Explaining Ethno-Regional Favouritism in Sub-Saharan Africa

Sanghamitra Bandyopadhyay and Elliott Green

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Sanghamitra Bandyopadhyay
Queen Mary, University of London
s.bandyopadhyay@qmul.ac.uk

and

Elliott Green[1]
London School of Economics
e.d.green@lse.ac.uk

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Abstract:

A burgeoning literature on ethno-regional favouritism in Sub-Saharan Africa has largely found that Presidents favour their co-ethnic kin in the provision of public and private goods. However, this literature has largely remained empirically narrow in focus. To fill this gap, we conducted the largest examination to date of ethno-regional favouritism in Sub-Saharan Africa across both public and private goods. Strikingly, we failed to find evidence of a positive effect of living in an area inhabited by the President's co-ethnics. However, we did document the existence of a "co-ethnic bonus," whereby individuals in co-ethnic areas had higher opinions of the government, viewed themselves as subjectively better off, and rated government performance on service delivery higher, even after controlling for the services in question. This argument is consistent with evidence from previous literature on how having co-ethnics in power generates positive psychological or "psychic" benefits separate from material benefits.

Keywords: African Development; Co-Ethnicity; Ethnic Politics; Clientelism; Public Goods

People have blamed the Langi over [former Ugandan President Milton] Obote's misdeeds but go to Akokoro [Obote's ancestral home] and see whether the people there gained at all. People elsewhere think all of you from western Uganda are enjoying, and they are envious of you [but] what do you, the ordinary people of Kiruhura, have?

> Presidential Candidate Kizza Besigye upon visiting the hometown of President Yoweri Museveni during the 2011 Ugandan Presidential campaign (Sserunjogi, 2011).

1. Overview

There is a large literature on ethno-regional favouritism in the developing world, particularly in Sub-Saharan Africa where Presidents are perceived to favour their co-ethnic kin through access to both private and public goods. More specifically, scholars have shown a positive effect of having a co-ethnic in power on road construction (Burgess et al., 2015), night-time luminosity (De Luca et al., 2018; Dickens, 2018; Soumahoro, 2015), infrastructure (Walters et al., 2023), perceptions of fair treatment by the government (Ahlerup and Isaksson, 2015), access to education (André et al., 2018; Franck and Rainer, 2012; Kramon and Posner, 2016; Li, 2018), wealth (Dickens, 2018), and healthcare access (Beiser-McGrath et al., 2021; Franck and Rainer, 2012).

However, another set of literature suggests that these results are not robust to alternative measures (Kramon and Posner, 2013; Simson and Green, 2020), suffer from endogeneity concerns due to uneven colonial investment (Maravall et al., 2023), or find the existence of a null or even a negative effect of ethno-regional favouritism (Kasara, 2007; Kudamatsu, 2009). This evidence is well supported by older literature on how clientelistic politics in Africa benefit the elite but not the masses, who support their co-ethnics despite failing to gain materially when they are in power (cf. Van de Walle, 2003).

One potential explanation for these contradictory findings is that much of the scholarship demonstrating a positive effect of ethnic favouritism has a narrow empirical focus. More specifically, almost all aforementioned studies either examine only one country – particularly Kenya – (André et al., 2018; Burgess et al., 2015; Kramon and Posner, 2016; Kudamatsu, 2009; Li, 2018; Walters et al., 2023), focus on only one outcome (Ahlerup and Isaksson, 2015; Burgess et al., 2015; De Luca et al., 2018), and/or use only one dataset (Ahlerup and Isaksson, 2015; De Luca et al., 2018; Franck and Rainer, 2012). In the first case, the problem with studying only one country is obvious: such a phenomenon could be limited to only a few studied countries because of high-quality data relative to other areas. In the second case, there is a similar problem with focusing on one outcome and not others, whereby governments could be giving with one hand while taking with the other; thus, as noted previously by Kasara (2007), only a wholistic approach that examines multiple outcomes simultaneously can assess the degree to which Presidents favour their co-ethnic kin. Indeed, because some goods take longer to deliver, and some are exclusively financed and delivered by national governments, focusing on one particular type of good can

generate spurious results. Finally, in the third case, the use of multiple sources is critical for external validity in a situation where differences between group-level outcomes can be statistically significant but still very small in magnitude (Simson and Green, 2020).

We are not the first to complain about the narrow focus of much of this literature (De Luca et al., 2018). Most notably, Kramon and Posner (2013) find that different measures of favouritism and a focus on different countries can generate varied effects and caution about making general claims about ethnic favouritism. Yet their advice has largely been ignored if we consider the paucity of scholarship that uses multiple datasets to examine multiple outcomes across multiple countries.[2] Moreover, within this literature, there has been a complete lack of scholarship on both the differences between objective and subjective measures of well-being and the distribution of access to goods *within* the President's ethnic group, despite, as we explain below, clear theoretical reasons for examining both outcomes.

Therefore, we study the effects of having a co-ethnic President on various outcomes using multiple data sources across over two dozen Sub-Saharan African countries. More specifically, we use over 200 country surveys from the Afrobarometer and Demographic and Health Survey (DHS) databases from the late 1980s to the present, as well as geocoded data on paved roads dating back to 1960, to generate country-district-year panel datasets with detailed information on the proportion of residents who are co-ethnic with the President. In all three cases, we are the first to use these data sources to examine contemporaneous evidence for ethnic favouritism across the entire region.[3] In the case of the Afrobarometer and DHS databases, the continued increase in the number of geocoded country surveys alongside ongoing regime changes in Africa allows us to use these two data sources to examine contemporaneous variations in access to a large number of public and private goods at the district-level for the first time. This contrasts with previous examinations into ethnic favouritism in Africa that have used individual-level DHS data as a source of historical data on infant mortality and schooling (Beiser-McGrath et al., 2021; Franck and Rainer, 2012). Geocoded data on paved roads has only recently been published (Jedwab and Storeygard, 2022).

We document three important findings. First, we find no evidence of a positive effect of having a co-ethnic President on any objective outcome of interest; in fact, we find evidence of a negative effect for several outcomes. More specifically, we show that, consistent with evidence from Maravall et al. (2023), Presidents' ethnic homelands tend to have higher levels of human and economic development than other areas. However, this relationship no longer holds, and even reverses, when including country-fixed effects

[2] We know of only two such papers, namely Beiser-McGrath et al. (2021) and Dickens (2018), both of which are still very limited in the outcomes they study.
[3] Dickens (2018) uses contemporaneous data on one of our outcomes, namely the DHS wealth index, but only for 33 surveys across 13 countries.

that allow us to focus only on internal variations. These results suggest that, far from benefitting from having a co-ethnic President, Africans who live in their President's ethnic homelands see higher levels of deprivation.

