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The Politics of Ethnic Identity in Sub-Saharan Africa

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Abstract:

Recent literature on ethnic favouritism suggests that Presidents tend to target co-ethnics with patronage, especially in non-democracies. Coupled with evidence on the role of incentives in driving ethnic identity change, I propose that a change in the ethnic identity of presidents in non-democracies should lead to ethnic switching among citizens towards the new ruling ethnic group. Using Demographic and Health Survey data from thirteen African countries, I show that change in the ethnic identity of the President leads to a shift of women identifying with the new ruling ethnic group of around 1.5% of the population in non-democracies, or on average 10% of the President's ethnic group. This relationship is robust to the use of a variety of control variables and different specifications as well as the use of qualitative case study evidence from Ghana and Guinea; I also suggest it may be an underestimate due to data limitations.

Key Words: Africa; Ethnicity; Ethnic Identity; Democratization; Ethno-Regional Favouritism; DHS Data

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1. Introduction

There now exists a large literature on how ethnicity can influence politics, especially as regards public goods distribution and conflict (Baldwin & Huber, 2010; Franck & Rainer, 2012; Habyarimana, Humphreys, Posner, & Weinstein, 2009; Montalvo & Reynal-Querol, 2005; Posner, 2004). However, very rarely has the question been asked the other way around, namely how politics can influence ethnic identity, especially in the short term. Indeed, while there is a small literature on a number of individual case studies of politically-induced identity change (Cassan, 2015; Laitin, 1998; Posner, 2005), as well as how long-term processes of industrialization and state-building can influence ethnic and national identity formation (Gellner, 2006 [1983]; Tilly, 1994; Wimmer, 2015), there remains a lacuna in the study of how contemporary political change can alter ethnic identity in a broad context.

As such I propose a theory of how a change in the ethnic identity of the President can create an incentive for citizens to change their ethnic identity towards that of the new President, at least in non-democratic contexts. More specifically, recent literature on ethnic favouritism has shown how Presidents target co-ethnics with preferred access to public goods such as roads, schools and hospitals, especially in non-democracies where governments do not need to rely on a broad coalition for support and monitoring of public goods provision from the media and opposition parties is weak (Burgess, Jedwab, Miguel, Morjaria, & Padró i Miquel, 2015; Franck & Rainer, 2012; Kramon & Posner, 2016). This system of discrimination creates incentives for individuals to identify with the President's ethnic group, such that the more non-democratic the regime, the greater the incentive to switch ethnic groups. Thus, given the aforementioned literature that demonstrates the roles of political incentives in identity change, we should be able to find evidence of identity change coinciding with ethnic presidential change in the contemporary world.

To test this theory I use Demographic and Health Survey data from thirteen African countries that have had ethnic presidential changes and at least two comparable surveys collecting data on ethnic identity. Africa is an ideal location to examine this theory, both because most states in the continent are ethnically diverse, thereby leading to multiple examples of ethnic presidential change, and because many states are non-democratic. Based on data from 581,012 respondents across 57 country surveys from 13 countries between 1986 and 2016 and including 21 cases of a change in the President's ethnic identity, I show that ethnic presidential change induces roughly 1.5% of adult women to switch their ethnic identity towards that of the new President in non-democracies. Given the average size of the ruling ethnic group in these countries, this result suggests that one in ten people identifying with the President's ethnic group in non-democratic countries previously identified with another group. As I show below, this result is robust to the use of a number of different specifications, control variables and sub-samples. Moreover, I examine the two case studies of Ghana and Guinea, where the existence of multi-party democracy in the former case was coupled with a lack of ethnic switching after an ethnic presidential change in

2001, while a more autocratic system of governance in the latter case saw an ethnic presidential change in 2011 followed by a notable change in the percentage identifying with the President's ethnic group.

The rest of the paper is organized as follows. In section 2 I set out my theory of politically-induced ethnic change, first by discussing the literature on ethnic favouritism and then by focussing on theories of instrumentalist ethnic change. In Section 3 I examine the two case studies of Ghana and Guinea, including a focus on DHS surveys in both countries. Section 4 first lays out my empirical model and data before displaying the main results and robustness tests. Finally, I discuss some broader implications from this paper for the study of ethnicity and nationalism before concluding in section 5.

2. Theory

The hypothesis that ethnic political change should result in mass ethnic change towards the ethnic group of the new President is built on two separate but related sets of literature, namely scholarship on ethnic favouritism and on theories of ethnic change. In the former case there is now a substantial literature on the degree to which Presidents target public and private goods such as roads and health and education spending towards their ethnic brethren (as sometimes proxied by their birthplace), particularly in Africa (Ahlerup & Isaksson, 2015; Burgess et al., 2015; De Luca, Hodler, Raschky, & Valsecchi, 2015; Dickens, 2017; Dreher et al., 2015; Franck & Rainer, 2012; Hodler & Raschky, 2014; Kramon & Posner, 2016; Mueller & Tapsoba, 2016).[2] The formal theoretical basis for this type of targeting is that Presidents are reliant upon their ethnic brethren for political support, whom they must reward with higher public spending in order to stay in office (Burgess et al., 2015; Padró i Miquel, 2007). As for why politicians target their ethnic kin rather than other social groups based around linguistic, religious or class identities, the fact that ethnicity is relatively difficult to switch compared to other identities makes it ideal as a way to identify those who will receive benefits from the state (Caselli & Coleman II, 2013; Fearon, 1999).

However, we should expect ethnic favouritism to be more prominent in non-democracies than in democracies, both because citizens in democracies have greater access to information via the media and can therefore better hold governments to account, and because governments in multi-ethnic democracies without an ethnic majority can only obtain an electoral majority via a cross-ethnic coalition, as compared to a more narrow mono-ethnic basis that is possible in a non-democracy. As such, (Ahlerup & Isaksson, 2015; Burgess et al., 2015; Hodler & Raschky, 2014; Mueller & Tapsoba, 2016) present evidence that ethnic/regional favouritism is either diminished or absent under democratic rule.[3] Another way to put this argument is that democratization diminishes both the supply and demand for ethnic favouritist policies from the government's perspective, such that the former declines due to greater scrutiny of the government from the media and opposition parties, while the latter declines due to a need for governments to reach out to multiple ethnic groups to form a winning coalition. Relatedly, democratization also reduces the potential for reprisals against members of the former President's ethnic group, which have been a common phenomenon in non-democracies in post-colonial Africa and which could lead members of such groups to switch identities after their co-ethnic President falls from power.[4]

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[2] Nor is this preferential spending is limited to non-elites: (Francois, Rainer, & Trebbi, 2015) show that African leaders provide preferential treatment towards co-ethnic elites when it comes to appointing their cabinet ministers, even when controlling for group size.

As regards theories of ethnic change, if we take a primordial view of ethnicity, such that individuals are stuck with the ethnic group they were assigned at birth, then those who are not co-ethnic with the President must merely suffer until the next regime change possibly provides them with their "turn to eat." However, a more instrumentalist understanding of ethnicity would suggest that individuals can and do switch ethnic identities given incentives to do so. Indeed, there is evidence from (Posner, 2005) on how shifts in political institutions (specifically the nature of the party system) in Zambia led individuals to shift from language-based identities in a multi-party system to tribal identities in a one-party system and back again. Similarly, (Laitin, 1998) shows that the break-up of the USSR altered incentives in language choice for both Russian and titular language speakers in a number of post-Soviet states. In a developed country context (Nix & Qian, 2015) show that better socio-economic opportunities for whites relative to blacks was correlated with greater racial "passing" by black Americans in the late 19th and early 20th century. Finally, (Cassan, 2015) provides evidence that legislation in colonial India incentivized the individual-level manipulation of caste identity for the purposes of acquiring land. The same logic applies in cross-national analyses as well: (Wimmer, 2015) suggests that states provide incentives for individuals to identify with the nation when they provide public goods, while (Green, 2018) shows that individuals give up more parochial tribal identities and adhere to larger ethnic identities during periods of industrialization. Within this literature, (Cassan, 2015; Laitin, 1998; Nix & Qian, 2015) are particularly relevant inasmuch as the identity shifts they document occur along horizontal rather than vertical lines, inasmuch as individuals shift identity from one comparable, exclusive social group to another, rather than from a smaller identity to a larger one, with the former nested inside the larger such that both identities can be held simultaneously (and are thus not exclusive).

