy for initial codifications of societal norms, I argue that the timing of the Neolithic Revolution can capture exogenous variation in the acquisition of institutional traits.[5] Using this instrumental variable strategy, I find similar result as the OLS estimation: the legacy of "good" leaders has been "bad" institutions. Second, in addition to these common empirical strategies (OLS and IV), my findings is not altered when alternative methods such as fixed effects and difference-in-differences are employed.

As far as I know, this study is the first attempt to establish a link between the institutional profile of the heads of states – as measured by the pre-colonial institutional traits of their ancestors – and political change. In doing so, it brings a new insight to the debate on institutional change and comparative development. Beyond its close affinity with the debate on the importance of history and culture (Gennaioli & Rainer, 2007; Giuliano & Nunn, 2013; Michalopoulos & Papaioannou, 2013), this paper is also related to the idea that certain disruptive societal choices or historical events – the so-called critical junctures hypothesis – may influence subsequent economic and institutional development (Collier & Collier, 1993; Engerman & Sokoloff, 2002). In the African context, only a recent analysis by Wantchékon and García-Ponce (2013) has investigated empirically the "critical junctures" hypothesis. While these authors examine the relationship between independence movements and post-Cold War democracy, this study focuses on the institutional background of the fathers of independence and its association with contemporary institutional development. Finally, this paper also adds to the debate about leadership quality, political selection and outcomes as initiated in the citizen-candidate literature (Besley & Coate, 1997). Moreover, I fill the empirical void on the effects of leaders on institutions by showing that the quality of the first African leaders did matter for consecutive political development.

[4] The Neolithic Revolution is the transition from the nomadism to agriculture and settlement that several societies experienced in the course of human history.

[5] By construction the data on the timing of the Neolithic Revolution is country-specific and not ethnic-specific. Since there is no specific data on when the leaders' ethnic groups transitioned from hunter-gathering to agriculture, I use the available country-level data as the proxy for the ethnicity-level data.

The remainder of this paper is organized as follows. In section I, I discuss some relevant historical and theoretical background. Section II elaborates on the data collection of the pre-colonial ethnic institutional traits of the first leaders used in this paper, and describes other relevant data sources. Section III provides details on the empirical exercise and highlights the main findings. Finally, I explore potential mechanisms in section IV and conclude in section V.

I. Historical and Theoretical Background

A. Pre-Colonial Ethnic Institutions in Africa

Unlike theories suggesting that the economic and political fate of modern Africa is rooted in its colonial history, other analyses have implied that Africa's contemporary economic and institutional fortune should not be systematically dissociated with the complexity of its traditional polity (Gennaioli & Rainer, 2007; Michalopoulos & Papaioannou, 2013; Osafo-Kwaako & Robinson, 2013). Before colonization, Africa was inhabited by various cultural and linguistic groups characterized by diverse degrees of hierarchical polities[6]. At the top of the pyramid, sovereigns such as the Moro Naba (Mossi Kingdom) and Sonni Ali (Songhai Empire) in Western Africa, Molambo (Bubi Kingdom) and Ilunga Sungu (Luba Kingdom) in Central Africa, and Gaki Sherocho (Kaffa Kingdom) in Eastern Africa exerted their authority over highly centralized political entities. At the bottom, the political power of local headmen from ethnic groups such as the Lobi (Western Africa), the Bari (Northern Africa), the Kung (Southern Africa) and the Kikuyu (Eastern Africa) was circumscribed to the village, not beyond. Other ethnicities, structured in the form of petty or large chiefdoms, lay in the middle of the two aforementioned systems of jurisdictional hierarchy. These include the Tukulor (Western Africa), the Bwaka (Central Africa), the Nama (Southern Africa), and the Saadi (Northern Africa).

In addition to this remarkable variety in political centralization, Africa's ethnicities are also quite heterogeneous in other institutional traits such as class stratification, inheritance distribution rules for real property and the transmission of political power, among others (Murdock, 1959). For example, although they lack any centralized political structure beyond the village, the Teke from the Republic of Congo tends to choose their local headmen through

[6] The information of the jurisdictional hierarchy of ethnic groups in Africa and elsewhere is collected from the Ethnographic Atlas by Murdock (1959, 1967) and later corrected by Gray (1999).

elections. Alternatively, other ethnicities such as the Baule from Cote d'Ivoire and the Angas from Nigeria rely respectively on matrilineal and patrilineal systems as succession rules. No doubt that this significant diversity in the spatial distribution of the institutional traits of ethnic groups is interesting in and of itself for economic and statistical analysis(Gennaioli & Rainer, 2007; Nunn & Puga, 2012), but more than that, these specific socio-political characteristics have also been present in the political life of some African countries. For example, the institutional norms of the Zanaki from Tanzania served as the basis of the Ujamaa, a socio-political and economic program promoted in the 1960s by Julius Nyerere, the first President of the country (Stoger-Eising, 2000). Since Nyerere was himself from the Zanaki ethnicity, other heads of states may have also relied on their ancestral institutional background in conducting public affairs.

A number of studies have investigated the economic and political consequences of this significant heterogeneity in pre-colonial ethnic institutional arrangements. Although these studies generally agree on the persistence nature of the ethnic institutional traits, the results they have often generated are sometimes diverging. For example, early statehood is thought to fuel economic development (Michalopoulos & Papaioannou, 2013) while being inversely related to democracy (Hariri, 2012). If political centralization is positively correlated with the provision of public goods such as education and health (Gennaioli et al., 2005) or if it tends to increase regional prosperity (Michalopoulos & Papaioannou, 2013), therefore, as suggested by the modernization argument, it should be less likely to engender non-democratic institutions. In the same vein, Giuliano and Nunn (2013) have also suggested that preindustrial democratic societies are the precursors of modern-day democratic nations. However, the data exploited by theses authors, which identified Somalia, Morocco, Egypt and Tunisia as the African champions of democracy at the local level, are difficult to reconcile with the contemporary poor institutional performance of these countries (as measured by the polity score). These irregularities in previous studies encourage further empirical scrutiny about the importance of pre-colonial institutional characteristics for contemporary outcomes.

B. Leadership Quality and Outcomes

The tradition in the literature, when it comes to leadership quality, has been so far to investigate its economic consequence. For example, the unpredictable death of a leader (Jones & Olken, 2005) or his level of education (Besley & Reynal-Querol, 2011) has been used to predict

economic performance. However, as for the institutional consequence of national leadership, the focus has been essentially on how political regimes – autocracy or democracy – select politicians, not the other way around. Here, I fill this void by considering the emergence of new states, about fifty years ago in Africa, as an opportunity to investigate the link between political development and the ethnic institutional profile of national leaders.

Whether it is informative about individuals' competence or honesty, intrinsic or acquired ethnic characteristics can be decisive in the choice of the median voter. In particular, I contend that having or lacking inclusive ethnic institutional traits may affect voters' perception on the leaders' morality in conducting public affairs. For example, because local autocracy is thought to be more pronounced in stratified societies (Gennaioli & Rainer, 2007), as opposed to egalitarian communities, a descendant from a stratified ethnicity could be perceived as more inclined to produce non-inclusive institutions.

Despite the fact that culturally-induced traits are generally persistent, it has been recognized that they can be challenged, if not deteriorated, by incentive-driven factors such as psychological and material rewards associated with power (Caselli & Morelli, 2004). The distribution of power in Cote d'Ivoire between 1960 and 2000 is a good illustration of this theory. Under the presidency of Felix Houphouet-Boigny, a descendant of the inclusive Baule ethnic group, the key ministerial portfolios were concentrated in the hands of his fellow Akan people[7]. For example, under his 33 years of presidency, the ministries of economy, agriculture, and national defense, among others, have been generally occupied by either a Baule or a member of the Akan cultural family. Henri Konan Bedie, a Baule native and his successor, was the first Ivorian (the others being French descendants) to be appointed as the Minister of Economy in 1966. Since Cote d'Ivoire is the world top producer of cocoa (40% world production) and has also important oil reserves, the gap between Houphouet-Boigny's political agenda and its ethnic values could have been motivated by rent-seeking behavior. Far from being an exception, the case of Boigny seems to reflect a widespread experience across Africa. Indeed, this paper provides evidence that potential access to natural resource is one reason why descendants of inclusive ethnicities failed to generate democratic institutions in Africa.

[7] The Akan is a cultural group which comprises sub-ethnic groups such as the Baule, Asante, Anyi, Nzema and others who essentially live in Cote d'Ivoire and Ghana.

II. Data

A. Founding Fathers and Their Ethnic Affiliation

To determine the identity and the ethnic affiliation of the founding fathers of post-colonial Africa, I employ a couple of approaches. First, I exploit the Archigos dataset, compiled by Goemans et al. (2006), to obtain information on the identity of 51 African heads of states at independence. Second, using a variety of sources, the then identified heads of states are matched to their respective ethnic groups[8]. It is worth mentioning that this data collection initiative, which has been voluntarily restricted to the ethnic identity of the first leaders of the sovereign African nations, is autonomous from similar enterprises undertaken by authors such as Kasara (2007) and, Franck and Rainer (2012). Columns 1-5 of Table 1 provide more details on the leaders' identity, their birthplace, their country of origin and their respective ethnicity.[9]

It is important to distinguish the purpose of this investigation from previous works that have used similar dataset on the ethnic identity of African leaders. Authors such as Londregan et al. (1995), Kasara (2007) and, Franck and Rainer (2012), among others, have used similar information of leaders' ethnic identities to investigate chauvinism and political transition in Africa. This line of inquiry is beyond the scope of this paper, which is more concerned about the transmission of ethnic institutional capital to modern polity via national leaders.

B. Pre-Colonial Institutional Heritage

One objective of this paper is to use the collected information on the ethnic identity of the earliest national leaders in Africa to uncover their ethnic institutional heritage. For this, I use primarily the *Ethnographic Atlas* database, constructed by Murdock (1967), which provides detailed information on the preindustrial characteristics of more than 1200 societies around the globe. For Africa, the atlas contains information on 834 ethnic groups, identifies their location and describes their main cultural, political and economic features. I complement Murdock's atlas with alternative sources such as Nicholls (1913), Wilson (1971), and Stoger-Eising (2000) to identify the institutional characteristics of the ethnicities not recorded in the primary data source.