Our second finding is based on perceptions of government performance and quality of life from Afrobarometer, which suggest that, across many subjective measures, individuals in areas co-ethnic to the President rate the performance of the President and the national government more broadly as better than in other areas, while also rating their quality of life and treatment of their ethnic group as better than respondents in other areas. These results suggest a disconnect between objective and subjective measures of well-being, such that individuals from co-ethnic areas perceive their lives and access to public goods as better than other areas without any objective evidence to support their beliefs. We confirm these findings by showing the existence of a "co-ethnic bonus" in the assessment of a variety of specific government functions, whereby individuals in co-ethnic areas have higher levels of satisfaction with government performance even after controlling for the existence and/or quality of the goods in question.

Finally, we use individual-level DHS wealth index data to square our findings of a null or negative co-ethnicity effect with the large body of literature that finds a positive effect of ethnic favouritism. More specifically, upon breaking down the wealth index into quintiles and measuring co-ethnicity on both individual and district levels, we show that both individual and district-level co-ethnicity with the President is associated with an increase in belonging to the highest (80-100%) quintile (and a concomitant decline in the middle three wealth quintiles). However, an interaction between the variables is negative and large in magnitude, which suggests that positive benefits of individual co-ethnicity accrue only to those co-ethnics who reside outside the President's ethnic homeland while negative effects accrue to co-ethnics living in co-ethnic districts.

Our results clearly contradict the earlier scholarship that argues governments must provide material goods to their co-ethnics for continued political support. Instead, our results support the long-standing argument that citizens accrue non-material psychological or "psychic" benefits from having a co-ethnic in power (Chandra, 2004), alongside a literature that suggests individuals vote for co-ethnic elites because it is their least-worst choice. They are also consistent with the theory that ethnic favouritism is not uniform across members of the ruling group, with incentives driving governments to channel goods towards co-ethnic elites over non-elites due to needing their continued support, although interrogating this latter theory is beyond the bounds of this paper.

In the rest of the paper, we discuss the literature on regional favouritism before presenting our data, econometric strategy, and results. We then examine how our results fail to support the standard model

of ethnic favouritism but are instead consistent with theories focusing on "psychic benefits" and the non-uniform distribution of ethnic favouritist policies. We then discuss the qualitative example of Goodluck Jonathan's Nigeria to help make sense of our results before concluding.

2. Literature

The theoretical core of the literature on ethnic favouritism is that rulers need to have the support of their co-ethnics to stay in power, and that they maintain this support via the provision of public or private goods. This assumption is perhaps most clearly specified in a formal model by Padró i Miquel (2007) and later repeated in Burgess et al. (2015), although the argument that members of specific ethnic groups are targeted for distributive government spending or "pork" can be found earlier in Fearon (1999). More specifically, the fact that ethnic identity is difficult to change relative to other identity markers like language or religion makes it useful for politicians looking to identify voting blocs they can win over by providing public goods. The President's co-ethnics can thus be seen as akin to "core" supporters of the government; the theory of ethnic favouritism is thus akin to Cox and McCubbins (1986) 's argument that politicians will target redistribution towards their core supporters.

Quantitative evidence for the existence of ethnic favouritism in Africa can be dated back to Franck and Rainer (2012), which used historical DHS data to show that the President's co-ethnics were more likely to attend and complete school and suffered lower levels of infant mortality. As noted above, since then, there has been a burgeoning quantity of literature demonstrating a positive effect of co-ethnicity on various outcomes, whether in individual countries (André et al., 2018; Burgess et al., 2015; Kramon and Posner, 2016; Li, 2018; Walters et al., 2023), Africa more widely (Ahlerup and Isaksson, 2015; Beiser-McGrath et al., 2021; Dickens, 2018; Soumahoro, 2015), or across the developing world (De Luca et al., 2018). A separate set of literature has focussed on regional or birthplace favouritism, which attempts to show a bias in public goods provision towards the birth region or district of the President and thus avoids the problem of coding the ethnic identity of both the President and citizens (which is especially problematic in countries without accurate census or survey data on ethnicity), and which has also provided evidence for a positive effect on such outcomes as luminosity and perceptions of fair treatment by the government (Ahlerup and Isaksson, 2015; Hodler and Raschky, 2014).

The debate on whether politicians target the provision of public goods towards "core" or "swing" voters has raged for several decades within political science without a clear answer, although recent evidence supports a generally nuanced set of arguments about when, why, and how certain groups are targeted (Albertus, 2013; Gonschorek et al., 2018; Kang, 2018; Kauder et al., 2016; Litschig, 2012; Mares and Young, 2018). However, the literature on ethnic and regional favouritism has been heavily one-sided in

its findings, despite its obvious theoretical similarity with the core/swing voter literature, with relatively little scholarship demonstrating a null or even negative effect of co-ethnicity on redistribution (excepting: Kasara, 2007; Kramon and Posner, 2013; Kudamatsu, 2009; Simson and Green, 2020). Theoretically, this disparity is even more striking if one considers that the core/swing voter model is built upon the need for politicians to maintain electoral support, while the ethnic/regional favouritism model is built instead on politicians' need for political support, which could consist of votes but also of financial support and is thus not premised on equal levels of support from all members of a given group or block.

There are several possible reasons for this disparity in findings between these two scholarship sets. One reason could derive from publication bias, as papers that find a null relationship, such as Kudamatsu (2009), remain unpublished, while other null findings might remain unwritten altogether. The problem of publication bias within social science has been well documented in recent years (Franco et al., 2014; Gerber et al., 2001; Gerber and Malhotra, 2008); it is easier to publish a paper that demonstrates a statistically significant relationship between two variables rather than one that yields a set of null results.

A second reason, already alluded to above, is a data issue: in contrast to data on political partisanship that can establish "core" and "swing" voters in established democracies based on extensive survey data, identifying co-ethnics requires accurate census or survey data which, historically, has in short supply in developing countries, particularly in Africa. The result is that scholarship on ethnic favouritism has often measured co-ethnicity in crude or simplistic ways, either by coding a given region or district as co-ethnic with a dummy variable (Burgess et al., 2015), using outdated maps of ethnic homelands (De Luca et al., 2018), or using current survey data on respondents' ethnic identification to generate historical data on co-ethnicity for respondents during their childhoods or at the time of birth of respondents' children up to 38 years in the past.[4] These strategies are clearly suboptimal for various reasons, including evidence that ethnic identification can change over time in Africa in response to economic and political phenomena (Green, 2021; 2022) and the problems of using recall data (De Nicola and Giné, 2014), particularly regarding the effects of politics on memory (Ansolabehere and Hersh, 2017).