Of course, as already noted, ethnicity forms the basis for clientlistic politics precisely because it is hard to change, and thus it should be a rare event relative to vertical ethnic change, even given the strong incentives discussed above. Put another way, the costs of such a shift are high: "like learning a second language in adulthood, the process is exhausting and the results usually far from perfect" (Bentley, 1987, p. 35). It is thus not surprising that evidence for racial passing in the late 19th and early 20th century United States suggests that "only" around 19% of African-American men passed for white at some point during their lifetime, despite the huge incentives to do so (Nix & Qian, 2015).

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[3] But also see (Dickens, 2017; Dreher et al., 2015; Franck & Rainer, 2012; Kramon & Posner, 2016), who find no effect for democracy in diminishing the role of ethnic favouritism.

[4] Examples of such reprisals abound: in addition to the example of Guinea detailed below, other cases include the Langi under Idi Amin in Uganda (Mazrui, 1980) and the Krahn in Liberia after Samuel Doe began to fall from power in 1989 (Ellis, 1995).

In particular the degree to which ethnic "passing" in Africa differs in its degree of difficulty from other parts of the world can be seen in two ways. On the one hand, it should be easier to pass as a member of a new ethnic group in Africa since the countries in question are all largely racially homogenous and thus individuals have similar skin colour and facial appearances, at least relative to the US. However, on the other hand ethnic rather than racial passing generally means that individuals who wished to pass would have to learn a new ethnic language, making it harder than in the US. Indeed, evidence from around the world suggests that horizontal ethnic passing is quite rare due to the great difficulty of being accepted as a member of the new ethnic group. For instance, attempts at passing by the Burakumin minority of Japan, who are physically indistinguishable from other Japanese, often fail due to subtle ethnic markers like their place of origin, speech patterns or lack of kinship relations (Horowitz, 2000, p. 49), while efforts by Indians to pass as members of the Ladino majority group in Guatemala fail unless they severe their social ties by moving to a different part of the country (Van den Berghe, 1968). In India ethnic passing is so difficult – since "in the most crucial circumstances, ethnic credentials are sure to be closely checked through acquaintances, kinsmen and one's natal village" – that one type of traditional entertainer, the *bahurupiya*, specializes in simulating various identities and is paid according to how successful he is at fooling others (Berreman, 1972, p. 577).

Thus, given the barriers to successful ethnic passing, we should not be surprised if the number of people who shift their identities horizontally in Africa is small, even given the incentives to do so. As explained above, these incentives should be higher in non-democracies, which leads to the hypothesis that politically-driven ethnic switching in Africa should only occur in non-democratic countries, with the magnitude of the shift increasing the more non-democratic the context. Finally, we should expect to find more evidence of ethnic switching than other types of identity switching, particularly as regards religion. We test all of these hypotheses below.

3. Case Studies

There already exists an abundance of anecdotal evidence from Africa of assimilation into the President's ethnic group for the purposes of accessing public goods. For instance, in Uganda it was well known that President Idi Amin favoured his Nubian ethnic group in Uganda in the 1970s across government, the army and the private sector (Jørgensen, 1981; Kasfir, 1979). Thus, "given the present political and economic advantages in possessing Nubian status,… it is quite probable that more than half of those claiming Nubian identity today grew up with the objective indicators of other ethnic units" (Kasfir, 1979, p. 385). In Kenya President Daniel arap Moi's regime favoured his co-ethnic Kalenjin in the mass provision of education, infrastructure as well as elite positions in the public and private sector in the 1980s (Burgess et al., 2015; Hornsby, 2012, pp. 442-443; Kramon & Posner, 2016). As such it was not particularly mysterious that the 1989 census showed "the highest growth rates… in communities seen as aligned to the government, membership of which might confer some advantages" (Hornsby, 2012, p. 452).

It is nonetheless useful here to examine the relationship between democracy and ethnic change by comparing two qualitative case studies before presenting my quantitative results. Here I take a closer look at the politics of ethnic change in two coastal West African countries, namely Ghana and Guinea. These countries are useful inasmuch as they are structurally similar in many ways, with a similar geographic size (238,535 square kilometres in Ghana vs. 245,836 in Guinea) and a dominant ethnic group that is between 1/3 and 1/2 of the population (the Akan in Ghana and the Peul in Guinea). Both countries have avoided civil wars but nonetheless have a history of post-colonial autocratic rule and coups d'état. However, from the 1990s Ghana has become significantly more democratic while Guinea has not, such that the Polity2 average score across the years covered by DHS surveys in Ghana (1993-2014) is 5.1 while for Guinea it is -0.6 (1999-2012). As I show below, this political change has meant that ethnicity has remained much more important politically in Guinea than in Ghana.

3.1. Guinea

Guinea is ethnically divided between the Peul (or Fulbe; roughly 35% of the population), the Malinké (~30%) and the Soussou (~15-20%), as well as several smaller groups. Ethnicity has long played a major role in Guinean politics. On the one hand, the first President of Guinea, Ahmed Sékou Touré (ruled 1958-1984) was a member of the Malinké ethnic group but drew support from members of other ethnic groups like the Soussou and found inspiration in Marxism; he thus famously predicted in 1959 that, "in three or four years, no one will remember the tribal, ethnic or religious rivalries which, in the recent past, caused so much damage to our country and its population" (Young, 2004, p. 6). Yet his regime continued to perpetuate these rivalries, especially in 1976 when he arrested the diplomat Diallo Telli and accused him of leading a French-Peul conspiracy to overthrow his presidency; the result was not only the death by starvation of Telli but a purge of Peul from public office as part of "the largest act of ethnic cleansing in the history of the First Republic" (Posthumus, 2016, p. 87).

Upon coming to power in 1984 after Touré's death President Lansana Conté allowed his fellow Soussou to obtain "scholarships, government jobs, business contracts and army posts," to the point where in 1990 they controlled nearly 30% of senior government posts, or around twice their actual percentage of the population.[5] These gains came at the expense of the Malinké, who had previously dominated the army and civil service (Groelsema, 1998, pp. 417-418). In particular the Malinké dominance in the national cabinet was swiftly replaced by a Soussou dominance (Francois et al., 2015, p. Figure A.1), and there was now a suspicion that that army officers were not promoted unless they were Soussou (Posthumus, 2016, p. 160). The failed coup of July 4, 1985 led to a riot against Malinké residents of Conakry for retribution, alongside the execution of up to 70 people associated with the former Touré regime. Conté's response to the destruction of Malinké shops and properties was to exclaim, in Soussou, "*wö fatara"* ("you have done well") (Posthumus, 2016, p. 128). Moreover, the Malinké were not the only ethnic group to suffer: for instance, an area of Conakry inhabited mostly by Peul called the Kaporo Rails was razed in 1998 under the pretence that it was an area unfit for human habitation (Posthumus, 2016, p. 228).

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[5] (Bruk, 1986) estimates the Soussou at 11.0% in 1985 while a national health survey in 1992 lists them at 17% (Groelsema, 1998, p. 420).

The death of Lansana Conté in 2008 led to a coup d'etat under Captain Moussa Camara, who subsequently suspended the constitution; he was later replaced by General Sékouba Konaté in 2009, who organized a presidential election the following year. The election of Alpha Condé in 2010 was a landmark in Guinean democratization, as he was the first ever Guinean President to assume power through a national election. However, under Condé's leadership ethnic politics continued to inform voters inasmuch as his political party, the *Rassemblement du Peuple de Guinee* (RPG), has long been widely known as a Malinké-based party, while his main opponent in the election, Cello Dalein Diallo, drew support from the Peul. Ethnic slogans were common in the campaign, notably "it's our [Peul] turn" from Diallo's supporters and "anyone but a Peul" from Condé's side (Arieff & McGovern, 2013, p. 217). Diallo's loss in the second round of the election drew responses from Peul about ethnic bias, which only increased when an airplane crashed in February 2013 carrying Guinea's Chief of Staff General Kéléfa Diallo and other predominantly Peul soldiers (Posthumus, 2016, pp. 228-229). Most recently Condé was re-elected in 2015, which means that Guinea has yet to experience a democratic regime change in its history. Indeed, democracy remains very much unconsolidated in Guinea, with its global ranking of press freedom by Reporters without Borders never higher than 80th since 2003.