[8] A leader's ethnicity is defined as the ethnicity of his parents. In the case where his parents are from difference ethnicities, I consider first the ethnicity of the father, the ethnicity of the mother being the other alternative.

[9] South Sudan, which gained independence in July 2011, is not dissociated from Sudan in this study.

Of the 48 heads of states, for which the ethnic affiliation is acknowledged in my database, I have been able to systematically match 47 leaders to the institutional traits of their ethnicities[10]. Since, Tubman Harper the first president of Liberia and an Americo-Liberian descendant is from an ethnicity that is not institutionally categorized, I coded its institutional characteristics as missing and dropped it from the analysis. Columns 6-8 of Table 1 report the institutional characteristics that local communities may have transmitted to their descendants who would later become the founding fathers of modern Africa.

Having identified the leaders, their ethnicity, and the institutional background of their ancestors, I construct the variable of interest, labeled as "*Heritage*", using three pre-colonial institutional features. The first variable, identified as "*Class Stratification*" ranges from 1 to 5, and describes the extent of class differentiation within the ethnic group. I assign a score of 1 if there is an "*absence of significant class distinctions among freemen*" in an ethnic society and 0 otherwise. The second variable, "*Succession to the Office of Local Headman*", provides information about the appointment process of the local headman. As in Giuliano and Nunn (2013), an ethnic group has a democratic experience and given a score of 1 if the mode of succession of its local headman is through elections or consensus, and 0 otherwise. The third and last variable captures the "*Inheritance Distribution for Real Property (Land)*". I assign a score of 1 to an ethnic group that falls into the category "*equal or relatively equal*", and 0 otherwise.

Why are the leaders with the aforementioned ethnic institutional heritage defined as "good" leaders in this study? Simply because these variables are either direct measures of democracy – in the case of the succession by elections or consensus – or correlates of political participation – in the case of the absence of stratification or the equal distribution of inheritance. For example, Ember et al. (1997) use anthropological data and show that absence of class stratification, a measure of equality, is positively correlated with political participation across cultures. As for the equal distribution of inheritance among the heirs, De Toqueville (1829) in his assessment of democracy in Western societies has also praised the "virtue of the law of partible inheritance" as an important foundation of the Anglo-American political inclusion. Finally, a recent paper by Giuliano and Nunn (2013) has also shown that some states are democratic today because their ancestors embraced democracy before the industrial Revolution. In the context of this study, I

[10] Since the islands of Cape Verde, Comoros and Mauritius appear in the Ethnographic Atlas as uninhabited, the ethnic identities of their respective first leaders, Pedro Pires, Ahmed Abdallah and Sir Seewoosagur Ramgoolam, are coded as unknown.

assume that the African leaders with one of these ethnic institutional qualities are the ones that took office at independence with a democratic heritage.

Figures 1-4 show the spatial distribution of the three pre-colonial institutional characteristics that are the focus of this analysis: class stratification; succession of the local headman; and inheritance distribution for real property. The blue and green polygons on these maps indicate the variables that have been coded as 1, while the other colored polygons show the variables coded as 0. Finally, polygons showing missing information and uninhabited areas are left blank. As shown in these maps, there is a substantial degree of variation in the ethnic institutional traits within and across the African countries. It also appears that some of these institutional characteristics may overlap. For example, while the Bwaka (Central African Republic) and the Ngumba (Equatorial Guinea) are both characterized by *egalitarian property rights* and *societal inclusiveness* practices, the Egyptian Arabs (Egypt) and the Zerma (Niger) seem to have been characterized by both *egalitarian property rights* and *democratic norms*. Other societies such as the Teke (Congo), the Baule (Cote d'Ivoire) and the Ewe (Togo) could only claim one dimension of the ethnic institutional capital as defined above, namely societal inclusiveness.

To construct the country-level independent variable of interest in this study, the starting point is the ethnic identity of each country's first leader at independence. If the first head of state is a descendant of an ethnic group whose institutional traits fall in one of the three categories of the *ethnic institutional capital* previously defined – i.e. societal inclusiveness, democratic norms, and egalitarian property rights – then his country is assigned a score of 1 for that variable. The countries whose leaders do not satisfy this requirement are given the score of 0.[11] In figure 4, the countries whose leaders could claim an ethnic institutional capital heritage are shown in blue, and the countries whose leaders do not have such an institutional background are shown in green. As previously mentioned, countries for which there is no information on the ethnic institutional background of the first leaders are displayed in white (See Liberia for example).

Among the 47 countries, for which information on the institutional background of the first leaders are available, 25 countries were run at independence by leaders coming from institutionally inclusive – from the perspective of this study – local communities. Most of the countries identified in Giuliano and Nunn (2013) as having a tradition of local democracy in

[11] Under this criterion, 25 out of 47 countries are identified as having a leader from a democratic background. However, when I impose that the first leader be a descendant of an ethnic group whose characteristics fall in three or two categories, I ended up with 0 and 7 countries, respectively.

Africa, namely Somalia, Morocco and Egypt are in this sample. It also includes Sub-Saharan African countries such as Cote d'Ivoire, Niger, Rwanda and Malawi, among others. For the 22 remaining countries, the map shows that they are also spatially spread all over the African continent. Among them, there are Southern African countries such as South Africa and Namibia, as well as Western African countries such as Mali and Senegal, and Tunisia a Northern African state.

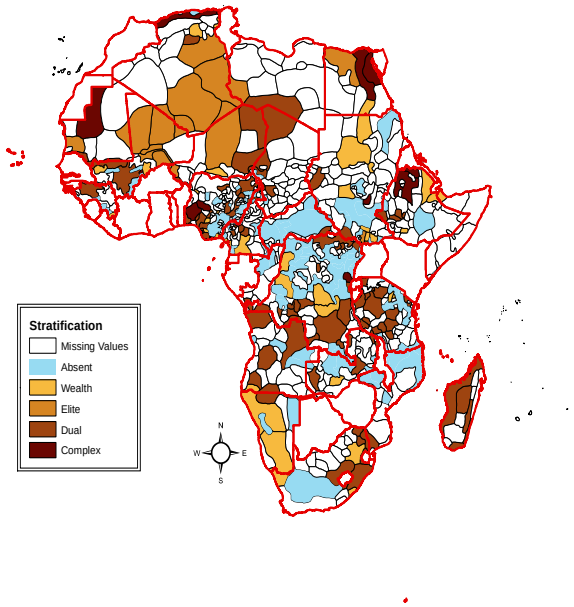

Figure 1: Spatial Distribution of Social Stratification in Ethnic Territories

Note: Polygons bounded by black lines and red lines correspond to the Pre-Colonial Ethnic and Contemporary National Boundaries, respectively.

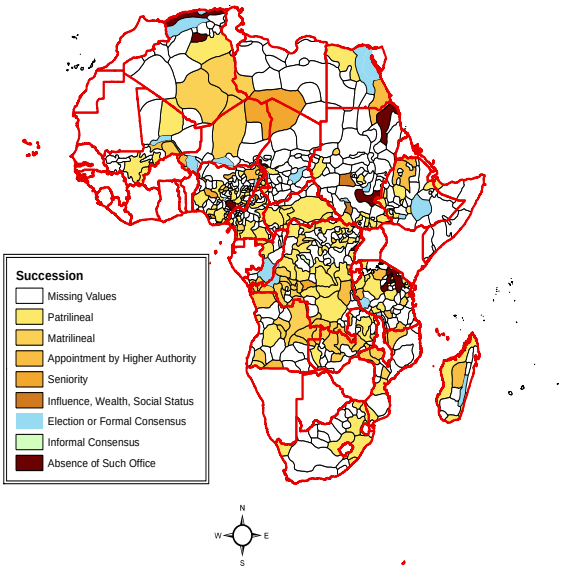

Figure 2: Succession to the Office of the Local Headman

Note: Polygons bounded by black lines and red lines correspond to the Pre-Colonial Ethnic and Contemporary National Boundaries, respectively.

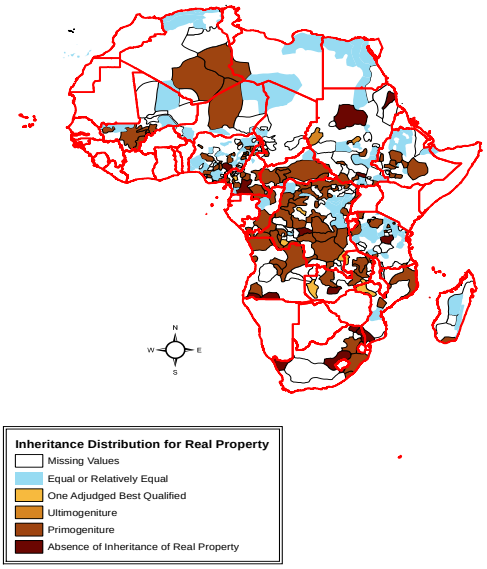

Figure 3: Inheritance Distribution for Real Property (Land).
Note: Polygons bounded by black lines and red lines correspond to the Pre-Colonial Ethnic and Contemporary National Boundaries, respectively.

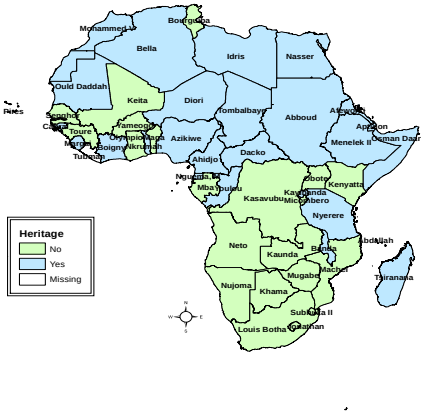

Figure 4: Leaders' Countries with (Blue) and without (Green) Heritage.
Note: The Names of the National Leaders are displayed within the boundaries of the countries.