A third reason could be that the benefits that co-ethnics receive from governments are different than those received by core voters regarding the distribution of non-material benefits – such as higher levels of self-esteem, which Chandra (2004) and Horowitz (2000) label "psychic benefits." More specifically, individuals might benefit from the accession to power of a co-ethnic by enjoying more social recognition on a day-to-day basis, especially if that group was previously excluded from power. In contrast, members of a group that has recently lost power might perceive lower social recognition and self-esteem levels.

[4] DHS surveys often include data on children of respondents up to the age of 38.

Indeed, in situations where ethnicity is highly politicized, there is a strong incentive for the leader's co-ethnics to support the leader and help them stay in power (i.e., by voting for the ruling party) for fear that, once they lose power, they might be targeted for retribution.[5] In other words, citizens might continue to support a co-ethnic President, not because they benefit materially, but because it is their least-worst option. For example, in the 1992 Kenyan general election, ruling KANU elites rallied support among President Daniel arap Moi's Kalenjin ethnic community by referring to the Kalenjin proverb *Ngo samis murian kobo kot ne bo* ("A rat stinks but it has its own home," or, more loosely translated, "although Moi is bad, he is our rat") (Lynch, 2008, p. 552).[6]

As such, we suggest that a more inductive approach to the study of ethnic favouritism would be useful, whereby large contemporaneous datasets that contain information on both objective indicators and subjective perceptions of ethnic bias would allow us to assess the degree to which ethnic favouritism is a broad-based phenomenon.

3. Data and Specification

As noted above, we draw from three different sources for our data. The first two, the Afrobarometer and DHS, have long been used for studying the politics of development in contemporary Africa due to their widespread coverage across time and space. Yet neither the Afrobarometer nor the DHS are longitudinal surveys and thus cannot be used in their raw form to trace the existence of ethno-regional favouritism across time. Moreover, earlier DHS surveys were not geocoded beyond the region level, and Afrobarometer data was only released in geocoded form to researchers in 2017. For these reasons, earlier scholarship into ethnic favouritism used DHS individual-level survey data to track historical data on infant mortality and education in Africa dating back to the 1950s (Beiser-McGrath et al., 2021; Franck and Rainer, 2012) but could not examine the contemporaneous relationship between ethnicity and other types of public goods provision. Yet the recent addition of new rounds of geocoded data to both the Afrobarometer and the DHS means that there is now a substantial amount of contemporaneous data on African countries that can be used to analyse many different outcomes dating back over 30 years. Our expanded DHS dataset, therefore, encompasses 101 surveys from 24 countries from 1988 to 2021, compared to the 45 surveys from 17 countries from 1986 to 2009 used by Franck and Rainer (2012).[7]

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[5] Examples from Africa of reprisals for members of ethnic groups who recently lost power abound, including the targeting of Malinké citizens under Lansana Conté's rule in Guinea in the late 1980s (Posthumus, 2016, p. 128), the Krahn in Liberia after Samuel Doe's fall from power in 1989 (Ellis, 1995, pp. 166-7) and the Langi under Idi Amin in Uganda in the 1970s (Mazrui, 1980). Another way to phrase the psychological motivation for individuals to support a co-ethnic President for fear of losing power is through the logic of the endowment effect, whereby individuals who own a resource place more importance on losing it than they do on acquiring it in the first place (Tversky and Kahneman, 1991).

[6] Note the similarity here to the famous quote attributed to Franklin D. Roosevelt: "he may be a son-of-a-b*tch, but he's our son-of-a-b*tch."

[7] We supplemented eight surveys from the UNICEF Multiple Indicator Cluster Survey (MICS) to the DHS dataset, since the MICS data, like the DHS, focusses on demographic and health outcomes for women aged 15-49 across the developing world, including in several countries not covered over the same time span as the DHS. The MICS data is not, however, geocoded,

Our third data source is panel data on the length of paved roads across Africa, which was compiled from semi-regular Michelin maps dating back to the 1960s by Jedwab and Storeygard (2022). This dataset essentially extends the data on road construction in Kenya from Burgess et al. (2015) across 38 other countries in mainland Sub-Saharan Africa (excepting Lesotho, Swaziland, and South Africa) and contains geocoded data on road length categorized by highways, paved roads, and other improved roads from three sets of regional maps published between 1961 and 2014. More specifically, data on each country is drawn from either the Michelin map for Central/Southern Africa (across 23 maps between 1961 and 2012), North-East Africa (21 maps between 1966 and 2012), or North-West Africa (20 maps between 1965 and 2014). In their analysis, Burgess et al. (2015) use the change in the district's share of all new roads constructed in the country between the previous and current maps. However, in around 10% of the observations in our dataset, there is a negative change in road length by country (due to a decline in the quality of roads), makings the district share in the road network growth for these observations meaningless.[8] As such, we decided to use a simple measure of the (logged) length of paved roads and highways by district as our dependent variable, although we use alternative measures as discussed below.[9]

In all three cases, we created panel datasets at the district level (the second-highest administrative unit) and round (for the surveys)[10] or year (for the roads data, where each observation was taken from the map year). For the Afrobarometer and DHS data, we collapsed the data along the provided survey weights, allowing for variation in sampling across rural and urban areas and non-responses. The original data was taken at the individual level for the Afrobarometer and the household for the DHS; we did not use individual-level data for the DHS as it was primarily focussed only on women aged 15-49 (although we return to this data later in the paper).

Like Burgess et al. (2015), we focused on units of government rather than ethnic- or language-group homelands, as others have done (De Luca et al., 2018; Dickens, 2018), for three reasons. First, as noted above, ethnic identities are constantly in flux for political and economic reasons, especially in Africa, where individuals have a long history of assimilating into groups with more access to political power (Green, 2021). Therefore, relying upon outdated ethnographic maps from the mid-20th century to study contemporary outcomes could be highly misleading. Secondly, if we are studying the mechanisms by which central governments allocate resources to the President's co-ethnics, then it is highly likely that

and thus we are limited to datasets that include district or regional-level data in their data. (We code the round data for these eight surveys as if they were conducted by the DHS.) Our results are robust to dropping the MICS data from our analysis.

[8] Part of the problem is in our use of more maps than Burgess et al. (2015); they only used ten maps, none of which were from contiguous years.

[9] We add 0.01 km to observations where the length is precisely zero.

[10] In cases where the DHS has more than one survey per country-round, we always chose the geo-coded survey with the highest number of respondents.

such allocations would include transfers to individual local-level governmental units rather than ethnic homeland areas, a point to which we return in our qualitative discussion below. Thirdly, we have sub-national jurisdictional data but lack geo-coordinates for a substantial number of the DHS surveys in question – including all three surveys under President Daniel arap Moi's rule in Kenya, for example – meaning we would have to drop these surveys from our analysis if we were to use geocoded ethnic homelands as our unit of observation.