3.2. Ghana

Like Guinea, Ghana is ethnically diverse, with the Akan as the largest group (roughly 45% of the population), followed by the Mole-Dagbani (12-20%), Ewe (12-15%), and the Ga-Adangbe (6-8%), among others. Also like Guinea, Ghana's first postcolonial leader Kwame Nkrumah was ostensibly committed to pan-African and anti-tribal politics. As such Nkrumah's government passed the Avoidance of Discrimination Act of 1957, which prohibited the formation of political parties on the basis of ethnic, regional or religious lines; this law was repeated in various forms in the constitutions of 1969, 1979, 1992 and the Political Parties Act of 2000 (Langer, 2007, p. 13). Nkrumah was deposed in a coup d'etat in 1966, with several governments following in succession until Jerry Rawlings, born to a Scottish father and a Ewe mother, took office in 1981 in another coup d'etat. Rawlings moved towards re-establishing democracy and won elections in 1992 and

1996 before retiring from office in 2001. A presidential election in 2000 saw the Akan politician John Kufuor from the New Patriotic Party (NPP) defeat another Akan from Rawling's NDC political party, John Atta Mills; Kufuor would leave office after two terms in 2009 in favour of Mills, who won the 2008 presidential election. Elections followed in 2012 and 2016, leading in the latter case to the country's third democratic regime.

There is a history of ethnic favouritism under earlier regimes in Ghana. For instance, in 1970 the Ewe leader of the opposition Kportufe Agama claimed that various public servants under the then Akan Prime Minister Abrefa Busia (ruled 1969-1972) were being dismissed for being Ewe or Ga, and evidence points to a huge drop in Ewe members of the government cabinet and a sharp increase in Akan members under Busia's rule (Langer, 2007, pp. 12, 16). However, ethnic favouritism has been much less evident in Ghana under Rawlings and his successors, coinciding with the period of Ghana's democratization. For instance, government cabinets under Rawlings were very well balanced in ethnic terms, such that the Akan were over-represented and the Ewe were actually slightly under-represented relative to their percentage in the 2000 Ghanian census, especially after Rawlings was elected President in 1992. Under Kufuor there is evidence that the Akan did benefit at the expense of the Ewe as regards government ministers, but their over-representation was slight compared to Busia's government and the last years of Nkrumah's rule, and the Mole-Dagbani and other northern ethnic groups received a fair share of cabinet posts if one includes both ministers and deputy ministers (Langer, 2007, p. 16).

Democratization has also meant that political parties in Ghana have become much more broadly based across the country and not so heavily reliant upon one ethnic group in response to an increasingly focus on non-ethnic issues by voters (Lindberg & Morrison, 2008). For instance, the NPP initially began as an Akan party in the 1990s but began to see an increase in Ewe representation over time alongside an increase in the party's share of votes in Ewe populated areas; it has also always awarded the slot of the Vice-Presidential candidate to a Northerner (i.e., non-Akan and non-Ewe) (Elischer, 2008, p. 187). As regards the press, Rawlings repealed various media laws from older regimes in 1993, which ironically led to a public debate on Ewe favouritism under Rawling's rule (Langer, 2007, p. 12); in its annual rankings of press freedom Reporters without Borders have ranked Ghana within the most free 30 countries in the world every year since 2009.

3.3. Evidence on Ethnic Change from Guinea and Ghana

Ethnicity has thus continued to be relevant in politics in Guinea but relatively irrelevant in Ghana, such that members of the ruling ethnic group would be more likely to expect targeted public goods in the former than the latter case, just as members of the previous President's ethnic group would be more likely to suffer violent reprisals in the former case than in the latter case. Thus we would hypothesize that ethnic political change would lead to an ethnic shift towards the new ruling group in the former but not the latter. To test this hypothesis we examine DHS survey results from both countries in Figures 1 and 2, with three surveys from Guinea (1999, 2005 and 2012) and five from Ghana (1993, 1998, 2003, 2007 and 2008).[6] As Figure 1 shows, the shift in power from Lansana Conté (Soussou) to Alpha Condé (Malinke) coincided with a decline in the percentage identifying as Soussou from 20.3% to 19.1% between 2005 and 2012, while those who identified as Malinke increased from 26.4% to 31.1%. In contrast, Figure 2 shows that the transition from Jerry Rawlings (Ewe) to John Kufuor (Akan) was not correlated with any notable change in ethnic identity in Ghana; if anything, both the Akan and Ewe saw a drop in their percentages from the Rawlings to the Kufuor era (in favour of the Mole-Dagbani and other ethnic groups).

[Insert Figures 1 and 2 here]

4. Data Analysis

4.1. Data

I now turn towards quantitative evidence. My data come from surveys conducted by the Demographic and Health Survey (DHS) Program, which have been conducted across lower- and middle-income countries since the late 1980s. The main focus of the DHS is to collect data on fertility, family planning, health, gender and nutrition across a wide range of developing countries. As such it tends to focus on women of reproductive age (15-49), although it has in many cases also included men in its surveys (as discussed below). These surveys are useful for my purposes here as they tend to be conducted around every 4-6 years with a relatively large number of respondents: the lowest number of respondents for a country-survey in my sample is the 2011 Liberia survey with 3939 respondents,[7] while the largest is the 2014 Kenya survey with 31,071 respondents. The structure of the surveys is always the same across countries and years, such that individuals are asked first about basic personal data (age, education, access to public goods, and asset ownership) before being asked about their religious and ethnic identity, which alleviates concerns about the potential for priming. Data on ethnicity has been collected for the majority of country-surveys, and thus the DHS is particularly useful for the study of ethnic politics in countries like Tanzania where census data on ethnicity has not existed for decades. As such in recent years its data on ethnic identity has been used in (Franck & Rainer, 2012; Kramon & Posner, 2013, 2016; Østby, 2008), albeit never as a dependent variable as in this paper.

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[6] For the sake of simplicity I deliberately leave aside the transition in Ghana to John Mahama's regime in 2012 here.

[7] To put this number in perspective, recall that that the largest Afrobarometer surveys only collect data from 2400 respondents. The Afrobarometer – which is the only other large-scale source of cross-national times-series data on ethnic identity in Africa – not only has much smaller surveys and a small number of countries covered than the DHS but has very poor coverage among non-democracies and has much greater within-country variation in the number of ethnic categories, making it impossible to use for my purposes.

The DHS has conducted surveys in almost all African countries, but in some cases it has only conducted one survey or it has not asked respondents about their ethnic identity in multiple surveys. In other cases there exists multiple rounds of data on ethnic identity but the countries have not experienced any ethnic political transitions. I am thus left with thirteen countries with ethnic presidential transitions and panel data on ethnic identity across two or more surveys, which is actually a majority of the African countries where there was an ethnic presidential transition from the late 1980s to the present; within these thirteen countries the data covers a majority (21 out of 38) of ethnic presidential transitions (not including Presidents whose term in office was less than one year; for data see Table A.1). Moreover, these countries are broadly representative of Africa as a whole, as can be seen in a series of difference-of-means test comparing countries included in the dataset vs. those not included across a number of relevant variables in Table A.2.[8]

In a small number of cases the country surveys do not list the same number of ethnic categories as they do in other rounds; as a rule of thumb I exclude all surveys which do not include ethnic groups that are 1% or more on average of the country's population in other surveys. (Examples of excluded groups include the Gruma and Grussi in Ghana in 1988, the Taita in Kenya in 1988 and the Soninke in Senegal in 1986 and 1999.) Occasionally there is some variation in the number of ethnic categories for very small groups and which we can thus assume will have no influence on the size of other groups; however, in the case of the 2013 Nigerian survey the number of groups listed is so anomalous from other surveys that I excluded it from my analysis.[9] I only include data on ethnic groups that are on average 1% or more of the population, primarily because no ethnic group smaller than 1% had a co-ethnic become President among the countries in my sample in between the first and last DHS surveys,[10] but also because a minimum group size of 1% is the same threshold previously used when computing country-level ELF measures (cf. (Fearon, 2003)). In all cases I use data weighted by the DHS at the enumeration level to account for uneven sampling and non-responses.

Coding the ethnic group of the President is generally unproblematic, with the possible exception of Liberia (as discussed in Appendix 1). My sample thus consists of a total of 57 surveys across 13 countries, with descriptive statistics by country listed in Table 1. As can be seen there is variation in the number of surveys per country, from a minimum of three to ten in the case of Senegal; similar variation exists in the average number of survey respondents per country and the number of ethnic groups per country. There is also notable variation in the number of surveys for which there are male respondents, for which in two countries (Liberia and Nigeria) there is no time variation. As such I report results below that exclude countries one at a time in order to account for any country-specific anomalies in the data, and disaggregate my results by gender.

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[8] The only variable that is statistically different at the 5% level across the two columns is the mean Polity2 score, such that countries included in the dataset have a mean score of 6.1 vs. 1.3 in non-included countries. This difference is, of course, driven by the fact that I only included countries which have experienced regime change, which biases the sample towards democracies. If I instead include all countries which have had two or more DHS surveys with ethnic data, which adds six additional countries to the original list of thirteen, then the Polity2 variable is no longer significant at the 5% level (as seen in the following row in Table A.2).