C. Measuring Democracy

To measure the contemporaneous level of political development in Africa, I use the most recent version of the Polity2 score, developed in the Polity IV project by Marshall and Jaggers (2012). This is a broad measure of democracy, which classifies countries from the most exclusive political regime (-10) to the most inclusive political system (+10). Specifically, the country-level Polity2 score is obtained from subtracting each country's Autocracy score from its Democracy score. Since both the Autocracy and Democracy variables reflect, by construction, the extent to which political participation is fair and open as well as the constraints on the chief executive, so does the Polity2 index.

As shown in figure 5, post-independence political experience in Africa under the two types of leadership defined above is characterized by two waves. During the first wave, which lasts from 1960 to 1990 and overlaps with the Cold War era, there was less variation in democratic experience[12]. Nonetheless, countries for which the variable heritage is coded as 1 performed

[12] This result is consistent with similar observation in Watchenkon and Garcia-Ponce (2013) in which countries with insurrectional legacy and civil disobedience legacy present similar trends during the Cold War period.

better politically than their counterparts during this time period. As for the second wave, which starts at the end of the Cold War in 1990, there is a significant variation in democratic scores with a notable comparative advantage in favor of countries whose leaders lack the ethnic institutional capital as previously defined. These countries' mean normalized – on a 0-1 scale – post-Cold War democratic score is about 0.571 when the others have 0.416 (Table 2).

Motivated by this significant variation in Africa's institutional trend after 1990, and following authors such as Wantchékon and García-Ponce (2013) and Hariri (2012), the primary empirical specifications in this study (OLS and IV estimations) use the post-Cold War average level of democracy as the main dependent variable. The average normalized level of democracy at that time varies from the minimum score of 0.045 to the maximum score of 1[13]. Since a score of 1 indicates the most inclusive political regime (equivalent to +10 in the original coding system), states like Botswana (0.886), South Africa (0.932), Cape Verde (0.954) and Mauritius (1) seem to be the most democratic African regimes. At the bottom of the list, Swaziland (0.045), Eritrea (0.170), Libya (0.182) and Morocco (0.191) are the least democratic states.

It is worth mentioning that in addition to the OLS and IV specifications, I also use, for extensions, alternative empirical strategies that are not restricted to the post-Cold War polity scores. In particular, in the Difference-In-Differences and the Fixed Effects estimations, I consider annual democratic scores for both the pre-Cold War and the post-Cold War era to analyze the link between ethnic institutional capital of the first leaders and the trajectory of contemporaneous political development in Africa.

D. Neolithic Revolution and Other Historical Events

Is the intrinsic quality of a politician stemming from his ethnic heritage, whether it signals his competence or his degree of honesty, important for political competition? If one answers this question by the affirmative, then linking institutional heritage to political outcome may entail some endogeneity problems. Simply put, some African leaders who competed for power right after colonization may have been selected by their constituencies or the former colonial powers because their ancestral heritage was a significant asset. To overcome this issue, I must identify a source of exogenous variation in the institutional characteristics of national leaders. Before that, it is important to recall that a critical assumption of this paper is that leaders' institutional quality

[13] The statistics on the minimum and maximum values are not shown in the summary statistics table 2, but they are available upon request.

was inherited from their ancestors. Thus, a possible source of exogenous variation in the pre-colonial institutional features of ethnic nations can eventually be used as an instrument for the institutional quality of the first leaders. Because it ascertains the transition from the nomadic lifestyle to sedentariness, which is the starting point of initial codification of societal norms, I use the timing since the Neolithic Revolution as instrument for the pre-industrial institutional traits that the ethnic groups transmitted to the national leaders. Of course, this instrumental variable may not be perfect for two main reasons. First, it is by construction a country-level proxy for the transition from hunting and gathering to agriculture and settlement, not an ethnic-specific proxy, which would have been ideal for this paper. Second, its accuracy could be undermined by potential migration patterns across the continent, something Putterman and Trainor (2006), who collected the data, have claimed that they took into account. Nonetheless, as shown in Table 2, countries in which the leaders inherited some ethnic institutional capital seem to have experienced their agricultural Revolution almost 1000 years before their counterparts.

Other historical variables may have been important for contemporaneous level of democracy. As a precaution against the likelihood that factors such as colonial origins, ethnic or religious fragmentations and the duration of civil conflict drive the link between ethnic heritage and democracy, I include them as control variables. The colonial origin control is a dummy variable indicating whether the country is a former British, French or Portuguese colony, which aims at capturing the difference in democratic experiences among countries distinguished along their former colonial powers. The data on ethnic and religious fragmentation, and years of civil conflict are collected from Fearon and Laitin (2003) and the Correlates of War project compiled by Sarkees and Schafer (2000), respectively.

E. Economic and Geographic Factors

Motivated by the empirical regularities between economic development and democracy, I control for development statistics using data provided by the World Bank such as GDP per capita, population size, and the share of population living in urban areas. More specifically, while the data on GDP per capita and population size cover the period 1960-2010, information on the share of the urban population I use is restricted to the period 1950-1955 and it aims at giving the extent of urban lifestyle at independence. By including the latter, I want to ascertain, as in Wantchékon and García-Ponce (2013), that the result is not influenced by the degree of

earlier "modernization." In order to take into account the resource curse hypothesis and its implications for institutional development, I also include a variable that captures for each country its degree of natural resource dependence. Using the World Bank WDI data on mineral fuel, ores and metal exports as a share of merchandise exports and following Jensen and Wantchekon (2004), I attribute to each country a score ranging from 1 to 4 according to its degree of resource dependence. In particular, a country receives a score of 1, 2, 3 and 4 if the share of natural resources in merchandise exports was less than 25%, between 25% and 50%, between 50% and 75%, and greater than 75%, respectively over the period 1980-2010.

I also include geographic factors such the absolute value of latitude and measure of terrain ruggedness index. Following Jared (1997), it is possible that countries situated along similar latitudes, because they shared similar climates, were more likely to be exposed to the propagation of institutional capital and technology. As for terrain ruggedness, it could incentivize reliance on guerilla warfare as a method of political dissent and ultimately affect institutional outcomes such as democracy (Wantchékon & García-Ponce, 2013). The data on the index of terrain ruggedness comes from Nunn and Puga (2012).

TABLE 2— SUMMARY STATISTICS

	(1)		(2)		(3)	
	All Countries		Countries with Heritage = 0		Countries with Heritage = 1	
Panel A. Pre-Colonial Institutional Traits and Neolithic Revolution						
	Mean	Std.	Mean	Std.	Mean	Std.
Property Rights	0.38	0.49	0.00	0.00	0.76	0.44
Societal Inclusiveness	0.25	0.44	0.00	0.00	0.53	0.51
Democratic Norms	0.17	0.38	0.00	0.00	0.43	0.51
Heritage	0.53	0.50	0.00	0.00	1.00	0.00
Neolithic Revolution (x1000)	2.89	1.27	2.53	0.24	3.47	1.20
Panel B. Democracy, Relevant Controls, and Potential Mechanisms						
Polity2 (Post-Cold War)	0.52	0.23	0.57	0.24	0.42	0.18
GDP per Capita (Logarithm)	6.61	1.10	6.67	1.14	6.51	1.05
Population (Logarithm)	15.82	1.38	15.91	1.19	16.06	1.37
Urban Population Growth (% of Total	5.56	1.77	5.45	2.11	5.73	1.49
Natural Resource Dependence	1.86	1.18	1.73	1.20	2.04	1.21
Ethnic Fragmentation	0.64	0.24	0.62	0.26	0.69	0.20
Religious Fragmentation	0.47	0.24	0.55	0.25	0.43	0.29
Years of Civil Conflict	6.78	9.78	6.82	9.77	7.48	10.47
French Ex-Colony	0.41	0.50	0.32	0.48	0.48	0.51
British Ex-Colony	0.37	0.49	0.46	0.51	0.32	0.48
Ruggedness	0.99	1.14	1.01	1.35	0.87	0.88
Latitude	13.50	9.67	14.24	10.09	12.94	9.97
European Language	0.04	0.13	0.02	0.03	0.002	0.01
Executive Constraints in 1970	3.02	1.72	2.95	1.91	1.96	1.06
Crude Oil Proved Reserves (Billion Barrels)	1.47	5.10	0.31	0.91	2.73	7.09

Notes: The table reports descriptive statistics for the variables used in this paper. Column 1, 2 and 3 display these statistics for the whole sample, the subsample of countries with first leaders not having an ethnic institutional capital, and the subsample of countries with leaders having an ethnic institutional capital, respectively. In Panel 1, I report pre-colonial institutional traits used to differentiate among national leaders, and the timing of the Neolithic Revolution obtained from Putterman and Trainor (2006). The statistics for the Polity 2 score and other relevant controls as well as potential mechanisms variables are reported in Panel 2. The mean, the standard error (in parenthesis) and the number of observations are reported for each variable for the whole sample and each subsample.

III. The Empirics of Leaders' Institutional Heritage and Democracy

As already discussed in subsection III-3, democratic experience in post-independence Africa is marked by a significant variation in the post-Cold War era (Figure 5). As a consequence, the left-hand side variable in the primary econometric specifications of this study (OLS and 2SLS) is the average level of post-Cold War democracy, covering the period 1991-2010. This raises the question of whether or not it is pertinent to use the ethnic institutional profile of the first leader to predict long-term political changes.[14] As relevant as this question is, its resolution necessitates a rigorous statistical investigation as I intend to do here using the *critical junctures* hypothesis. A key insight of this institutional path dependence theory is that contemporary institutional development may well be explained by certain critical historical moves or choices (Collier & Collier, 1993). This idea is well summarized by Bratton et al. (1997) when they write that "*a contingent model of change assumes that one agent's initiative prompts another actor's response and that political events cascade iteratively from one to another.*"

In what follows, I use a couple of conventional econometric frameworks to formally investigate the link between African leaders' ethnic institutional traits at independence and contemporary political development.