As for constructing our country-district survey observations, in many cases, the district names were included in the raw survey data. In others, we used geo-coordinates to identify a stable list of districts over time. In three cases – Central African Republic, Nigeria, and Uganda – we chose to use the highest administrative unit level rather than the second-highest, both because of a lack of consistent data at the lower tier and because the number of observations per unit at the highest level was comparable to other countries in our database – see Tables A1 and A2. (Our results are robust to the use of country-region survey observations instead.)

The dependent variables for the Afrobarometer and DHS data are based on indices constructed as the arithmetic mean across each type of outcome. More specifically, for the Afrobarometer, the indices are available based on the following outcomes: infrastructure (from enumerator responses on the existence of paved roads, piped water, electricity, sewage system, post offices, schools, police stations, and health clinics), assets (from respondent answers to questions about the ownership of a radio, TV, car/motorcycle, and mobile phone), poverty (from respondent answers to questions about whether they went without food, drinking water, medical care and income over the previous year), and full-time employment (from respondent answers). For the DHS, the outcomes are infrastructure (from respondent answers on access to piped water, electricity, and a flushing toilet) and assets (from respondent answers on the ownership of a radio, TV, refrigerator, bicycle, motorcycle and/or car). For the road data, our dependent variable is the (logged) length of roads by district. The descriptive statistics for all three data sources are given in Table A3.

We used the survey data to code the proportion of residents by district who were co-ethnic to the President at the time of the survey, except for the road data, where we used the Afrobarometer and DHS data to generate a simple dummy variable that captured whether the majority of the population of a district was co-ethnic with the President. (Using this dummy variable across all datasets yields almost identical results – available from the authors upon request.) Regarding coding the President's ethnicity, we list the Presidents included in the Afrobarometer and DHS datasets in Appendix A4, along with their dates in power and ethnic identities; in cases where they have multiple ethnic heritages, we list both identities and code the regions/districts as co-ethnic accordingly. Additionally, we excluded countries from our analysis for which we lacked sub-national data on ethnicity, such as Angola, Burundi, and

Rwanda, or which are largely ethnically homogenous (like Lesotho and Swaziland). Finally, we included Ethiopia in the DHS dataset by coding the ethnicity of the Prime Minister, as the Prime Minister's position holds more political power.

Our basic model is to regress a public/private goods outcome on the proportion of the population co-ethnic to President, along with district- and country-survey-fixed effects:

$$y_{ict} = \theta_i + \beta_{ct} + \lambda P_{ict-1} + \gamma \mathbf{X}_i + \varepsilon_{ict} \quad (1)$$

Wherein y_{ict} is a public/private goods outcome variable for district i in country c in round t; θ_i is the district-fixed effect; β_{ct} is the country-round/year fixed effect; P_{ict-1} is the lagged proportion co-ethnic to the President, where the measure is lagged by one year; $\mathbf{X}_i$ is a vector of additional controls; ε_{ict} is a normally distributed error term, following $N(0, \sigma_\varepsilon^2)$.

Consistent with the rest of the literature on ethnic favouritism, we used a one-year lag from the mid-point of the survey to code the ethnicity of the President, with our results robust to coding the President's ethnicity contemporaneously with the survey or with a two-year lag as reported in Table A5. As with similar literature using contemporaneous data on ethnic or regional favouritism (De Luca et al., 2018; Hodler and Raschky, 2014), the inclusion of the country-round or country-year fixed effect is particularly important as it allows us to control for country/survey or country/year specific factors, including survey design, time of year, and other related issues. We also cluster the standard errors at the level of the country-district and weight each country-survey equally. Finally, we control for urbanization when using survey data, assuming that both public and private goods will be more plentiful in urban areas, and the proportion of female respondents for the Afrobarometer data, assuming that women may have different access to certain goods.

4. Results

We begin our set of results in Table 1, using the Afrobarometer data in columns 1-4, DHS data in columns 5-6, and data on paved road coverage in column 7. In Panel A, we use the main specification without district-fixed effects to see if districts with a higher proportion of co-ethnics have higher levels of access to public and private goods. Meanwhile, in Panel B, we introduce district-fixed effects. In Panel A, we find that households in co-ethnic areas own more assets, have lower incidences of poverty, are more likely to have full-time employment, have greater access to infrastructure and assets, and have more paved roads, although the last result is imprecisely estimated. These findings echo previous findings from De Luca et al. (2018), Maravall et al. (2023), and others who show that co-ethnic areas have higher economic development and education levels but do not allow for any causal interpretation.

However, when introducing district fixed effects in Panel B, we find that most (five out of seven) of the coefficients from Panel A flip their signs. More specifically, having a co-ethnic President is now associated with 3-6% less access to infrastructure and asset ownership but is not associated with poverty or full-time employment in the Afrobarometer data. In the DHS and paved roads data, all three coefficients are no longer statistically correlated with the outcome.

Table 1: Main Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Data Source	Afrobarometer	Afrobarometer	Afrobarometer	Afrobarometer	DHS	DHS	Jedwab and Storeyguard
Dependent Variable:	Infrastructure Index	Assets Index	Poverty Index	Full-Time Employment	Infrastructure Index	Assets Index	Paved Roads (in Km, logged)
			Panel A: Without District Fixed Effects				
Co-Ethnic President t-1	0.011	0.023***	-0.045***	0.029***	0.023***	0.016***	0.530*
	(0.010)	(0.008)	(0.008)	(0.009)	(0.007)	(0.005)	(0.309)
			Panel B: With District Fixed Effects				
Co-Ethnic President t-1	-0.048***	-0.033***	0.004	0.026	-0.008	0.004	-0.061
	(0.014)	(0.009)	(0.012)	(0.016)	(0.007)	(0.003)	(0.124)
Country-Round/Year FEs	yes	yes	yes	yes	yes	yes	yes
Countries	23	22	23	23	23	23	19
Country-Rounds/Years	110	101	113	111	95	96	332
Districts	1317	1318	1317	1318	1102	1105	1696
Observations	5409	5047	5499	5462	4406	4427	31,192

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. Specifications 1-6 control for urbanization; the Afrobarometer data also includes a female dummy variable. Observations are weighted by country.

Two findings are immediately apparent from Table 1. First, none of the variables provide any positive evidence for the existence of ethnic favouritism in Panel B. Indeed, when disaggregating the indices along each variable in Tables A6-A10, we observe multiple outcomes negatively associated with co-ethnicity, including paved roads, piped water, all four types of assets, and cash income in the Afrobarometer data, and flushing toilets and bicycle ownership for the DHS. In only two instances, namely radio and motorcycle ownership in the DHS dataset, do we document an outcome positively associated with co-ethnicity.[11]

Second, the use of district-fixed effects has a major impact on the size and sign of the co-ethnic coefficient, suggesting Presidents are likely to come from ethnic groups that live in richer areas, but the areas that see a co-ethnic become President actually experience a decline in well-being rather than an increase. Incidentally, these results do not occur in the countries in our dataset that do not experience a leadership change across the survey rounds (dropping these countries from our analysis yields almost identical results – results available from the authors).