[9] The 2013 Nigerian survey lists 310 ethnic categories, compared to an average of 129 across the 2003, 2010 and 2015 surveys.

[10] The smallest ethnic group to have a co-ethnic President in the dataset was the Lenje of Zambia, with an average of 1.4% across the DHS surveys and Levy Mwanawasa as its co-ethnic President (in office 2002-2008). Outside the sample there have been a number of African Presidents from even smaller groups, such as Tanzanian President Jakaya Kikwete (in office 2005-2015) from the Kwere group (0.7% of the total population) and Nigerian President Ibrahim Babangida (1985-1993) from the Gwere group (0.6%).

[Insert Table 1 here]

In Table 2 I list all 21 ethnic presidential transitions included in the database, with data given on the year of the transition, the subsequent DHS survey, the president who was in office in the previous survey and his/her ethnic group and the subsequent president and ethnic group. In some cases, as indicated in the table, there was more than one president in between the previous and subsequent surveys; in most cases this was only one President but in Liberia seven heads of state came and went in between the 1986 and 2009 surveys.

[Insert Table 2 here]

Finally, I wish to code countries as democratic or non-democratic in accordance with my theoretical predictions detailed above. One way to do this is to use annual measures of democracy such as Polity2, and interact having a co-ethnic President with the country-year Polity2 score, which is a strategy I employ below. However, this technique is not as easy to interpret as a dummy variable which groups countries as democracies or non-democracies, which then allows me to examine the magnitude of the difference ethnic presidential transitions have on ethnic identity in both groups of countries. To do so I take the average Polity2 score across all years from the first to the last survey by country, and split countries according to the median of the average Polity2 country-level scores, which comes to 4.2 (out of a scale from -10 to +10).

4.2. Empirical Model and Results

One way to model the time-series relationship between the percentages identifying with given ethnic groups and the ethnic identity of the President would be to control for both country-ethnic group and year fixed effects, such that the model only captures change over time within the same ethnic group. This model is both simple and powerful and I use it below as a robustness measure but it does not allow for time-invariant country-level variables to be included inasmuch as they are washed away by the country-ethnic group fixed effects. When interacting a time-invariant measure of democracy at the country level and the presence of a co-ethnic President at the year/occasion level, then it is important to include both individual components of the interaction, which cannot be done when including cross sectional fixed effects (Bell & Jones, 2015, p. 148). Moreover, considering that ethnic identity is relatively persistent across time, it is useful to consider if any time-invariant country-level variables have an effect on ethnic identity. Indeed, running a variance components model to calculate the intra-class correlation coefficient, or the amount of variance in the percentage of each country-ethnic group that exists at each level of the model, shows that differences across countries account for a full 20.8% of the variance.

Thus I thus use a three-tiered multilevel model with random slopes and random intercepts, with level one at the year level, level two at the ethnic group level and level three at the country level. By adding higher level means of the level 1 variables at level 2, I can thus recreate the fixed effects model within a multilevel model and capture both time-variant and time-invariant effects (Bell & Jones, 2015). As regards additional variables, even after weighting the data it is important to control for the percentage of respondents in each country/survey who are located within a given ethnic group's homeland, defined here as the highest-level administrative unit which has the highest average proportion of respondents from a given ethnic group.[11] (Thus the homelands for the Luhya of Kenya and the Soussou of Guinea are the Western and Kindia provinces, respectively.) By doing so I can control for swings in the regional distribution of respondents, such as in Mali when ongoing conflict meant that none of the 2012 or 2015 surveys were conducted in the Gao, Kidal or Tombouctou regions, leading to a sharp decline in the proportion of respondents identifying as Songhai from an average of 7.5% in 2001 and 2006 to an average of 1.7% in 2012 and 2015.[12]

In order to build a parsimonious model, I included a wide variety of country-level time-invariant variables one at a time, and found only one variable that was consistently statistically significant, namely a French colonial dummy variable (which was always positive). This finding is not surprising, given the abundant evidence for the fact that British (and Belgian) colonialism was marked by a decentralized divide-and-rule strategy that encouraged ethnic fractionalization, while French colonialism focussed more on centralized rule that, if anything, encouraged assimilation

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[11] For many surveys the DHS provides the GPS location for each enumeration area, which would allow me to use (Murdock, 1967)'s data on African ethnic homelands as the ethnic homeland rather than an administrative unit. However, there are two problems with this approach. First, there is not an exact match for many of the ethnic groups by the DHS data to those listed by (Murdock, 1967), with the Americo-Liberians of Liberia, the Annang of Nigeria and the Kuria, Ndengereko and Zanaki of Tanzania listed in the former but not the latter, for instance. Second, the GPS data is not available for 14 of the 57 DHS surveys, which leads to a loss of 6 out of the 21 ethnic presidential transitions from the dataset, or over ¼ of the transitions (and the only transition from both Kenya and Tanzania). As such I use the administrative unit as the homeland instead.

[12] In several countries the regions were not consistent across surveys, either due to a lack of coding by the DHS or the creation of new sub-national units over time. In the former case I overcame this problem by using DHS GPS datasets to identify the contemporary locations of all survey enumeration areas (as in Liberia and Senegal). In the latter case I was able to combine newer units with their "mother" units in order to avoid dropping surveys which did not have GPS datasets (as in Benin and Zambia). In only one case, namely Cote d'Ivoire, was I faced with the dual problems of having both a survey that was not geocoded (the 2005 round 5 survey) and an inconsistent use of regional classification (with the 1998 round 3 survey only listing regions as Abidjan, Small City and Countryside). As such I dropped the 1998 Cote d'Ivoire survey from my analysis, since I had two surveys (1994 and 1998) conducted during the Presidency of Henri Konan Bédié (r. 1993-1999) but only one (2005) done during Laurent Gbagbo's presidency (r. 2000-2010).

(Blanton, Mason, & Athow, 2001; Young, 1994, p. 232). Indeed, as seen in Table 1, the two countries with by far the largest number of ethnic groups are Nigeria and Tanzania, both former British colonies, while the two countries with the lowest number of ethnic groups, namely Guinea and Senegal, are both former French colonies.

I begin my analysis in column 1 of Table 3 without an interaction term but with country-level dummies for French colonization and being a non-democracy. Having a co-ethnic President is positive and statistically significant across the entire dataset, although the coefficient suggests having a co-ethnic president only increases the percentage of a given ethnic group by 0.6%. In column 2 I include the interaction term, which shows that the results from column 1 are entirely driven by non-democratic countries and whose coefficient, at 1.5%, more than doubles compared to column 1. Dividing the average size of the ruling ethnic group in non-democracies from Table 1 by this coefficient suggests that one out of every ten women who identify with the ruling ethnic group in non-democracies were not members of the group prior to having a co-ethnic in power.

In column 3 I control for the possibility that long-term demographic trends might be driving changes in the size of ethnic groups by including a lagged dependent variable and using OLS with standard errors clustered at the country-ethnic group level, as suggested by (Angrist & Pischke, 2009, p. 244); despite losing over ¼ of my observations the interaction coefficient remains statistically significant at the 5% level and even grows in magnitude. Column 4 reports the use of a fixed-effect model controlling for both ethnic group and country-year fixed effects; the results are similar to column 2 except a decline in the size of the coefficient, which could be a result of removing the time-invariant variables from the model. In column 5 I interact the co-ethnic President variable with a continuous measure of non-democracy, which is simply the inverted country-year Polity2 in a given year; here results confirm the earlier hypothesis that the effect of ethnic presidential change on ethnic identity is inversely proportional to the level of democracy in a given country at a given point in time.[13] Finally, in column 6 I check for reverse causality by coding the co-ethnic President variable (and interaction term) with a lead of five years, to account for the possibility that there is a correlation between the future election of a president and the increase in the size of an ethnic group. However, as expected neither the co-ethnic President nor the interaction term is statistically significant in column 5. In most of the columns the Francophone dummy variable is statistically significant as well, with a coefficient in columns 1-2 and 3-5 that suggests that the average ethnic group in French-speaking Africa is 4% larger than in non-Francophone Africa, which is itself a novel finding.

[Insert Table 3]

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[13] As alternative measure of democracy I used data from Freedom House as an alternative measure of democracy, both by splitting the sample according to the median democracy score (4.2 on a scale of 1 to 7) and by interacting the co-ethnic President variable with a continuous measure of democracy; I also used data on country averages from Freedom House's Freedom of the Press Index (available only from 1993 onwards). In all three cases the results are statistically significant with a similar coefficient to the interaction term in Table 3 (results available upon request).