A. Ordinary Least Squares

In Table 3, I summarize the results based on the following ordinary least squares regression that associates the post-Cold War average level of democracy with the African leaders' ethnic institutional profile at independence:

$$(1) \qquad Democracy_i = \alpha + \beta * Heritage_i + X_i'\gamma + \varepsilon_i$$

where $Democracy_i$ is the average level of democracy over the period 1991-2010 in state i, as measured by the Polity2 index; $Heritage_i$ is a binary variable that equals 1 if the first leader of state i is a descendant of an ethnic group with at least one of the following institutional characteristics: absence of class stratification among freemen; equal or relatively equal distribution of inheritance for real property; and/or using elections or other forms of consensus in

[14] In the database on national leadership in Table 1, approximately 18% (9 out of 51) of the African first heads of states stayed in power after the end of the Cold War. These heads of states are indicated with the symbol (+) in Table 1.

the succession of the local headman. Otherwise, it takes the value 0. In addition to these two variables, I also include X_i, which is a set of country-specific control variables including geographic, historical, and economic factors. For the economic variables, I use the post-Cold War average of GDP per capita, population size (both in logarithm terms), the share of population living in urban areas between 1955 and 1960 as well as the natural resource dependence measure. While the coefficient β, the parameter of interest, captures the effects of the first leaders' ethnic institutional quality on contemporary democracy, the terms α and ε_i are the constant and the stochastic error, respectively.

To assess the importance of the first leader's quality on democracy, I start by evaluating a univariate regression in which average post-Cold War democracy is regressed on the variable *Heritage* (Column 1). If *Heritage* captures democratic norms, either directly (succession by consensus) or indirectly (no stratification and partible inheritance rules being positively correlated to political participation), one might intuitively expect a positive coefficient β, suggesting that leaders with the aforementioned ethnic institutional backgrounds should be more likely to transmit democracy as a political legacy. On the contrary, the results displayed in column 1 indicate a negative (-0.154) and statistically significant coefficient at the 5% level on *Heritage*, implying that leaders with good ethnic institutional capitals produce less democracy relatively to their counterparts without a similar heritage. Although this less intuitive result requires additional empirical investigations, it is still consistent with the summary statistics compiled in Table 2, in which it appears that the political legacy of the institutionally well-endowed leaders is less inclusive than the legacy of their counterparts.

In subsequent columns (columns 2-6), I progressively add the relevant subcategories of controls (columns 2-5) including successively the economic controls (column 2), the geographic controls (column 3), the historical controls (column 4), and both economic and geographic controls (column 5), before I consider all the controls variables in column 6. The economic controls are: the average level of GDP per capita (logarithm) and population size (logarithm) between 1991 and 2010; the share of urban population at the eve of the 1960s; and the natural resource dependence variable. Including this first subcategory of control variables in column 2 does not alter the qualitative result of the univariate case; the coefficient of *Heritage* is still negative and statistically significant at the 5% level, and neither GDP per capita nor the two

population variables seem to have been statistically important for contemporary democratic performance.

In columns 3-5, I first add to the baseline specification the geographic (column 3) and historical controls (column 4) separately, before considering together both the economic and geographic covariates in column 5. Once again the negative correlation between the first leader's ethnic institutional heritage and post-Cold War democracy is robust across these alternative specifications. More specifically, the geographic factors including the absolute latitude and the terrain ruggedness index have no significant statistical effects on contemporary democracy whether they are included solely (column 3) or with the economic controls (column 5) in the reduced form equation 1. As for the historical controls in column 4, while former colonies dummies and both ethnic and religious fragmentation seem not to matter for democracy in this framework, the extent of civil wars is negatively associated with post-Cold War political participation at the 5% level of statistical significance. Although there is less intellectual consensus on the detrimental effects of war in general and civil war in particular on institutional building (Blattman & Miguel, 2010), this finding suggests that the extent of civil conflict may have weakened democratic institutions in Africa after the fall of the Berlin Wall and the collapse of the Soviet Union.

Column 6 includes all the covariates from the subset of controls previously presented. Interestingly, the coefficient of the absolute value of latitude enters the system with a positive and statistically significant sign at the 5% level. This provides support to the argument of Jared (1997) that technology and institutions were easily spread along the East-West axis than along the North-South axis[15]. In addition to the importance of this geographic factor, two historical variables, namely religious fragmentation and the duration of civil conflict, appear in the specification with the expected signs. I find a strong and positive correlation between religious diversity and political inclusion, as measured by the polity score. Also, as before, the duration of civil war appears to hinder democracy. Regarding the coefficient of *Heritage,* it is still negative and statistically significant at the 5% level confirming that the result of the univariate case in column 1 is robust to controlling relevant geographic, historical and economic factors. In sum, African leaders who inherited egalitarian and democratic norms from their ancestors, as opposed

[15] The positive correlation between latitude and democratic outcome, as measured by the polity score, means that African countries at high attitude tend be relatively more democratic than tropical countries.

to the ones without such an institutional quality, have been on average less successful in conveying inclusive institutions as political legacy. On average, the post-Cold War democracy score in the countries of the "good" leaders is about 0.15 lower – on a 0-1 scale – than the level of democracy in the countries of their counterparts.

TABLE 3— ORDINARY LEAST SQUARES ESTIMATES

DEPENDENT VARIABLE IS POST-COLD WAR AVERAGE LEVEL OF DEMOCRACY						
	(1)	(2)	(3)	(4)	(5)	(6)
Heritage	**-0.154****	**-0.150****	**-0.158****	**-0.140****	**-0.152****	**-0.129****
	(0.061)	(0.062)	(0.061)	(0.058)	(0.063)	(0.055)
GDP per capita		-0.027			-0.028	-0.032
		(0.035)			(0.038)	(0.031)
Population		0.011			0.010	0.009
		(0.026)			(0.030)	(0.028)
Urban Growth		-0.020			-0.017	-0.022
		(0.023)			(0.021)	(0.019)
Natural Resource Dependence		-0.021			-0.025	-0.019
		(0.024)			(0.024)	(0.023)
Latitude			-0.001		0.0001	0.008**
			(0.003)		(0.003)	(0.003)
Ruggedness			-0.015		-0.016	-0.005
			(0.038)		(0.043)	(0.039)
French Ex-Colony				-0.037		-0.052
				(0.073)		(0.072)
British Ex-Colony				-0.020		-0.074
				(0.066)		(0.070)
Ethnic Fragmentation				0.220		0.266
				(0.166)		(0.178)
Religious Fragmentation				0.197		0.340**
				(0.125)		(0.144)
Years of Civil Conflict				-0.005**		-0.007***
				(0.002)		(0.002)
Constant	0.571***	0.724	0.603***	0.384***	0.752	0.445
	(0.05)	(0.554)	(0.058)	(0.109)	(0.635)	(0.576)
R^2	0.128	0.206	0.139	0.302	0.211	0.454
N	47	46	47	47	46	46

Notes: Estimates across specifications are based on OLS regression of equation 1. The dependent variable is the normalized post-Cold average of the polity 2 score from the Polity IV database. The variable of interest, Heritage, is a dummy that takes the value 1 when the first leader of a country is identified as having an ethnic institutional heritage of egalitarian and democratic norms. The robust standard deviations are shown in parentheses. *** Significant at the 1% level; ** Significant at the 5% level; and * Significant at the 10% level.

B. Two-Stage Least Squares

In the previous section, both the univariate and the multivariate OLS estimations of the reduced-form specifications, linking first leaders' ethnic institutional quality to democracy, have shown a reversal of fortune in the transmission of democratic norms in Africa. Before I investigate the underlying mechanisms at play, it is important to address potential concerns that may affect the reliability of the OLS results. Perhaps the quality of the first leaders at the birth of new African states was an important aspect of their accession to political power. It is possible, for instance, that the initial political and institutional traits of some ethnic groups may predispose their descendants to be more or less competitive in the race for power and its exercise. Or, it may

be the case that the leaders who ended up being heads of states at independence were chosen by the former colonial powers because of their initial political or institutional heritage. If the advent of the first leaders in power happened under any of these circumstances or similar conditions, then the results presented so far will suffer from an endogeneity bias.

To deal with this potential endogeneity problem, I use an instrumental variables approach. As in Hariri (2012), I employ the time that has elapsed between the Neolithic Revolution and each country's independence date as an instrument for the pre-colonial ethnic institutional features of its dwellers. Because the Neolithic Revolution ascertains the transition from nomadic lifestyle to sedentariness, it may be relevant in explaining initial codifications of societal norms, thus being a correlate of the institutional features of the countries' ethnicities.

Using the premises that earlier institutional arrangements depend on the timing of the Neolithic Revolution, and that having or not a particular institutional profile is an indirect consequence of the Neolithic Revolution, I estimate the following linear probability equation:

$$\text{Heritage}_i = \kappa + \sigma^* \text{ Neolithic}_i + X_i'\delta + \varepsilon_i \quad (2)$$

where $Neolithic_i$ is the time that has run out between the Neolithic transition and the accession of state i to independence. $Heritage_i$ is a dummy variable that indicates, as before, whether or not the leader of the state i is a descendant of an ethnic group having egalitarian and democratic pre-colonial institutional norms. X_i is a set of controls identical to the ones defined in the OLS case. κ, μ_i and σ are the constant, the error term, and the coefficient of correlation between the variables $Neolithic_i$ and $Heritage_i$, respectively.

In the 2SLS terminology, equation (2) being the first-stage, the second stage is the equation (1). Using the 2SLS procedure, I estimate both equations and compile the regression results in Table 4. This technique implies that the effect of *Heritage* on contemporary democratic performance is causal if the exclusion restriction that the variable *Neolithic* is absent from equation (1) is valid. In other words, if the timing between the Neolithic transition and independence matters for post-Cold War democracy, it is probably because its correlation with the ethnic institutional quality of the first leaders.

As shown in Panel 2 of Table 4, there is a strong and positive correlation between the *Heritage* dummy and the *Neolithic* variable. As for the coefficient of the variable of interest, the *Heritage*

dummy, its estimates via 2SLS with the subsets of controls are presented in columns 1-6 of Panel 1 in Table 4. Once again, I find a strong and negative correlation between the *Heritage* dummy and post-Cold War democracy levels. On average, the institutional legacy of "good" leaders has been about 0.45 lower, in terms of the polity score, than the institutional legacy of the leaders with the alternative ethnic institutional quality. The estimated coefficient is higher than the OLS estimates (Table 3) and it is highly statistically significant with an average standard deviation of about 0.18.