In Table 2, we turn to the DHS data on wealth – compiled based on access to assets and infrastructure and subdivided into quintiles in each survey. We can thus not only examine if co-ethnicity is associated with greater wealth but also focus on the distribution of wealth within each country-survey. We again present results without district-fixed effects in Panel A, including them in Panel B. As with Table 1, Panel A provides clear evidence that co-ethnic areas tend to be wealthier, including a lower proportion of residents in the bottom wealth quintile and higher proportions in the second, third, fourth, and fifth quintiles. However, when we include district-fixed effects, the sign reverses on the co-ethnicity coefficient in columns 1 and 2, indicating that having a co-ethnic President is associated with an increase in the proportion of respondents in the lowest three wealth quintiles (0-60%), with a weak relationship with the fourth quintile (60-80%), and no relationship with the highest quintile (80-100%). These results indicate that co-ethnicity is associated with increased poverty and is consistent with a negative effect of co-ethnicity overall.

[11] The contradictory results on radio ownership could stem from a variety of causes, including the use of different survey years and the focus on individual ownership for the Afrobarometer (with even coverage across men and women) and household ownership for the DHS (drawing solely upon female respondents).

Table 2: Poverty and Ethno-Regional Favouritism in Contemporary Africa, DHS Household-Level Data

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Wealth	0-20% Quint.	20%-40% Quint.	40-60% Quint.	60%-80% Quint.	80%-100% Quint.
			Panel A: Without District Fixed Effects			
Co-Ethnic President t-1	0.071***	-0.096***	0.099***	0.092***	0.066***	0.030***
	(0.011)	(0.015)	(0.013)	(0.013)	(0.011)	(0.008)
			Panel B: With District Fixed Effects			
Co-Ethnic President t-1	-0.018**	0.036***	0.047***	0.035***	0.019*	0.002
	(0.009)	(0.012)	(0.014)	(0.013)	(0.011)	(0.007)
District FEs	yes	yes	yes	yes	yes	yes
Country-Round FEs	yes	yes	yes	yes	yes	yes
Countries	23	23	23	23	23	23
Country-Rounds	90	90	90	90	90	90
Districts	1097	1097	1097	1097	1097	1097
Observations	4212	4212	4212	4212	4212	4212

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include an urbanization dummy. Observations are weighted by country.

We ran several additional specifications as robustness checks. In Table A11, we used alternative measures of road coverage, first by using the same dependent variable as Burgess et al. (2015) – share in new road construction – but only when the change in road length by country was zero or positive, and second by including improved roads in our analysis. Our results do not differ substantially except in column 3 (with share in new road construction as the dependent variable and including data from improved roads), where co-ethnic areas see a 5% decline in new road construction compared to non-co-ethnic areas.

We also interacted the co-ethnic variable with the level of democracy, based on scholarship that has found a negative effect for the interaction variable on either ethnic (Burgess et al., 2015) or regional favouritism (Hodler and Raschky, 2014), although most of the literature has not found a notable impact of democracy on ethnic favouritism (cf. (De Luca et al., 2018; Dickens, 2018; Franck and Rainer, 2012; Kramon and Posner, 2016)). As reported in Table A12, we find an interaction effect (using the V-Dem polyarchy index as our measure of democracy) moderates the effect of ethnic favouritism for two of the Afrobarometer outcomes, namely infrastructure and poverty (with a weak fit in the latter case). However, it is important to note that the Afrobarometer data has notably light coverage of non-democracies relative to the other two datasets. In all other specifications, neither the co-ethnic variable nor the interaction variable are correlated with the outcome variable.

Finally, we examined the effect of the President's birthplace instead of ethnicity. One possible explanation for our findings is that ethnic favouritism is very narrowly targeted; for instance, Presidents are more likely to direct favours to their hometown or district than all areas that share their ethnicity. As such, we used the President's birth district as the main right-hand side variable rather than the President's co-ethnic area and re-ran all of the specifications from Table 1 (see Appendix Table A13). Our findings show a negative correlation between presidential birthplace and infrastructure in the Afrobarometer data but no relationship with the outcomes.

5. The Co-Ethnic Bonus

So far, we have failed to find any generalized evidence for the contemporaneous existence of ethnic favouritism in Africa, with evidence suggesting that individuals living in co-ethnic areas actually see less access to public goods and assets and higher levels of poverty. Yet our analysis has only focussed on objective outcome measures up until now, without any discussion of subjective perceptions of well-being, public services or government performance. Indeed, one explanation

for our results is that individuals in co-ethnic majority areas believe that the government favours them with better government services, making them better off than their fellow citizens, even if that is not the case. Two possible explanations could lead to this belief. The first is that, as documented above, co-ethnic areas tend to be richer than other areas, which could lead citizens to misperceive the causal relationship between well-being and political power. The second is due to positive feelings they may have towards their co-ethnic leader, which could bias their answers.

To investigate this hypothesis, we use eight subjective measures of government performance and well-being from the Afrobarometer as our dependent variables in Table 3, which we regress in Panel A on a contemporaneous measure of co-ethnicity (respondents were asked about contemporaneous government performance). This panel has the same controls as in columns 1-4 of Table 1. In Panel B, we include a measure for having a co-ethnic President two years before the survey to see if the co-ethnic bonus reverses for groups that have recently lost power.

We begin with three questions about the President – presidential performance, trust in the President's office, and belief that the President is corrupt. We then use a composite index based on the arithmetic mean of respondents' beliefs in the quality of government performance in thirteen areas: managing the economy, improving living standards of the poor, creating jobs, narrowing income gaps, reducing crime, improving basic health, addressing educational needs, providing water and sanitation, ensuring there is enough food to eat, fighting corruption, combatting HIV/AIDS, maintaining roads and bridges, and resolving violent conflict between communities. Another composite index asks about the ease of accessing government services, specifically obtaining identity documents, household services such as electricity and water, medical treatment, and help from the police.[12] Finally, we include a measure of whether respondents believe their ethnic group is being treated unfairly by the government before ending with respondents' self-assessed living conditions, assessment of the country's current economic condition, and whether the country is going in the right direction.

[12] Unlike questions about government performance, questions about services allow respondents to answer if they never used the services in question, meaning the panel is created from a smaller sample of individual answers.