4.3. Robustness Tests

In Table 4 I utilize a series of sub-samples to test for the robustness of my results. In some cases the DHS conducted more than one survey per country per round, which in many cases resulted from the use of smaller-scale AIDS Indicator or Malaria Indicator surveys rather than a larger-scale Standard DHS survey. As such in column 1 I only included one observation per round per country (always the largest survey per country/round) and controlled for round fixed effects, which led to a loss of data from Ghana, Kenya, Liberia, Senegal and Tanzania. In column 2 I only included surveys conducted on either side of an ethnic presidential change to control for longer-term ethnic demographic changes; the fact that the coefficient actually increases in size in this specification suggests that, if anything, my previous results from Table 3 may be underestimates. I also check for the possibility that the small number of countries is biasing my results, inasmuch as a low number of observations at the highest level of a multi-level model can produce inaccurate results (Maas & Hox, 2005); thus in column 3 I limit my analysis only to the six non-democratic countries and drop the interaction term, leaving 86 country-ethnic groups at the highest level of analysis. Here again the results are robust, with a coefficient slightly larger than it was before in Table 3.

In column 4 of Table 4 I examine whether the religious identity of the president has any effect on religious demography. While there is a history of religious favouritism in Africa in countries such as Nigeria and Uganda, in general we would expect religious favouritism to be less important than ethnic favouritism inasmuch as religious identity is easier to alter than ethnic identity and is thus, which has led many individuals can more openly and freely convert from one religion to another than to/from an ethnic group (Caselli & Coleman II, 2013; Fearon, 1999). When dividing up the population into three main religious groups (Protestants, Catholics and Muslims), I have data from 37 surveys across eight countries, as detailed in Table A.5. Far from providing evidence of religious identity switching, the coefficient on the interaction term is actually negative and statistically significant (although this result is not robust to including a lagged dependent variable or using a sub-sample of non-democratic countries). Finally, in column 5 I include data from both men and women, which reduces the number of countries included from 13 to 11 and the number of surveys from 57 to 44; here the interaction term remains positive but lower in magnitude and only statistically significant at the 6.4% level. While this result should be interpreted cautiously given the smaller data set, it nonetheless matches with previous literature on how women are more likely to receive ethnically-targeted public goods than men (Franck & Rainer, 2012).)

[Insert Table 4]

I also conducted a number of alternative robustness tests. In the first instance I dropped one country at a time from my analysis to account for the possibility that one country might be driving my results, which is especially important considering the small number of countries included in my analysis. For instance, it is possible that the increase in the percentage identifying as Americo-Liberian in Liberia under President Ellen Johnson Sirleaf is merely due to many Americo-Liberians returning from exile after the end of the Liberian civil war.[14] However, the coefficient on the interaction term is very consistent and actually increases in size on several occasions (with results available from the author upon request).[15]

The second robustness test is to examine one country at a time, which means dropping the country-level of the multi-level model and just running a two-level model. As seen in Table A.3, the coefficient on the interaction term is positive for all six non-democracies; it is also statistically significant at the 1% level in three of them despite very low sample sizes (and only slightly imprecisely estimated for Liberia and Tanzania). In contrast, of the seven democratic countries three have a negative coefficient.

Finally, as reported in Table A.4 I conducted a variety of secondary interaction tests that could affect the relationship between ethnic presidential change and ethnic change. In column 1 I added an additional variable controlling for having a co-ethnic attain power in a neighbouring non-democratic country, which plausibly could lead members of the same ethnic group in the original country to emigrate to the neighbouring country in order to receive the benefits of ethnic favouritism.[16] Indeed, there is historical evidence for this phenomenon, with Congolese and Sudanese Nubians emigrating to Uganda to join Idi Amin's regime in the 1970s; when Amin later fell from power the fear of retribution not only led the foreign Nubians to return home but also saw Ugandan Nubians flee to Sudan (Mazrui, 1980, p. 51). In columns 2-5 I add additional interactions for country-year values of GDP per capita and total years of primary and secondary schooling, and for country-level ELF (from (Fearon, 2003)) and state antiquity values, inasmuch as all four variables were shown to be correlated with regional favouritism at a global level in previous scholarship (De Luca et al., 2015; Hodler & Raschky, 2014).[17] In column 6 I use the fact that the DHS asked both female and male respondents their ethnic identity in surveys that covered both sexes, and calculated the average rate of inter-ethnic marriage by country-survey;[18] I then interacted the intermarriage measure and the co-ethnic President variable to assess whether higher incidence of intermarriage leads to more ethnic switching. The result in all cases is that the coefficient on the main interaction term remains statistically significant and very stable, with no additional effects from the secondary interactions.

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[14] Such a scenario is actually highly implausible, considering that the number of Americo-Liberians who would have had to have been missing from the 1986 survey to account for their increased presence in the 2009, 2011 and 2013 surveys is around 50,000; in contrast, the literature on Liberia suggests that the number of Americo-Liberians who fled the country after Samuel Doe took power in 1980 was only in the hundreds.

[15] As an additional robustness measure I used a Francophone-only sub-sample, as well as one that was only non-Francophone, with very similar results in both cases.

[16] Examples of ethnic groups with a ruling co-ethnic in a neighbouring country include the Yoruba of Benin during Olusegun Obasanjo's presidency in Nigeria, the Malinke of Côte d'Ivoire during Sékouba Konaté and Alpha Condé's presidency in Guinea, and the Chewa of Malawi during Rupiah Banda's president of Zambia.

[17] I tried other interaction effects which were correlated with ethnic favouritism in the literature such as average taxation as a percentage of GDP, average revenue as a percentage of GDP, average government expenditure on education as a percentage of GDP and having a dominant religion (Franck & Rainer, 2012), all of which yielded the same results as in Table A.5 (results available from author upon request).

4.4. Individual Correlates of Ethnic Switching

The data presented here is panel data according to ethnic group but not according to individuals, which means that we cannot get exact information on which types of women are engaging in ethnic switching. It is, however, possible to obtain ethnic data according to sub-samples of each survey, with the caveat that doing so introduces a great deal of noise due to smaller sample sizes. Referring back to section 2, the incentives for ethnic switching should not be equal for all women: for instance, those looking to find public service employment would have greater incentives in switching their ethnic identity to that of the president in non-democratic contexts than those not seeking employment, which could suggest that more educated women could see greater ethnic switching.

I examined a variety of variables that could allow for taking sub-samples of the data, many of which were not usable: the Wealth Index, for instance, was only introduced in surveys after 2002, while on average less than 40% of the respondents lived in urban areas across all 57 surveys, making rural and urban subsamples infeasible. Instead I used six sub-samples in Table 5, with illiterate and literate women in columns 1-2, women with 0-3 and 4+ years of education in columns 3-4 and finally younger (15-27) and older women (28-49) in columns 5-6.[19] The results suggest that ethnic switching is present across all six sub-samples, although the size of the coefficient changes in each column alongside the level of statistical significance. What is intriguing in the two sub-samples split by age is the higher coefficient for older women, which may suggest that ethnic switching increases with age. Considering that the DHS only surveys women younger than 50 and, across the six non-democracies in the dataset, the proportion of the total adult female population which was over 50 across the years covered was 17.4% on average according to UN demographic data, it is possible that the size of the coefficients in Tables 3 and 4 could actually be underestimates.

[Insert Table 5 here]

5. Discussion and Conclusion

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[18] The country average rate of intermarriage ranges from 10.1% in Kenya to 45.8% in Zambia.

[19] I code illiteracy by the answer “Cannot Read At All” to the DHS literacy question, with literacy coded as partial or full literacy. The mean level of illiteracy across all country surveys is 56.85%; the mean number of years of school is 3.91 and the mean age is 28.39.

In this paper I used DHS survey data from thirteen African countries to show that ethnic political transitions lead adult women to switch their ethnic identity towards that of the President in non-democratic contexts. I calculated that the average percentage of the female population switching groups is around 1.5%, which, as taken as a proportion of the average size of the ruling group in the non-democracies included in the dataset, means that one out of every ten women identifying with the ruling ethnic group in these countries previously identified with another ethnic group. I showed that this result is robust to the use of variety of different specifications and subsamples, as well as to a qualitative comparison of Ghana and Guinea.

I conclude in two ways, first by drawing out some broader implications for understanding the politics of ethnicity and nationalism, and secondly through suggestions for further research. As regards the former, my results suggest that political incentives drive identity change, specifically the degree to which presidents redistribute resources towards their co-ethnic kin in non-democracies and target co-ethnics of previous leaders for retribution. If these results are generalizable to longer periods of time and beyond Africa (inasmuch as historically the entire world was governed under non-democratic means), then much of the modern variation in ethnic fractionalization could be in part derived from the ability of centralized states to incentivize ethnic assimilation as a means for citizens to acquire access to state resources.