TABLE 4— TWO-STAGE LEAST SQUARES ESTIMATES

Panel A. Second Stage – Dependent Variable is Post-Cold War Average Level of Democracy						
	(1)	(2)	(3)	(4)	(5)	(6)
Heritage	**-0.453*** **	**-0.536** **	**-0.481*** **	**-0.341** **	**-0.601** **	**-0.305** **
	(0.175)	(0.222)	(0.168)	(0.172)	(0.256)	(0.122)
GDP per capita		-0.053			-0.071	-0.075**
		(0.043)			(0.062)	(0.035)
Population		0.028			0.027	0.017
		(0.044)			(0.048)	(0.027)
Urban Growth		-0.013			-0.004	-0.022
		(0.027)			(0.028)	(0.018)
Natural Resource Dependence		0.010			0.010	0.004
		(0.040)			(0.045)	(0.024)
Latitude			-0.002		0.003	0.012***
			(0.004)		(0.006)	(0.004)
Ruggedness			-0.027		-0.037	-0.0003
			(0.034)		(0.036)	(0.031)
French Ex-Colony				-0.026		-0.015
				(0.088)		(0.075)
British Ex-Colony				-0.015		-0.043
				(0.075)		(0.078)
Ethnic Fragmentation				0.311*		0.356**
				(0.181)		(0.166)
Religious Fragmentation				0.101		0.368**
				(0.156)		(0.156)
Years of Civil Conflict				-0.005		-0.008***
				(0.003)		(0.003)
Constant	0.729***	0.709	0.793***	0.467***	0.824	0.486
	(0.108)	(0.822)	(0.108)	(0.138)	(0.963)	(0.535)
R^2	.	.	.	0.050	.	0.346
N	44	43	44	44	43	43
Panel B. First Stage – Dependent Variable is Dummy for Ethnic Institutional Heritage of the First Leader						
Neolithic	**0.169*** **	**0.151*** **	**0.177*** **	**0.166*** **	**0.147** **	**0.196*** **
	(0.040)	(0.047)	(0.042)	(0.048)	(0.054)	(0.069)
Economic Controls	No	Yes	No	No	Yes	Yes
Geographic Controls	No	No	Yes	No	Yes	Yes
Historical Controls	No	No	No	Yes	No	Yes
R^2	0.159	0.208	0.168	0.219	0.209	0.275
N	44	43	44	44	43	43

Notes: Estimates across specifications are based on 2SLS regressions. The dependent variable is the normalized post-Cold average of the polity 2 score from the Polity IV database. *Neolithic* is timing between the Neolithic Revolution and Independence, which is used as instrument for the *Heritage* dummy. The variable of interest, *Heritage*, is a dummy that takes the value 1 when the first leader of a country is identified as having an ethnic institutional heritage of egalitarian and democratic norms. The robust standard deviations are shown in parentheses. *** Significant at the 1% level; ** Significant at the 5% level; and * Significant at the 10% level.

C. Extensions: Difference-In-Differences and Fixed-Effects [Beyond the First Leaders: A Panel Data Approach]

It could be the case that unobserved or hard-to-account-for country-specific (or ethnic-specific) characteristics are driving the statistical link between leaders' ethnic institutional quality and post-Cold War political trajectory in Africa. Ideally, a time-series cross-sectional data on the ethnic institutional background of the African leaders would be preferred to deal with these potential issues, but the binary nature of the *Heritage* is an obstacle for such an econometric analysis. Nonetheless, following Wantchékon and García-Ponce (2013), I can exploit the structural break in the African states' polity score in 1990, as shown in figure 5, to extend the econometric analysis beyond the cross-sectional frameworks used so far.

Political scientists such as Villalón and Huxtable (1998) have often interpreted this discontinuity in African polities following the fall of the Berlin Wall as one of the most critical steps in the emergence of different political paths. In the same vein, Wantchékon and García-Ponce (2013) have also suggested that the end of the Cold War could also be seen as the end of direct international interferences in African national polities. If these theories are accurate, then the impact of the leaders' ethnic institutional quality on democracy in their respective countries should be more important after than before 1990.

As in Wantchékon and García-Ponce (2013), I confront this hypothesis to an empirical scrutiny using the difference-in-differences method. In doing so, I compare democracy levels between pre and post stage of the Cold War in the two categories of countries: the ones where the first leaders inherited the egalitarian and democratic norms and the ones where the first leaders did not have such a heritage. In particular, the following equation is estimated:

$$(3) \qquad \text{Democracy}_{it} = \alpha_i + (\text{Heritage}_i * \text{post1990}_t)'\varphi + \text{post1990}_t'\vartheta + \varepsilon_{it}$$

where $Democracy_{it}$ is the average level of democracy at time *t, t* being the period before or after the Cold War; α_i is the country fixed-effects which captures time-invariant country characteristics; $post1990_t$ is a dummy variable that equals to 1 for the post-Cold War era, and 0 otherwise; $Heritage_i$ x $post1990_t$ is an interaction between the *Heritage* dummy and the $post1990_t$ dummy; and ε_{it} is the error term. While the coefficient ϑ captures the overall difference in democracy levels between the Cold War era and the post-Cold War era, the coefficient φ should

inform the reader on the difference in the post-Cold War levels of democracy between the two types of countries.

The same hypothesis can also be tested using the fixed-effects approach. For this, I estimate the following equation:

$$(4) \qquad Democracy_{it} = \alpha_i + \pi_t + (Heritage_i * post1990_t)'\theta + X_{it}'\phi + \varepsilon_{it}$$

where $Democracy_{it}$ is defined as before with the exception that t is now every year since independence before and after the end of the Cold War; α_i, π_t and X_{it} are the country and year fixed effects, and a set of time-varying controls such as GDP per capita and population size, respectively. The coefficient θ aims at capturing the difference in democracy levels after the Cold War between the two categories of countries.

The results of both the DID and the FE estimations, displayed in Table 5, are consistent with the previous findings obtained from both the OLS and IV estimations. The political legacy of the leaders whose ancestors had inclusive and democratic pre-colonial institutions has been less democratic than the political legacy of their counterparts. This result is not only robust to several control variables such as economic, historical and geographic covariates, but it is also strong when alternative econometric methods to the standard OLS procedure are used, including the DID and FE techniques. Moreover, the statistical links between the ethnic institutional quality of the first African leaders and contemporary democracy levels seem to be a causal relationship, as suggested by the results of the 2SLS methodology.

TABLE 5— DIFFERENCE-IN-DIFFERENCES AND FIXED-EFFECTS ESTIMATES

Dependent Variable is Average Level of Democracy Since Independence					
	(1) DID		(2) FE	(3) FE Robust Std.	
Heritage x Post Cold War	**-0.154****	**-0.039****	**-0.036****	**-0.039****	**-0.036****
	(0.061)	(0.016)	(0.016)	(0.016)	(0.016)
Post-Cold War Dummy	0.324***				
	(0.058)				
GDP per capita			-1.122*		0.080***
			(0.064)		(0.312)
Population			-0.175		0.051***
			(0.213)		(0.008)
Constant	0.247***	0.353***	4.144	0.353***	-1.093***
	(0.030)	(0.112)	(0.127)	(0.092)	(0.193)
Country Dummies?	Yes	Yes	Yes	Yes	Yes
Year Dummies?	No	Yes	Yes	Yes	Yes
R^2	0.303	0.358	0.361	0.583	0.589
N	93	2352	2299	2352	2299

Notes: Estimates are based on difference-in-differences, least squares dummy variables and fixed effects are shown in Column 1, Column 2 and Column 3, respectively. The dependent variable is either the average level of democracy before and after the end of the Cold War (1990) in the case of DID, or the yearly average of democracy level since independence for both the FE and FE with robust standard deviation. The

variable of interest is the interaction term between the *Heritage* dummy and the post-Cold War dummy, and it aims at capturing the difference in democratic score between the two categories of countries after the Cold War. The standard deviations are shown in parentheses. *** Significant at the 1% level; ** Significant at the 5% level; and * Significant at the 10% level.

VI. Uncovering Potential Mechanisms

Did the ethnic institutional characteristics of the first African leaders at independence play a crucial role in subsequent political development? The sequence of statistical methods I have used so far to investigate this important issue suggests that I answer this question in the affirmative. Surprisingly, leaders whose ethnicities are identified in anthropological records as having democracy-enhancing features seem to have been the ones who transmitted non-democratic institutions as political legacy. The question now is why did the "good" leaders produce "bad" institutions? In what follows, I explore a series of theories about social norms, whether they are attitudinal (what people from a particular kinship are supposed to do) or behavioral (what they actually do), that may be relevant in explaining this institutional turnabout. Specifically, using the World Values Survey database, I start by examining whether or not individuals belonging to the ethnicities I have identified as having inclusive ancestral backgrounds tend to be more or less supportive of contemporary democratic institutions. Next, I also investigate alternative explanations including political and materialistic motivations that may have incentivized African national leaders to opt for a political choice that is at the odds of their social virtues.

A. Attitudes Towards Democracy

One of the underlying hypotheses of this paper is the idea documented by Giuliano and Nunn (2013) that suggests an intergenerational transmission of democracy. These authors have empirically demonstrated that the transmission of democracy from pre-industrial local communities to modern states may have been partly possible because of the positive impact of the earlier democratic experiences on citizens' attitudes towards contemporary democratic institutions. In the context of this paper, it is unclear whether the non-transmission of local democracy is explained by the national leadership effects solely or a shift in the perception about democracy of the descendants of the politically inclusive ethnicities. Using both the World Values Survey (WVS hereafter) database and the information collected by Fearon (2003) on the share of ethnic groups in each country, I test the latter hypothesis by looking at people's perception and beliefs about democratic institutions in their respective countries of residence.