Table 3: Political Attitudes, Afrobarometer Data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dep. Variable:	Approve of President's performance	Trust the President	President is corrupt	Govt. performance index	Govt. services index	Ethnic group is treated badly	Present living conditions	Economic condition of country	Country moving in right direct.
				Panel A: with Co-Ethnic President (t-0)					
Co-Ethnic Pres.	0.154***	0.149***	-0.096***	0.119***	0.064***	-0.061***	0.030*	0.060***	0.207***
	(0.025)	(0.022)	(0.020)	(0.015)	(0.015)	(0.015)	(0.017)	(0.017)	(0.031)
District FEs	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country-Round FEs	yes	yes	yes	yes	yes	yes	yes	yes	yes
Countries	23	23	23	23	23	23	23	23	23
Country-Rounds	111	112	107	112	92	98	109	109	69
Districts	1318	1318	1318	1318	1314	1318	1318	1318	1302
Observations	5491	5477	5361	5480	4550	4966	5440	5440	3406
				Panel B: with Co-Ethnic President (t-0 and t-2)					
Co-Ethnic Pres.	0.199***	0.209***	-0.111***	0.161***	0.061***	-0.070***	0.032*	0.054***	0.229***
	(0.027)	(0.023)	(0.021)	(0.018)	(0.017)	(0.015)	(0.019)	(0.018)	(0.032)
Co-Ethnic Pres. (t-2 years)	-0.083***	-0.114***	0.029*	-0.080***	0.004	0.016	-0.005	0.011	-0.109***
	(0.020)	(0.018)	(0.017)	(0.014)	(0.018)	(0.016)	(0.018)	(0.015)	(0.027)
Panel A Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes

Countries	23	23	23	23	23	23	23	23	23
Country-Rounds	111	112	107	112	92	98	109	109	69
Districts	1318	1318	1318	1318	1314	1318	1318	1318	1302
Observations	5491	5477	5361	5480	4550	4966	5440	5440	3406

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the regional level are in parentheses. All specifications include controls for urbanization and female respondents. Observations are weighted by country.

As Table 3 indicates, for every outcome, respondents in co-ethnic areas show higher satisfaction with the President, government performance and services, their self-assessed living standards, and the direction of the country than respondents in non-co-ethnic areas while also showing lower levels of belief in presidential corruption and unfair treatment of their ethnic group. These results hold for both Panels A and B; in the latter, the two-year lagged measure of co-ethnicity has the opposite sign of the contemporaneous measure of co-ethnicity in most of the specifications and is statistically significant in most of them, which suggests that having a co-ethnic in power and having recently had a co-ethnic lose power have very different impacts on perceptions of governance.[13]

These results suggest that individuals in co-ethnic areas perceive better quality governance than in other areas, which could be a result of two factors: either these respondents receive more, or better quality, goods than areas not captured in our earlier analysis, or governments receive a co-ethnic bonus from co-ethnic majority areas unrelated to service provision. The first hypothesis is implausible if we recall the number of different measures we used across our three datasets, which failed to show a single type of public or private good positively associated with co-ethnicity. It is also implausible that, as seen in Panel B, objective welfare and government quality measures would decline so rapidly within two years.

We can test the second hypothesis in two ways. First, we regress individual government performance measures on the co-ethnicity variable and the best available measure of the good in question to test for a co-ethnic bonus. We have ten such measures from the Afrobarometer data: job creation (while controlling for full-time employment), income gaps (controlling for going without income in the past year), basic health services (controlling for going without medical care in the past year), water and sanitation (controlling for going without water in the past year), ensuring people have enough to eat (controlling for going without food in the past year), improving the lives of the poor (controlling for the aforementioned poverty index), reducing crime (controlling for the fear of crime at home in the past year), maintaining roads and bridges (controlling for the existence of a paved road in the enumeration area), providing reliable electricity (controlling for the existence of electricity in the enumeration area), and addressing educational needs (controlling for the existence of a school in the enumeration area).

[13] These results are almost identical with a three-year lag for the second co-ethnicity variable.

We list the results of each specification in Table 4, first with just the contemporaneous co-ethnic President variable in Panel A, and then when adding a measure for having a co-ethnic President two years before the survey in Panel B. In both Panels A and B, the control variable is statistically significant with the right sign, while the contemporaneous co-ethnicity variable is also always positive and statistically significant. In Panel B, the lagged measure of co-ethnicity is negative and statistically significant in all ten specifications. These results provide substantial evidence of a co-ethnic bonus, whereby respondents in co-ethnic areas rate the quality of various services higher, even after controlling for the services themselves, alongside a negative effect for members of ethnic groups who recently lost power.

Table 4: Evidence for a Co-Ethnic Bonus in Perceptions of Government Performance, Afrobarometer Data

(Dependent variable: Central Government handles _ well)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Creating jobs	Narrowing income gap	Basic health services	Providing water and sanitation	Ensuring enough to eat	Improving lives of the poor	Reducing crime	Upkeep of roads and bridges	Providing reliable electricity	Addressing educational needs
	Panel A: with Co-Ethnic President (t-0)									
Co-Ethnic President	0.107***	0.124***	0.122***	0.138***	0.142***	0.214***	0.121***	0.153***	0.172***	0.138***
	(0.018)	(0.017)	(0.018)	(0.021)	(0.019)	(0.024)	(0.019)	(0.025)	(0.023)	(0.018)
Employed full time	0.036**									
	(0.017)									
Go without income In last year		-0.184***								
		(0.021)								
Go without medical care in last year			-0.212***							
			(0.018)							
Go without water in last year				-0.376***						
				(0.016)						
Go without food in last year					-0.145***					
					(0.019)					
Poverty index						-0.256***				
						(0.030)				
Feared crime at home in last year							-0.190***			
							(0.020)			
Paved road in area								0.037***		
								(0.015)		
Electricity in area									0.179***	
									(0.013)	
School in area										0.025*
										(0.013)

Panel B: with Co-Ethnic President (t-0 and t-2)

Co-Ethnic President	0.158***	0.175***	0.177***	0.188***	0.180***	0.252***	0.168***	0.210***	0.228***	0.184***
	(0.022)	(0.021)	(0.020)	(0.024)	(0.021)	(0.019)	(0.021)	(0.029)	(0.025)	(0.022)
Co-Ethnic President	-0.093***	-0.095***	-0.107***	-0.092***	-0.070***	-0.086***	-0.088***	-0.110***	-0.126***	-0.086***
(t-2 years)	(0.016)	(0.015)	(0.019)	(0.019)	(0.016)	(0.025)	(0.018)	(0.032)	(0.024)	(0.019)
Controls from Panel A	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Countries	24	24	24	24	24	24	24	23	24	24
Country-Rounds	112	112	114	112	109	86	110	64	85	111
Districts	1318	1318	1318	1318	1318	1313	1318	1290	1312	1317
Observations	5440	5440	5477	5440	5370	4250	5418	3181	4203	5379

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the regional level are in parentheses. All specifications include controls for urbanization and female respondents. Observations are weighted by country.