This implication is borne out by (Wimmer, 2015), who shows that the percentage of the population who historically lived under a centralized state is correlated both with ethnic fractionalization (negatively) and with the provision of transportation and education public goods (positively). His explanation for this relationship is similar but not identical to mine, claiming that strong states can provide incentives for members of linguistic minority groups to shift their language to the state language in order to “communicate more easily with state officials, to demand services, participation and recognition more effectively, or to become a civil servant themselves” (Wimmer, 2015, p. 7). For Wimmer the process of assimilation thus represents something of contract between the state and minority groups, such that the former provide political rights and public goods to the latter, who in return provide loyalty and identification with the former; in this sense the crucial variable explaining the success or failure of nation-building is the amount of resources available to the regime. However, my argument has little to do with the quantity of resources available to the ruling elite but much more to do with the discriminatory provision of public goods and resources towards the ruling ethnic group, such that members of the group are advantaged and those who do not identify with the group are disadvantaged.

Another implication of my results is that the incentives for assimilation into the ruling ethnic group operate only in non-democracies. Recalling the theoretical framework above, governments in democracies neither have the supply of ethnic favouritist policies due to greater scrutiny by the media and opposition parties nor the demand for such policies inasmuch as they require a broad-based majority support of the electorate. This decline in ethnic favouritism in democracies could explain why ethnic assimilation is so difficult to incentivize in democratic contexts. There is abundant evidence that democratization in Africa and elsewhere has brought about the rise of clientelistic identity-based political parties for minority ethnic groups (Keefer, 2007; Van de Walle, 2003), thereby discouraging assimilation into President's party inasmuch as these new parties advocate the redistribution of resources to their core ethnic constituencies. In countries without an ethnic majority parties which wish to achieve power must either broaden their appeal beyond their core ethnic constituents or form multi-ethnic coalitions. In countries with ethnic majorities this incentive is not present at the central government level, but democratization still presents political space for minority-based political parties to emerge and disincentivize assimilation.

As regards further research on the topic, there are at least three areas that would benefit closer scrutiny in the future. First, as suggested above, the use of longitudinal survey data would help to identify individual correlates of ethnic switching, along the lines used by (Nix & Qian, 2015) in their analysis of racial switching in the United States. Second, the paper focusses on women aged 15-49, with a median age of 28 and thus a bias towards the youth. Indeed, as shown above, preliminary evidence suggests that the ethnic switching in the sample is driven by older women. Further research could use other data that surveyed a broader range of ages, especially given previous research on how ageing can affect ethnic and racial identity (Phinney, 1990; Yip, Seaton, & Sellers, 2006). Third and finally, I show that adult women are more likely to change their identity towards that of the President than men (cf. Table 3), which is consistent with previous scholarship that women are more likely to benefit from public goods targeted at co-ethnics in Africa (Franck & Rainer, 2012). However, this result conflicts with another set of literature that suggests that women are less likely to support candidates for office who rely upon clientelistic appeals (Wantchekon, 2003), and that women are appointed to national cabinets less often in non-democracies that issue cabinet appointments as patronage positions (Arriola & Johnson, 2014). The gendered nature of ethnic favouritism and ethnic change thus needs more investigation in the future.

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Table 1: Countries and Surveys in the Dataset

Country	Surveys	Average Survey Size	Ethnic Transitions	Total # of Ethnic Groups	# of EGs > 1% of population	Average % of all EGs>1%	Average % of ruling EG
Benin	1996, 2001, 2006, 2011	11,359	1	8	8	12.4%	8.8%
Côte d'Ivoire	1994, 2005, 2011	7781	2	58	18	3.9	9.9
Ghana	1993, 1998, 2003, **2007**, 2008, 2014, **2016**	7017	2	7	7	13.5	26.6
Guinea	1999, 2005, 2012	7950	1	6	6	16.5	23.8
Kenya	1993, 1998, 2003, 2008, 2014 **2015**	11,476	1	10	10	9.4	18.4
Liberia	**1986, 2009, 2011**, 2013	5703	1	16	14	6.5	5.1
Malawi	2000, 2010, 2015	20,267	1	9	9	10.9	16.4
Mali	1995, 2001, 2006, 2012, **2015**	11,016	3	9	9	10.5	24.2
Niger	1992, 1998, 2006	7749	2	8	5	19.5	28.9
Nigeria	2003, **2010**, **2015**	7333	2	197	10	7.3	6.5
Senegal	1992, 1997, 2005, **2006, 2008,** 2010, **2012**, 2014, 2015, 2016	10,843	1	6	6	15.6	31.6
Tanzania	1991, 1994, 1996	7194	1	123	32	2.4	1.8
Zambia	1996, 2007, 2013	10,793	2	47	17	5.2	16.2
Average across all countries		*9729*	*1.5*	*38.8*	*11.7*	*10.3*	*16.8*
Average across non-democracies		*7976*	*1.5*	*36.8*	*14.3*	*9.7*	*14.7*

Bold indicates data is available for women only. All descriptive statistics is given for females only. Non-democracies here are those listed in column 1 of Table 4.

Table 2: Ethnic/Regime Transitions in the Dataset

Country	Transition	Survey	President in Previous Survey	Ethnic Group	Subsequent President	Ethnic Group
Benin	2006	2006	Mathieu Kérékou	Betamaribe/Somba	Thomas Boni Yayi	Yoruba
Côte d'Ivoire	2000	2005[20]	Henri Konan Bédié	Baoulé	Laurent Gbagbo	Bété
Côte d'Ivoire	2010	2011	Laurent Gbagbo	Bété	Alassane Ouattara	Malinké
Ghana	2001	2003	Jerry Rawlings	Ewe	John Kufuor	Akan
Ghana	2012	2014[21]	John Kufuor	Akan	John Mahama	Gonja/Guan
Guinea	2008	2012[22]	Lansana Conté	Soussou	Sékouba Konaté	Malinke
Kenya	2002	2003	Daniel arap Moi	Kalenjin	Mwai Kibaki	Kikuyu
Liberia	**2006**	**2009**[23]	**Samuel Doe**	**Krahn**	**Ellen Johnson-Sirleaf**	**Americo-Liberian**
Malawi	2004	2010	Bakili Muluzi	Yao	Bingu wa Mutharika	Lomwe
Mali	2002	2006	Alpha Oumar Konaré	Bambara/Peulh	Amadou Toumani Touré	Malinke/Peulh
Mali	2012	2012[24]	Amadou Toumani Touré	Malinke/Peulh	Dioncounda Traoré	Bambara
Mali	**2013**	**2015**	**Dioncounda Traoré**	**Bambara**	**Ibrahim Boubacar Keita**	**Malinke**
Niger	1996	1998[25]	Ali Saibou	Djerma	Ibrahim Baré Maïnassara	Haoussa
Niger	1999	2006[26]	Ibrahim Baré Maïnassara	Haoussa	Mamadou Tandja	Kanuri
Nigeria	**2010**	**2010**[27]	**Olusegun Obasanjo**	**Yoruba**	**Goodluck Jonathan**	**Ijaw**
Nigeria	**2015**	**2015**	**Goodluck Jonathan**	**Ijaw**	**Muhammadu Buhari**	**Fulani**
Senegal	2000	2005	Abdou Diouf	Serer	Abdoulaye Wade	Wolof
Senegal	2012	2014	Abdoulaye Wade	Wolof	Macky Sall	Fula
Tanzania	1995	1996	Ali Hassan Mwinyi	Shirazi/Swahili	Benjamin Mkapa	Makonde
Zambia	2002	2007	Frederick Chiluba	Bemba	Levy Mwanawasa	Lenje/Tonga
Zambia	2011	2013[28]	Levy Mwanawaswa	Lenje/Tonga	Michael Sata	Bemba

Bold indicates data is available for women only.

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[20] Robert Guéï (from the Yakouba or Dan ethnic group) held the Presidency of Côte d'Ivoire between 1999 and 2000 in between the 1994 and 2005 surveys.

[21] John Atta Mills (from the Akan ethnic group) held the Presidency of Ghana between 2009 and 2012 in between the 2008 and 2014 surveys.

[22] Moussa Dadis Camara (from the Guerze ethnic group) and Sékouba Konaté (from the Malinke ethnic group) held the Presidency of Guinea between 2008 and 2009, and between 2009 and 2010, respectively, in between the 2005 and 2012 surveys.