From the integrated WVS database, which contains five waves, I use the information on the 14 African countries in which the survey has been conducted at least once.[16]

Following Giuliano and Nunn (2013), I estimate the following individual-level regression using the OLS technique:

$$y_{it} = \alpha_t + \pi_t + \beta * \text{DemoHeritage}_c + X_{it}'\gamma + \varepsilon_{ict} \quad (5)$$

where y_{ict} represent successively one of the three outcomes variables capturing individual i's perception about democracy in his country of residence c during the wave t of the World Values Survey. The first outcome, labeled in the WVS as E117, is an ordinal and discrete variable varying from 1 to 4 that summarizes respondents' self-reported assessment about the importance of diverse political systems. Regarding democracy, the possible answers and their numerical values are: it is a very bad (1), fairly bad (2), fairly good (3) or very good (4) method of governance. The second outcome variable (E123) collects the informants' opinion about the following statement: "Democracy may have problems but it is better than any other form of government." Possible answers are: strongly disagree (1), disagree (2), agree (3), and agree strongly (4).[17] The third variable (E235), which assesses people's view about the importance for them to reside in a democratically governed country, attributes to each answer a numerical value varying from 1 to 10. While a score of 1 indicates that democracy is "not important at all" for the respondents, a score of 10 means that it is "absolutely important" for them.

$DemoHeritage_c$ is a country-level variable, which measures either (i) the proportion of a country's ethnicities whose ancestors were characterized by egalitarian and democratic norms or (ii) a dummy variable that equals 1 if the respondent lives in a country where the first leader is a descendant of an ethnic group with egalitarian and democratic norms, and 0 otherwise. X_{it} captures a set of individual characteristics including age, gender, and schooling. While α_t denotes the survey-wave fixed effects, the stochastic error term is captured by ε_{ict}. The variable of interest ($DemoHeritage_c$) being country specific in all the regressions, I cluster the standard errors at the country level.

[16] The World Values Survey covered the following periods: 1981-1984, 1989-1993, 1994-1999, 1999-2004 and 2005-2008. Among the African countries, only South Africa appears in the five waves. While countries such Nigerian, Morocco and Egypt are included in three and two waves respectively, the remaining 10 African countries appear in one wave.

[17] In the original WVS database the coding structure for the responses to E117 and E123 is as follows: very good (1), fairly good (2), fairly bad (3), and very bad (4); agree strongly (1), agree (2), disagree (3), and strongly disagree (4).

As shown in Table 6, there is a positive correlation between the *DemoHeritage* variable and self-reported attitudes towards democratic institutions in the different specifications of equation 5. More specifically, as the share of individuals who have inherited egalitarian and democratic norms increases in a country, the taste for democratic institutions becomes stronger (Table 6 Column 1 and 3). Similarly, residents of countries in which the first leader is a descendant of an institutionally well-endowed ethnicity are more likely to demand more democracy than their counterparts whom leaders did not have such an ancestral background.

Although this result rules out the political culture hypothesis as a potential mechanism through which good leaders has generated bad institutions in Africa, it has the merit to support one underlying theory of this paper. Because descendants of ethnicities who were governed through equal and inclusive institutions are more likely to support contemporary democracy, the contention of this paper is reconcilable with the intergenerational transmission of democracy as shown by Giuliano and Nunn (2013). Nonetheless, the question of why good national leaders have generated non-democratic institutions, despite the fact that their constituencies value democracy more than other political systems, is still unanswered. In the following subsection, I explore other potential mechanisms that may explain this unpredictable political trajectory taken by certain national leaders.

TABLE 6—ATTITUDES TOWARDS DEMOCRACY INDIVIDUAL-LEVEL LEAST SQUARES ESTIMATES

Dependent Variable is Self-Reported Attitudes Towards Democracy						
	(1)		(2)		(3)	
	Democratic System		Democracy is Better		Democracy is Important	
DemoHeritage (Proportion)	0.336***		0.217		0.853**	
	(0.042)		(0.183)		(0.315)	
DemoHeritage (Dummy)		0.241***		0.136		0.570**
		(0.047)		(0.174)		(0.205)
Gender (=1 for Male)	0.047***	0.048***	0.0594**	0.059**	0.046*	0.054**
	(0.010)	(0.010)	(0.019)	(0.019)	(0.024)	(0.023)
Age	-0.010	-0.017	0.041	0.037	0.037	0.017
	(0.013)	(0.015)	(0.053)	(0.054)	(0.036)	(0.038)
Education Level	0.031	0.023	-0.033	-0.031	0.319***	0.271**
	(0.023)	(0.027)	(0.034)	(0.036)	(0.094)	(0.093)
Wave Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.270***	3.308***	3.103***	3.141***	7.734***	8.060***
	(0.079)	(0.081)	(0.163)	(0.150)	(0.395)	(0.350)
R^2	0.046	0.040	0.015	0.010	0.035	0.033
N	31537	31537	17069	17069	15471	15471

Notes: Estimates are based on individual-level OLS. Dependent variables are from the WVS and represent numerical attributes of respondents' opinion about the importance of democracy as a political system (Column 1), whether they think that despite its limitations democracy is still better (Column 2), and how it is important for them to live in a democratic country. The variables of interest are either the estimated proportion of the population whose ancestors are characterized by egalitarian and democratic norms (DemoHeritage Proportion), or a dummy variable indicating whether or not the first leader is a descendent of an ethnic group with egalitarian and democratic pre-colonial institutions (DemoHeritage Dummy). The data on the proportion of ethnicities in each country are from Fearon (2003). The clustered standard deviations are shown in parentheses. *** Significant at the 1% level; ** Significant at the 5% level; and * Significant at the 10% level.

B. Beyond the Political Culture Mechanism

In this subsection, I explore three other channels that historians and political scientists have often highlighted as the reasons why African states may have failed to deliver inclusive institutions: the leadership legitimacy, the assimilation (or the lack of thereof) hypothesis and the "politics of the belly"[18]. The first hypothesis, which is closely related to the debate on state legitimacy, asserts that the discrepancy between pre-colonial ethnic territories and contemporary states has weakened the vertical integration between the society and politicians (Englebert, 2000). From this perspective, the first leaders at independence may have been incentivized to establish non-constraining institutions as a strategy to cope with legitimacy issues. For Englebert (2000), leaders of ethnically incompatible states may often rely on non-inclusive institutions to address potential challenges such as political contestation. I test this hypothesis by looking at the difference in the degree of executive constraints – obtained from the Polity IV database – on the two categories of leaders the first decade after independence (1970)[19]. As shown in column 2 of Table 7, countries with "good" leaders – the ones for which the *heritage* dummy is coded as 1 – tend to have less executive constraints than their counterparts. But when this variable is included in the OLS regression of equation 1, its coefficient becomes insignificantly different from zero. At the same time, the *heritage* dummy conserves its statistical attributes as derived from the previous OLS estimation; its coefficient is negative and statistically different from zero. This result suggests that the leadership legitimacy hypothesis is probably a poor mechanism in this framework (Column 2 of Table 8).

The second hypothesis, the so-called transplantation theory recently operationalized by Hariri (2012), states that early institutional development in the form of political centralization in particular might have been an obstruction to European settlement. This author went on to argue that this early statehood has contributed to limit the infusion of democratic norms although colonization itself was not an "export of democracy". Europeans who settled durably in former colonies are thought to have put in place inclusive institutional infrastructures that would later foster political development (Acemoglu et al., 2001; Hariri, 2012). Thus, Hariri (2012) concludes that the contemporary autocratic rules in many non-European states are probably a consequence of early political centralization in pre-colonial states, which impedes long-term settlement. Using

[18] See Bayart (1993).
[19] For easiness of comparison I use the year 1970 because most the African states gained independence around 1960.

the fraction of the population speaking a European language as its mother tongue – the data is from Hall and Jones (1999) – I test this assimilation hypothesis in the context of this study. I find on the one hand that the statistical link between the *heritage* dummy and the share of native speakers of a European language is negative but barely significant (see Column 1 of Table 7), and on the other hand, taking into account this variable as a control in equation 1 does not affect the quality of the previous findings (Column 1 of Table 8).

Before I present and discuss the empirical assessment of the so-called "*politics of the belly*", it is worth putting this concept into perspective. This term, originally known as "*La politique du ventre",* was initially introduced in the literature by the French political scientist Bayart (1993) in his book "*The State in Africa: The Politics of the Belly*". His thoughts are summarized by Berman (1998):

> *Jean-Francois Bayart chose …"the politics of the belly"… [as] a metaphor that summed up the constant references and analogies in political discourse throughout sub-Saharan Africa to politics as "eating" or "devouring", of getting one's share of the state's resource. These cultural forms themselves encapsulate the personal, materialistic and opportunistic character of African politics, and the relative unimportance… of ideology, principal or policy.*

To empirically assess this "*politics of the belly*" hypothesis, I argue that African leaders at independence may have anticipated the resource potential – in oil and diamond for example – of their newly established states, and this could have driven away some leaders from their cultural heritage. No doubt that many African countries were not equipped to conduct costly mineral explorations, but the involvement of many colonial companies such as the *British Petroleum* and the *Bureau de Recherche de Petrole* – a French institution created in 1945 – in oil exploration for example in Africa (See Figure 7) may have triggered some appetites among the first African leaders[20]. Ultimately, this rent opportunity could have been determinant in the type of institutions that the new African leadership introduced at independence, which I believe may have persisted nowadays. To test this hypothesis I collect information on countries' potential in both oil and diamond productions, which have often been identified in the literature as driving the within

[20] For references on oil exploration in colonial Africa, see for example (Ferrier & Bamberg, 1994).

Africa resource curse hypothesis through their detrimental effects on institutions (Lujala et al., 2005; Ross, 2001).

I consider two datasets as proxies for the resource potential of African countries at independence in order to test this "*politics of the belly*" hypothesis. First, I use the average level of crude oil proved reserves over the period 1980-2010 as provided by the US Energy Information Administration. In particular, I construct for each country a dichotomous variable that takes the value 1 when the average level of proven reserves in crude oil is greater than or equal to 100 billion barrels; and 0 otherwise. Second, I rely on a dataset, constructed by Nunn and Puga (2012), measuring for each African country carats of gem-quality diamond extraction per square kilometer over the period 1958-2000. Of the 51 African countries for which this information is available, only 16 countries have produced gem-quality diamonds over the time period considered with a minimum of about 300 thousands carats per square kilometer (Lesotho) and a maximum of approximately 210 million carats (Botswana). To distinguish gem-diamonds producing countries from other countries, I define a dummy variable that takes the value 1 if the country produces gem-quality diamond; and 0 otherwise.