Our second test is to regress subjective measures of local government performance on our co-ethnicity measure. If it is a subjective belief that co-ethnic areas benefit from the central government that is driving our results, then we should not observe any relationship between co-ethnicity and local government performance when co-ethnicity between respondents and government officials would likely be common across the country. Table 5 uses the same three Afrobarometer measures of performance, trust, and corruption used in columns 1-3 of Table 3, but applied to local government councils instead of the President. Again, our results show no statistical relationship between co-ethnicity with the President and subjective measures of local government quality, providing further evidence for Hypothesis 2.

Table 5: Local Government Performance, Afrobarometer Data

	(1)	(2)	(3)
Dependent Variable	Local Govt. Performance	Trust Local Government	Local Govt. is Corrupt
Co-Ethnic President	0.026	0.019	-0.022
	(0.018)	(0.017)	(0.018)
Countries	23	23	23
Country-Rounds	114	117	104
Districts	1318	1318	1318
Observations	5340	5443	4913

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include district fixed effects, country-round fixed effects, and female and urbanization dummies. Observations are weighted by country-round.

6. Individual-Level Analysis

So far, our analysis has consisted of examining the effect of co-ethnicity on access to public and private goods at the district level, where the data for each observation from the Afrobarometer and DHS is taken as the average of individual-level responses from the Afrobarometer and household-level data from the DHS/MICS data. Our analysis has failed to find any evidence for a positive effect of ethnic favouritism and shows a negative effect on several outcomes. However, as our analysis has, so far, only been conducted at the district level, we cannot say anything about the effect of co-ethnicity on households or individuals, within and outside co-ethnic areas.

We now turn to individual-level data from the DHS on the relationship between co-ethnicity and welfare. The DHS household-level survey data contains information on the gender and age of the head of the household but does not contain data on their ethnic identity. Instead, we turned to the DHS and MICS individual-level female data, where we used data on both individual ethnic identification and district location to allow us to control for both ethnicity and district-fixed effects. Since questions about ethnic identity can vary across DHS surveys (although less so than in the Afrobarometer), we only specified ethnic identities that were shared with at least one President during a survey and those encompassing more than an average of 10% of respondents per country, with all other ethnic identities coded as "other."[14] As with our previous country-district-survey analysis, we controlled for urban residence and country-round-fixed effects and weighted data equally by country-round and added a control for age. Finally, we wished to assess the degree to which co-ethnic individuals and/or districts benefit from having a co-ethnic in power, which meant including both individual-level and district-level co-ethnicity as separate co-variates, along with an interaction effect (Beiser-McGrath et al., 2021). As before, we lag the co-ethnicity measures (and the interaction effect) by one year.

We list our results in Table 6, beginning with the same infrastructure and assets indices we used in Table 1, followed by the wealth variable and quintiles from Table 2. What is immediately clear from columns 1-3 is that both co-ethnic individuals and areas have greater access to assets, infrastructure, and wealth. However, in each case, the negative coefficient of the interaction effect washes away any positive effects for co-ethnic individuals in co-ethnic areas, such that there is an overall negative effect. The results with the individual wealth quintiles in columns 4-8 are particularly interesting as they provide evidence of the role of co-ethnicity in driving intra-ethnic inequality. More specifically, they show declining proportions of individual co-ethnics and co-

[14] This is effectively the same strategy used by Franck and Rainer (2012) for the same reason.

ethnic districts in the middle three (20-80%) quintiles, alongside an increasing proportion in the top (80-100%) quintile. However, as in columns 1-3, the interaction effect takes the opposite sign at a high level of statistical significance in all cases. The key finding is thus that, while co-ethnic individuals outside co-ethnic areas and non-co-ethnic individuals within co-ethnic areas benefit, co-ethnics in co-ethnic areas do not. This result explains why there was no positive coefficient on the co-ethnic district variable for the top quintile in Table 2 since co-ethnics outside co-ethnic areas would stand to gain the most wealth according to the results in column 8. These results help explain the puzzling set of contradictory results from the literature on ethnic favouritism as they suggest that the benefits of co-ethnicity do not accrue equally to all members of a given group.

Table 6: Ethno-Regional Favouritism in Contemporary Africa, DHS Individual Female-Level Data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable:	Infrastructure	Assets	Wealth	0-20% Q.	20-40% Q.	40-60% Q.	60-80% Q.	80-100% Q.
Co-Ethnicity (t-1)	0.029***	0.014***	0.022***	0.008	-0.018***	-0.021***	-0.023***	0.054***
	(0.005)	(0.004)	(0.006)	(0.007)	(0.006)	(0.005)	(0.006)	(0.006)
Co-Ethnic President District (t-1)	0.029***	0.021***	0.032***	0.013	-0.025***	-0.041***	-0.024*	0.077***
	(0.010)	(0.006)	(0.011)	(0.013)	(0.011)	(0.011)	(0.013)	(0.014)
Co-Ethnicity (t-1) * Co-Ethnic Pres. district (t-1)	-0.073***	-0.042***	-0.068***	-0.008	0.040***	0.066***	0.053***	-0.151***
	(0.011)	(0.008)	(0.013)	(0.015)	(0.012)	(0.012)	(0.013)	(0.015)
Controls	yes	yes	yes	yes	yes	yes	yes	yes
District FEs	yes	yes	yes	yes	yes	yes	yes	yes
Country-Round FEs	yes	yes	yes	yes	yes	yes	yes	yes
Country-Ethnicity FEs	yes	yes	yes	yes	yes	yes	yes	yes
Countries	21	21	20	20	20	20	20	20
Country-Rounds	91	91	80	80	80	80	80	80
Districts	951	951	929	929	929	929	929	929
Observations	934,791	922,280	898,990	898,990	898,990	898,990	898,990	898,990

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include controls for age and urban residence. Observations are weighted by country-round.

7. Discussion

The aforementioned evidence suggests that non-material or psychic benefits drive the President's co-ethnics to support the government, even when they do not materially benefit in comparison with other citizens. Here, we present a brief case study of ethnic favouritism in Nigeria, which provides further qualitative evidence for our findings. Goodluck Jonathan was President of Nigeria from May 2010 to May 2015 and hails from the oil-rich Bayelsa state, where most of the population identifies with Jonathan's Ijaw ethnic group, in the southern Niger Delta or South-South Region.[15] In concurrence with the results from Panel A of Table 1, evidence from the Afrobarometer and DHS 2008 surveys shows that the South-South Region had above-average infrastructure and asset ownership levels before Jonathan came to office.