[23] Liberia saw seven heads of state hold office in between the 1986 and 2009 surveys.

[24] Amadou Sanogo (from the Bambara ethnic group) held the Presidency of Mali for less than one month in 2012 in between the 2006 and 2012 surveys.

[25] Mahamane Ousamane (from the Hausa ethnic group) held the Presidency of Niger between 1993 and 1996 in between the 1992 and 1998 surveys.

[26] Daouda Malam Wanké (from the Hausa ethnic group) held the Presidency of Niger for eight months in 1999 in between the 1998 and 2006 surveys.

[27] Umaru Musa Yar'Adua (from the Fulani ethnic group) held the Presidency of Nigeria between 2007 and 2010 in between the 2003 and 2010 surveys.

[28] Rupiah Banda (from the Chewa ethnic group) held the Presidency of Zambia between 2008 and 2011 in between the 2007 and 2013 surveys.

Table 3: Basic Results
(Dependent Variable: Weighted Percentage of Surveyed Population)

Model	MLM	MLM	OLS	FE	MLM	MLM
Sample	All	All	All	All	Annual Polity2 Data	Co-Ethnic President Lead 5 years
	(1)	(2)	(3)	(4)	(5)	(6)
Co-Ethnic President	0.006***	0.0005	-0.002	0.002	-0.004	0.004
	(0.002)	(0.002)	(0.005)	(0.003)	(0.004)	(0.004)
Co-Ethnic President * Non-democracy		0.015***	0.019**	0.012**	0.0016***	-0.002
		(0.004)	(0.009)	(0.005)	(0.0005)	(0.005)
Non-democracy	-0.011	-0.011	-0.001		-0.0001	-0.012
	(0.019)	(0.019)	(0.001)		(0.0001)	(0.019)
Percentage in ethnic group's region	0.315***	0.313***	0.352***	0.359***	0.315***	0.315***
	(0.033)	(0.033)	(0.065)	(0.046)	(0.033)	(0.038)
Francophone dummy	0.038**	0.038**	0.001		0.038**	0.041**
	(0.019)	(0.019)	(0.001)		(0.019)	(0.019)
Ethnic Group Percentage (lagged)			0.990***			
			(0.009)			
Constant	0.044**	0.044**	0.001	0.088**	0.039**	0.045
	(0.020)	(0.020)	(0.001)	(0.001)	(0.016)	(0.020)
Countries	13	13	13	13	13	13
Surveys	57	57	43	57	57	44
Ethnic Groups	152	152	152	152	152	152
Observations	597	597	445	597	597	494

* $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$. Non-democratic countries are defined as having an average Polity2 score of less than 4.5 across all years between the first and last DHS survey. The specification in column 4 includes both ethnic group fixed effects and country-year fixed effects.

Table 4: Additional Robustness Tests, Sub-Samples

(Dependent Variable: Weighted Percentage of Surveyed Population)

Sub-Sample	Only one Survey per Round	Only Surveys Before/After Regime Change	Only Non-Democracies	Religious Transitions	Male and Female Respondents
	(1)	(2)	(3)	(4)	(5)
Co-Ethnic President * Non-democracy	0.018***	0.021***	0.016***		0.008*
	(0.008)	(0.005)	(0.003)		(0.005)
Co-Religious President * Non-democracy				-0.037**	
				(0.015)	
Countries	13	13	6	8	11
Surveys	47	36	22	37	44
Ethnic Groups/Religions	152	152	86	24	127
Observations	499	398	303	114	456

* p ≤ 0.1, ** p ≤ 0.05, *** p ≤ 0.01. All regressions include the same controls as in Table 3. Column 1 also contains round fixed effects.

Table 5: Survey Sub-Samples

Sub-Sample	Illiterate	Literate	0-3 years schooling	4+ years schooling	Age 15-27	Age 28-49
	(1)	(2)	(3)	(4)	(5)	(6)
Co-Ethnic President * Non-democracy	0.019*** (0.006)	0.013** (0.006)	0.021*** (0.007)	0.018*** (0.006)	0.013*** (0.005)	0.018*** (0.004)
Countries	13	13	13	13	13	13
Surveys	54	54	55	55	57	57
Ethnic Groups	153	153	153	153	153	153
Observations	557	557	558	558	597	597

* p ≤ 0.1, ** p ≤ 0.05, *** p ≤ 0.01. All regressions include the same controls as in Table 3. Literacy data is not available for Cote d'Ivoire in 2005, Ghana in 2007 and Liberia in 2011; schooling data is not available for Ghana in 2007 and Tanzania in 1994.

Figure 1: Ethnic Change in Guinea

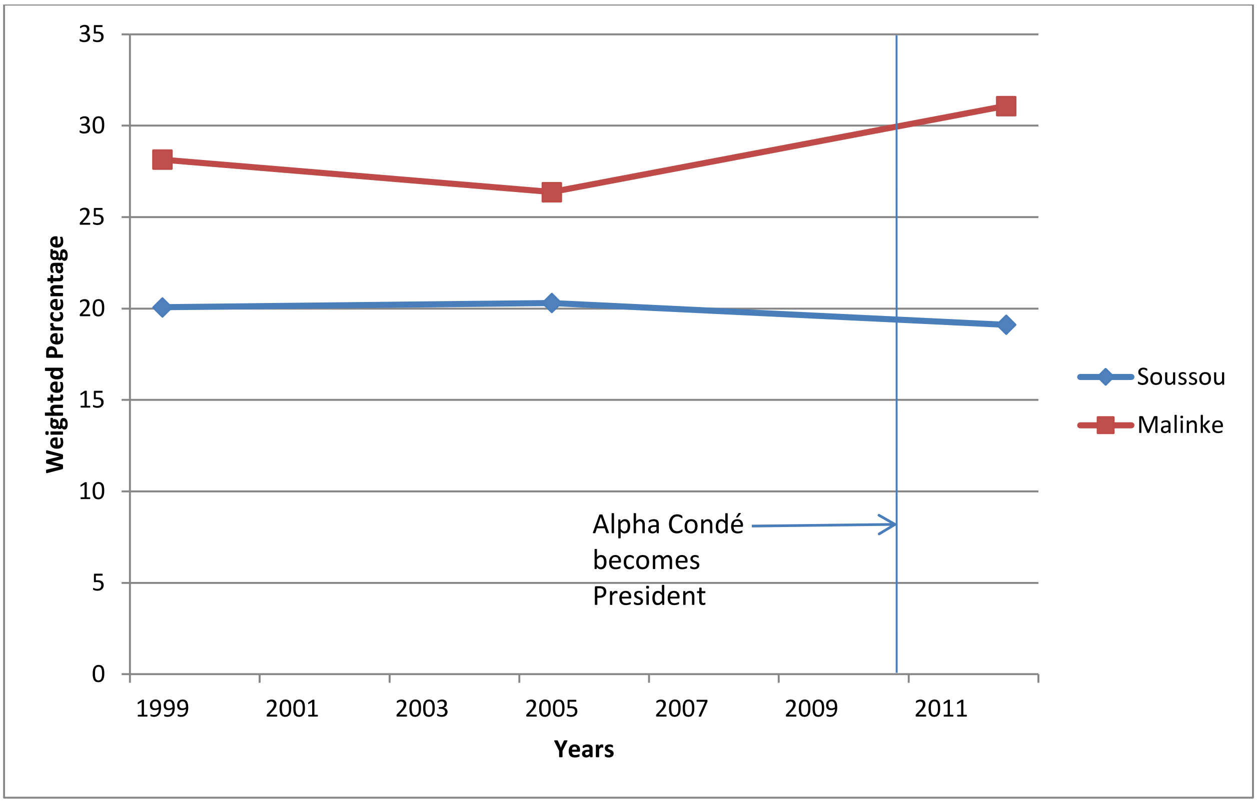
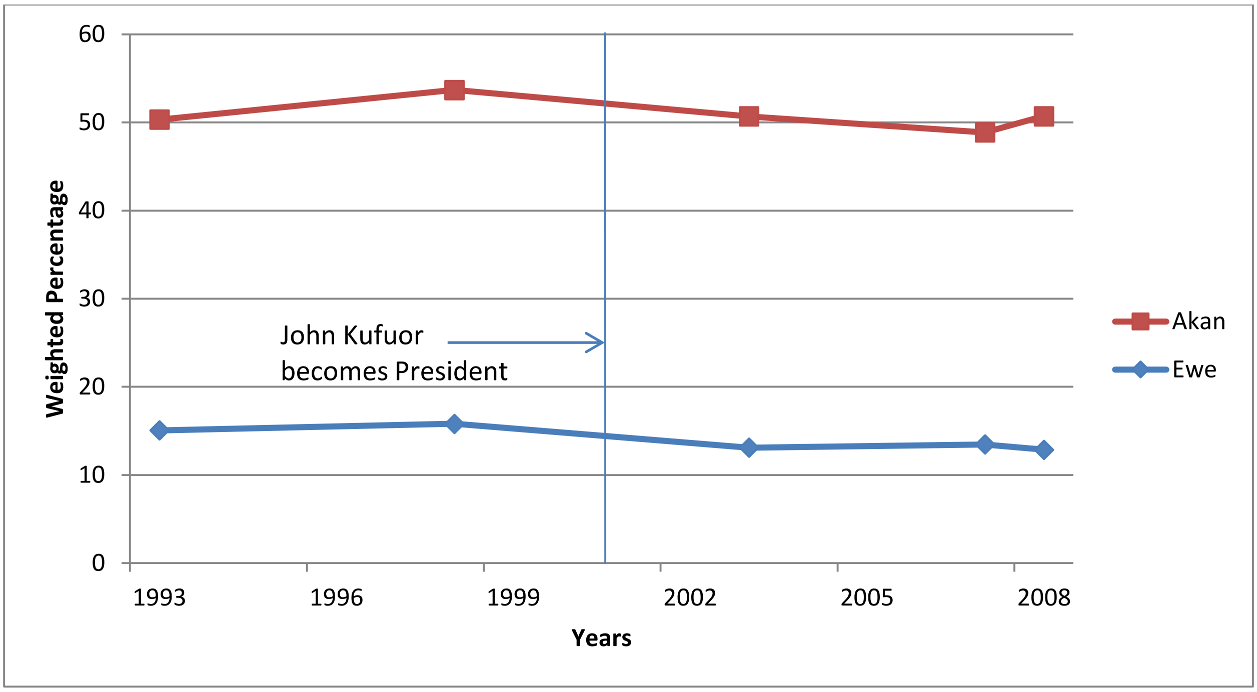