As shown in columns 3 and 4 of both Tables 7 and 8, the results regarding the *rent opportunity* dummies are mixed. While the column 3 of Table 7 displays a strong and positive correlation between the proven oil dummy and the *heritage* dummy at the standard statistical significance levels, the statistical relationships between the latter and the diamond dummy is negative and significant at the 5% level. These results suggest that the countries whose leaders are the descendants of institutionally well-endowed ethnic groups are potentially richer in oil but have limited access to gem-quality diamonds comparatively to their counterparts. Moreover, when these rent opportunity dummies are successively controlled for in the OLS estimation of the reduced-form equation 1 (Table 8), the effect of the heritage dummy on democracy remains qualitatively intact in the case of the diamond dummy (it is still negative and significant), but disappears in the case of the proven oil dummy (Columns 3 and 4 of Table 8). At the same time, the statistical link between the oil dummy and political participation, as measured by the polity score, is strongly negative and significant at the 5% level. In other words, what I have termed the rent opportunity mechanism is well captured by the oil curse than the diamond curse, which is consistent with a number of important contributions in the literature on resource curse. For example, Ross (2001) shows that oil is an obstruction to democracy in the measure that it makes

national leaders less dependent on fiscal contributions while facilitating their access to repressive means against demands for political overture. If oil, a natural resource, is a curse for democracy, why diamond, another natural resource, appears to be less detrimental to democracy in this study? One potential explanation for this empirical result is provided by Lujala et al. (2005), who distinguished the effects of lootable versus nonlootable diamonds on national institutions via their impacts on civil conflicts. For these authors, "*easily exploited resources like secondary diamonds can be used to finance ongoing conflicts that can drag on for prolonged periods. Nonlootable resources, on the other hand, may even depress the risk of conflict onset and incidence.*" In the context of this paper, this would suggest that gem-quality diamonds, whose exploitation is both skill and technological-intensive, are less likely to hinder democracy as implied by the results in Table 8.

To sum up, "*the politics of the belly*", while being detrimental to political participation in Africa seems to have been one potential channel through which African leaders, with good pre-colonial ethnic institutional background, failed to deliver inclusive and participatory institutions to their contemporary countrymen.

TABLE 7—ALTERNATIVE MECHANISMS LEAST SQUARES ESTIMATES

	(1)	(2)	(3)	(4)
	European Language Speakers	Executive Constraints	Rent Opportunity	
			Oil	Diamond
Heritage	-0.008	-0.905*	0.268**	-0.323**
	(0.007)	(0.469)	(0.113)	(0.134)
Economic Controls?	Yes	Yes	Yes	Yes
Geographic Controls?	Yes	Yes	Yes	Yes
R^2	0.326	0.204	0.448	0.220
N	43	46	46	46

Notes: Estimates across specifications are based on OLS regressions. From Column 1-3, the dependent variables are the share of European language native speakers (from Hall and Jones, 1999), the Executive Constraints (from Polity IV), and the Rent Opportunity dummy (Constructed by the author using proven oil reserves data from the US Energy Information Administration and Gem-Diamond Extraction from Nunn and Puga, 2012), respectively. Economic and geographic controls are similar to the ones used in Tables 3 and 4. The robust standard deviations are shown in parenthesis. *** Significant at the 1% level; ** Significant at the 5% level; and * Significant at the 10% level.

TABLE 7—MEDIATING ROLE OF MECHANISMS LEAST SQUARES ESTIMATES

	(1)	(2)	(3)	(4)
	European Language Speakers	Executive Constraints	Rent Opportunity	
			Oil	Diamond
Heritage	**-0.116***	**-0.139****	-0.099	**-0.137***
	(0.069)	(0.066)	(0.063)	(0.068)
European Language	1.670			
	(1.694)			
Executive Constraints		0.022		
		(0.022)		
Oil			**-0.223****	
			(0.084)	
Diamond				0.068
				(0.076)
Economic Controls?	Yes	Yes	Yes	Yes
Geographic Controls?	Yes	Yes	Yes	Yes
R^2	0.168	0.217	0.323	0.213
N	43	46	46	46

Notes: Estimates across specifications are based on OLS regressions. From Column 1-3, I control for the potential mechanisms including the share of European language native speakers (from Hall and Jones, 1999), the Executive Constraints (from Polity IV), and the Rent Opportunity dummy defined as before, respectively. Economic and geographic controls are similar to the ones used in Tables 3 and 4. The robust standard deviations are shown in parenthesis. *** Significant at the 1% level; ** Significant at the 5% level; and * Significant at the 10% level.

V. Conclusion

A recent but growing literature documents that a significant number of present-day economic, cultural and political outcomes are the manifestations of long-lasting and deeply rooted societal features. For example, a noteworthy contribution by Giuliano and Nunn (2013) provides evidence for an intergenerational transmission of democracy from pre-colonial ethnic societies to contemporary modern states. This paper is also interested in the persistence of institutional arrangements, but unlike previous studies that consider a more pluralist approach – by focusing on the share of the population with a particular societal characteristic – the emphasis here is on the ethnic institutional heritage of the national leader and its implications for national polity. In particular, I match a new constructed data on the ethnic identity of the first African heads of states with anthropological records to investigate the importance of the national leaders' ethnic institutional heritage for contemporary political trajectory.

Exploiting Africa's ethnic diversity and heterogeneous cultural norms, I find that contemporary democratic experiences are relatively bleaker in countries whose first leaders were the descendants of an institutionally inclusive ethnicity. The statistically significant and negative relationship between leaders' ethnic institutional background and contemporary political development appears to be robust to a set of control variables including economic, geographical and historical factors, and across a variety of econometric techniques. In addition, concerns about potential endogeneity issues that are susceptible to affect the validity of this finding are addressed without deteriorating its statistical robustness. As for the potential mechanisms that may have explained this institutional turnabout, I document that the inclination of certain African leaders towards rent-seeking, also known as "*the politics of belly*", is one potential channel that may have jeopardized "good" leaders' ability to perpetuate good institutions they inherited from their ancestors.

This article adds to a series of intellectual efforts social scientists are making to explain cross-country irregularities in economic and political development. First, by linking leadership quality in nascent African states at independence to long-term political development, it suggests that the impact of individual leaders on African political development is as important as other

historical events such as colonial experiences and armed conflicts, as documented in the literature of critical junctures. Second, on the interaction between institutions and leaders, although the literature agrees that political institutions and national leadership influence each other, a fewer empirical studies have looked at the effects of individual leaders on political system. If democracy and autocracy are thought to be important for leaders' selection, this paper shows empirically that the quality of the leader seems also to matter for the type of political system. Finally, the intellectual debate about the resource curse has often analyzed the importance of this phenomenon under the "Dutch disease" hypothesis, ignoring sometimes alternative mechanisms. This analysis espouses the idea that natural resources endowment may have a detrimental effect on institutions building through their impact on politicians' incentives (Caselli & Cunningham, 2009).

Despite their importance in sharpening our understanding of relevant economic and political issues, researches documenting the persistence of certain societal characteristics are often limited when it comes to policy guidance. Nonetheless, because it identifies leaders' inclination to rents as an obstruction to their ability to perpetuate the democratic legacy of their ancestors, this study suggests that limiting the power of individual leaders could be beneficial for institutional building in developing countries.

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APPENDIX

TABLE 1— ETHNICITIES AND INHERITED ETHNIC INSTITUTIONAL CAPITAL OF AFRICA'S FOUNDING FATHERS

(1) Country	(2) Leader	(3) Birthplace	(4) Ethnicity	(5) Equality	(6) Inclusiveness	(7) Democracy	(8) Heritage
Algeria	Bella	Maghnia	Arab Algerians	Yes	No	No	Yes
Angola	Neto	Bengo	Kimbundu/Umbundu	No	No	No	No
Benin	Maga	Parakou	Bariba/Mossi	No	No	No	No
Botswana	Khama	Serowe	Bamangwato/Tswana	No	No	No	No
Burkina Faso	Yameogo	Koudougou	Mossi	No	No	No	No
Burundi	Micombero	Rutovu	Rundi	No	No	No	No
Cameroon	Ahidjo	Garoua	Fulani/Adamawa	No	Yes	-	Yes
Cape Verde	Pires+	Fogo		-	-	-	-
CA Republic	Dacko	Bouchia	Bwaka	Yes	Yes	No	Yes
Chad	Tombalbaye	Koumra	Sala/Sara	-	Yes	-	Yes
Comoros	Abdallah	Domoni	Comorians	-	-	-	-
Congo	Youlou	Madibou	Teke	No	-	Yes	Yes
Cote d'Ivoire	Boigny+	Yamoussoukro	Baule	No	Yes	No	Yes
DR Congo	Kasavubu	Tshela	Kongo	No	No	No	No
Djibouti	G. Aptidon+	Lughaya/Somalia	Esa	Yes	No	No	Yes
Egypt	Nasser	Bakos/Alexandria	Arab Egyptians	Yes	No	Yes	Yes
Eq.Guinea	M. Nguema	Nsegayong	Ngumba	Yes	Yes	No	Yes
Eritrea	Afeworki+	Asmara	Tigrinya	Yes	No	No	Yes
Ethiopia	Menelek II	Angolela/Shewa	Amhara	Yes	-	-	Yes
Gabon	Mba	Libreville	Fang	No	No	No	No
Gambia	Jawara+	Barajally	Malinke	No	No	No	No
Ghana	Nkrumah	Nkroful	Nzema/Assini	No	No	No	No
Guinea	Toure	Faranah	Malinke	No	No	No	No
G.-Bissau	Cabral	Bissau	Pepel	No	Yes	-	Yes
Kenya	Kenyatta	Gatundu	Kikuyu	No	No	No	No
Lesotho	Jonathan	Leribe	Sotho	No	No	No	No
Liberia	Tubman	Harper	Americo-liberian	-	-	-	-
Libya	Idris	Al-Jaghbub	Sanusi	Yes	-	-	Yes
Madagascar	Tsiranana	Ambarikorano	Tsimihety*	-	Yes	-	Yes
Malawi	Banda+	Kasungu	Chewa	-	Yes	No	Yes
Mali	Keita	Bamako	Bambara	No	No	No	No
Mauritania	Ould Daddah	Boutilimit	Trarza	Yes	No	-	Yes
Mauritius	Ramgoolam	Belle Rive		-	-	-	-
Morocco	Mohammed V	Fes	Arab Moroccans	Yes	No	-	Yes
Mozambique	Machel	Madragoa	Thonga/Tsonga	No	No	No	No
Namibia	Nujoma+	Ongandjera	Ambo	No	No	No	No
Niger	Diori	Soudoure	Zerma	Yes	-	Yes	Yes
Nigeria	Azikiwe	Zungeru	Igbo	Yes	Yes	No	Yes
Rwanda	Kayibanda	Tare	Ruanda	Yes	No	No	Yes
Senegal	Senghor	Joal	Serer	No	No	No	No
Sierra Leone	Margai M.	Gbangbatoke	Mende	Yes	No	No	Yes
Somalia	Osman Daar	Beledweyne/Hiran	Hawiya/Somali	Yes	No	Yes	Yes
South Africa	Louis Botha	Greytown	Boers	No	No	No	No
Sudan	Abboud	Moh.-Gol Suakin	Shaigiya*/Arab	Yes	-	-	Yes
Swaziland	Subhuza II	Zombodze	Swazi	No	No	No	No
Tanzania	Nyerere	Butiama	Zanaki*	-	Yes	Yes	Yes
Togo	Olympio	Lome	Ewe	No	No	Yes	Yes
Tunisia	Ali Bourguiba	Monastir	Arab Tunisians	-	No	-	No
Uganda	Obote	Akokoro	Lango	No	No	No	No
Zambia	Kaunda+	Chinsali	Bemba	No	No	No	No
Zimbabwe	Mugabe+	Harare	Zezuru/Shona	No	-	No	No