Figure 2: Ethnic Change in Ghana



Appendices

Appendix 1: Coding Presidential Ethnic Groups

I used a variety of secondary sources to code the President's ethnic group. In only two cases was the coding controversial, namely Liberia and Mali. The former case involved Ellen Johnson-Sirleaf, President of Liberia since 2006, whom I coded as Americo-Liberian despite the fact that none of her grandparents were ethnically Americo-Liberian (two were Gola, one was Kru and one was German). I did so for three reasons: 1) she was a minister in the last Americo-Liberian government of William Tolbert when he was overthrown in 1980, 2) both of her parents were taken in as "wards" by Americo-Liberian families, which was the historical path to assimilation into Americo-Liberian society for natives, and 3) she has light skin colour due to being ¼ German and thus has a history of being mistaken for an Americo-Liberian of mulatto descent (cf. (The Analyst, 2012)).[29] In any case, my results are robust to recoding Johnson-Sirleaf's ethnic identity as Gola or Kru.

The second case involved Mali, where I followed (Kramon & Posner, 2013) and coded Alpha Oumar Konaré as mixed Bambara and Peulh, and Amadou Toumani Touré as mixed Malinke and Peulh. I assume that Dioncounda Traoré, who was interim President of Mali between 12 April 2012 and 4 September 2013, was Bambara like his clansman Moussa Traoré (President 1968-1991), although it is possible that he is actually from the Malinke ethnic group considering his birthplace in the city of Kati is on the border of the Bambara and Malinke home ethnic territories according to (Murdock, 1967). As with Liberia the result are robust to recoding Traoré as ethnically Malinke.

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[29] Mulattos were the dominant political group in Liberia from its founding in 1847 through the late 19th century.

Table A.1: All Ethnic Political Transitions in Sub-Saharan Africa, 1986-2015 (Bold = included in DHS dataset; Italics = President was in power for less than one year)

Country	**Years**
Benin	**2006**
Burundi	1993, 1996, 2003
Cote d'Ivoire	*1999*, **2000, 2010**
Democratic Republic of Congo	1997
Gambia	1996
Ghana	**2001**, **2012**
Guinea	**2008**
Guinea-Bissau	2000
Kenya	**2002**
Liberia	1990, *1996*, 1997, 2003, **2006**
Malawi	1994, **2004**, 2012, 2014
Mali	1991, 1992, **2002**, **2012**, **2013**
Mozambique	2015
Niger	**1996**, **1999**, 2010, 2011
Nigeria	1993, *1998*, 1999, 2007, **2010**, **2015**
Rwanda	1994
Senegal	**2000**, **2012**
Sierra Leone	2007
South Africa	*2008*, 2009
Tanzania	**1995**, 2005, 2015
Zambia	**2002**, 2008, **2011**, *2014*, 2015

The DHS data thus covers 13 out of 21 countries for which there has been an ethnic political transition in Sub-Saharan Africa between 1986 and 2015, and 21 out of 38 ethnic political transitions within these countries for Presidents in power for more than 1 year.

Table A.2: Correlates of Inclusion in the Dataset

Variable	2+ Surveys w/ Ethnic Data	0/1 Surveys w/ Ethnic Data	Difference of Means t-test
British Colony	0.462	0.406	-0.053*
ELF (Fearon)	0.777	0.684	-0.093*
Mean Absolute Latitude (log)	2.108	2.123	0.015
Km2 (log)	12.828	12.326	-0.504
GDP per capita (2012, log)	6.737	7.200	0.463
Polity2 Score (2015)	6.077	1.290	-4.787***
Polity2 Score (2015), including Countries w/o transitions	3.947	1.760	-2.187*

* $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$. The table uses World Bank GDP data from 2012 as that is the last year which has complete coverage across the continent.

Table A.3: Individual Country Results

(Dependent Variable: Weighted Percentage of Surveyed Population)

Only	Co-Ethnic President	Ethnic Groups	Observations
Benin	-0.007 (0.008)	8	32
Cote d'Ivoire	0.009 (0.007)	18	54
Ghana	0.004 (0.008)	7	49
Guinea	0.020*** (0.007)	6	18
Kenya	0.023*** (0.004)	10	60
Liberia	0.019 (0.014)	15	60
Malawi	0.001 (0.006)	9	27
Mali	0.001 (0.007)	9	45
Niger	0.021*** (0.008)	5	15
Nigeria	-0.002 (0.010)	10	30
Senegal	0.004 (0.005)	6	60
Tanzania	0.006 (0.005)	33	96
Zambia	-0.007* (0.004)	17	51

* $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$. Home region variable included across all regressions (but not reported here).

Table A.4: Secondary Interaction Results

(Dependent Variable: Weighted Percentage of Surveyed Population)

	(1)	(2)	(3)	(4)	(5)	(6)
Co-Ethnic President * Non-democracy	0.012**	0.013**	0.012**	0.015***	0.016**	0.015***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)
Non-democracy (in Neighboring Countries)	-0.001					
	(0.006)					
Log GDP per capita		0.0003				
		(0.001)				
Total Years of Schooling			-0.001			
			(0.001)			
ELF (Fearon 2003)				-0.0023		
				(0.027)		
State Antiquity Index					-0.001	
					(0.019)	
Intermarriage Rate						-0.012
						(0.023)
Countries	13	13	11	13	12	11
Ethnic Groups	152	152	136	153	120	127
Observations	597	597	540	597	501	456

* p ≤ 0.1, ** p ≤ 0.05, *** p ≤ 0.01. All regressions include the same controls as in Table 3.

Table A.5: DHS Data on Religious Political Transitions in Sub-Saharan Africa

Country	Mean Polity2 Score	Surveys	Transition(s)
Cote d'Ivoire	-1.1	1994, 2005, 2011	Catholic to Muslim
Ghana	5.4	1993, 1998, 2003, 2007, 2008, 2014, 2016	Catholic to Protestant
Madagascar	6.3	1992, 1997, 2003, 2008, 2011, 2013	Catholic to Protestant, Protestant to Catholic
Malawi	5.7	2000, 2004, 2010, 2015	Muslim to Catholic, Catholic to Protestant
Mozambique	5.0	1997, 2003, 2009, 2011	Catholic to Protestant
Nigeria	0.5	1990, 2003, 2008, 2013	Muslim to Protestant
Tanzania	-2.2	1991, 1994, 1996, 1999, 2003, 2004	Muslim to Catholic
Zambia	4.6	1996, 2007, 2013	Protestant to Catholic

Notes: the Nigeria 2010 and 2015 DHS surveys were unusable inasmuch as they did not distinguish between Catholics and Protestants.