Notes: * Anthropological information on these ethnicities is from secondary sources other than the primary source based on Murdock (1967). These sources include Peter Wilson (1971) for the Tmisihety, Stöger-Eising (2000) for the Zanaki and Nicholls (1913) for the Shaigiya.

+ These national leaders were still in power after the end of the Cold-War.

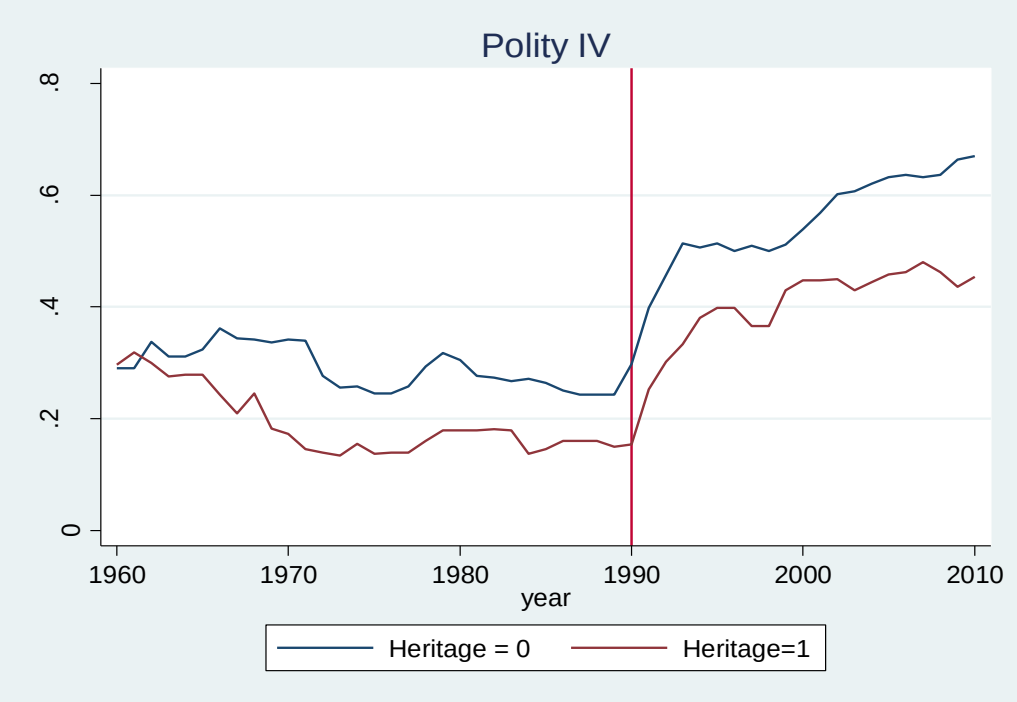

Figure 5: Annual changes in the average level of democracy using Polity IV.

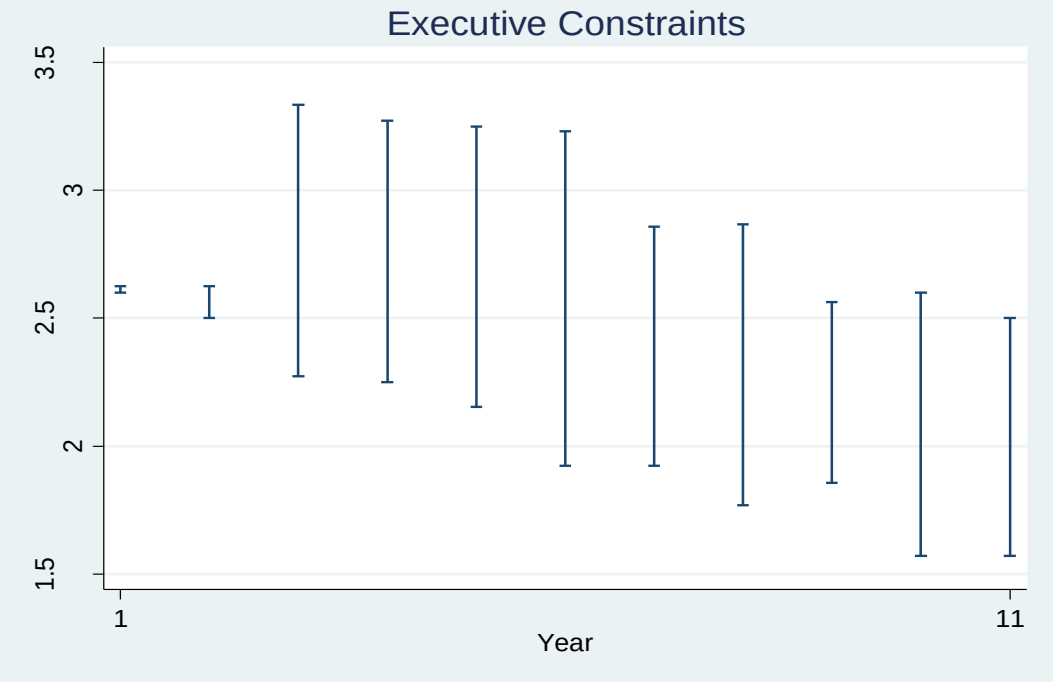

Figure 6: Differences in Executive Constraints during the first decade of Independence using Polity IV.

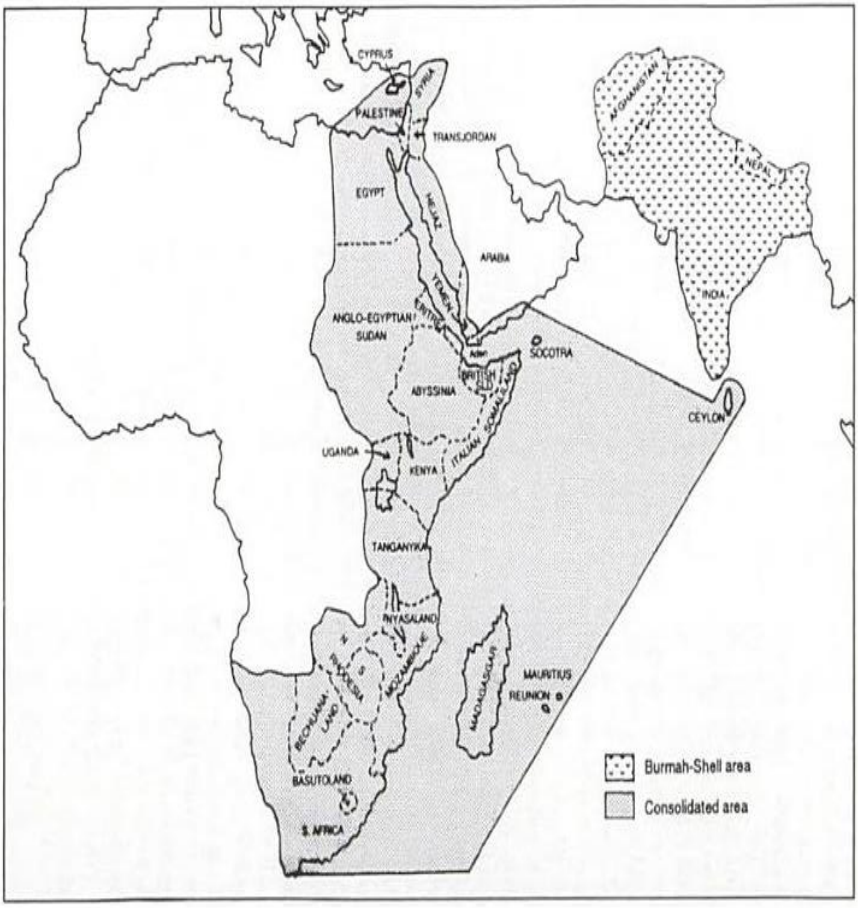

Figure 7
Note: This map shows the spatial coverage of the activities of the Consolidated Petroleum Company in colonial Africa. (Source: Bamberg, 1994