There is considerable evidence that Jonathan managed to channel state resources towards his home region during his Presidency, such that the South-South Region received 86% of all new government contracts approved by the Federal Executive Council (FEC) between March and August 2011, of which almost half were for road projects (Abdallah, 2011). The same year, Jonathan oversaw the creation of the Federal University, Otuoke, in his hometown in Bayelsa state. Meanwhile, a year later, the FEC also approved a new 2.8 billion Naira ($17.3 million) general hospital in Otuoke, even though Nigerian law dictates general hospitals are the financial responsibility of state governments (Ekott, 2013). Fellow Ijaw elites also benefitted from Jonathan's rule, including the appointment of Deziana Allison-Madueke to the lucrative post of Minister of Petroleum, and a $103 million contract awarded to a private military company linked to an Ijaw former militant, Government Oweizide Ekpemupolo (Oyefusi, 2014, pp. 530-1).

However, there is very little evidence that this increased spending in the President's home state produced greater access to assets or public goods provision for most residents – partially since his efforts at reforming farming disproportionately benefitted northern Nigeria (Cocks, 2015). Indeed, a good proportion of Jonathan's supposed "pork-barrel" achievements for Bayelsa state were part of broader investments in public services across the country; the new university in Otuoke, for instance, was one of eleven federal universities created across the country in 2011, including the first-ever Federal University in Katsina state in northern Nigeria, the home state of Jonathan's Presidential predecessor (Umaru Yar'Adua) and successor (Muhammadu Buhari). In this sense, Jonathan's public spending patterns were no different from the post-colonial educational policies

[15] The South-South Region is one of six of Nigeria's "geopolitical" zones, and consists of Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers states.

of various Kenyan presidents who have promoted educational convergence across the country (Simson and Green, 2020).

This relative lack of local development did not go unnoticed among locals. For instance, an activist from Bayelsa state who was arrested and jailed for making anti-government comments on Facebook complained in 2014 that:

> [Jonathan] has been in government for the past 14 years, but not one kilometer of road to show for it in [Jonathan's hometown of] Ogbia. He has moved from Deputy Governor to Acting Governor and to Governor. From Vice President to Acting President and now President for the past four years, yet we cannot be proud of one kilometer of road in our area. The major link road from Ogbia community to Oloibiri, where oil was first found, has been cut off by floods, and to date, that road is still like that. We don't have electricity for many years and no water. Are we going to wait till we have a Hausa or Yoruba man as President before those things will be fixed? (Adebayo, 2014).[16]

At the end of Jonathan's tenure as President in 2015, participants at a community meeting told a local journalist that "for the six years they were privileged to have produced the President, the area has little or nothing to show for it, as most of the jobs approved were awarded to companies owned by Jonathan's friends. They said the contractors have refused to execute the jobs, and Jonathan has equally refused to call them to order" (PM News, 2015). Another source noted that "the President has done his lot by ensuring that money is released for developmental purposes, particularly, in the area of road construction, but the people given the contract keep the money in their pockets and never execute the project. And the President is handicapped because they are his people" (Nwakunor, 2015).

These failures did not, however, make Jonathan unpopular in Bayelsa during his Presidency. Indeed, during the 2015 presidential campaign, one voter told a local reporter, "Some said he has not performed. But whether he performed or not, I will vote for him. I know everyone in Bayelsa will vote for him. He's our son and brother" (The Nation, 2015). Another resident told a Reuters reporter, "We haven't seen much benefit since our brother became President… there's no light,

[16] Evidence from the Afrobarometer backs up this assessment; the proportion of roads in the South-South Region recorded as paved dropped from 88.8% in 2008 to 76.9% in 2012 and 63.8% in 2015.

no water here. We're disappointed." But when asked whether she would vote for Jonathan, she replied, "Of course: he's our brother" (Cocks, 2015).

In the end, Jonathan lost the 2015 Presidential election by 54% to 45% to Buhari, an ethnic Fulani who was previously President from 1983 to 1985; however, he still won 98% of the vote in Bayelsa state and 91% across the South-South Region. Buhari's accession was accompanied, in typical Nigerian style, by claims to clamp down on the previous administration's corruption, which were seen by many of those in Bayelsa and the Niger Delta more broadly as selectively targeting people native to the area. It was thus not surprising to see a return to more violence in the Delta only months after Buhari took office as new Ijaw-led militant groups returned to attacking oil pipelines in the area (Chikwem and Duru, 2018).

8. Conclusions

In this paper, we examined the evidence for the existence of ethnic favouritism in contemporary Africa. Using multiple data sources across many outcomes from over two dozen countries, we found no consistent evidence of any positive effects of living in an area dominated by the President's co-ethnics. In fact, we found several outcomes where residents in co-ethnic areas enjoyed less access to public goods than other citizens. In contrast, we documented the existence of a "co-ethnic bonus," whereby individuals living in areas co-ethnic to the President perceived higher quality services and quality of life (alongside the perception of worse services and quality of life among members of recently ousted ethnic groups). We also found that individual and regional co-ethnicity is associated with a rise in wealth, but not for co-ethnics living in co-ethnic areas. Finally, the Nigerian example provided additional qualitative evidence of how having a co-ethnic in power can generate "psychic" or non-material benefits to non-elite co-ethnics, who provide political support to the regime despite any evidence of real benefits.

Our paper thus serves as a corrective to widespread assumptions about how African Presidents provide benefits to their co-ethnics. We conclude by offering some further suggestions on how our findings can be taken alongside other scholarship on the subject, as well as some suggestions for future research. Regarding the former, our results contrast sharply with the literature cited above and open a puzzle as to how our findings of co-ethnicity's null or negative effects can be squared with other findings of positive effects. We suggest that there are at least three factors that could generate these contradictory findings. First, as already noted, country-specific evidence may be simply not generalizable across the whole continent, especially from countries with clearly

delineated ethnic homelands and few changes in ethnic leadership, like Kenya (Burgess et al., 2015; Kramon and Posner, 2016; Li, 2018).[17]

Second, the use of survey data allows us to understand public and private goods provision across classes, while other studies' focus on night-time luminosity (De Luca et al., 2018; Dickens, 2018; Soumahoro, 2015) can demonstrate a positive effect of co-ethnicity but cannot distinguish which people benefit from distributive politics. Third, the fact that we find very different findings for subjective and objective outcomes suggests that scholarship focusing on subjective measures of ethnic favouritism, like Ahlerup and Isaksson (2015), should be taken with a degree of scepticism.

Regarding future research, we suggest scholars could focus on at least two extensions of our argument. First, the ethnic favouritism scholarship could take more interest in the more nuanced approach to redistribution in the core vs. swing voters literature. As noted above, this literature has moved beyond simple stories about whether one group of citizens benefits from state policies; instead, it focuses more on when, how, and why variation exists within redistributive policies. We note that newer scholarship, such as Beiser-McGrath et al. (2021), has focussed on where ethnic favouritism takes place, while other recent examinations of ethnic bias suggest ethnic favouritism can be generated by government actors in the police and judiciary without a directive from the central government (Choi et al., 2022; Vanden Eynde et al., 2018). Thus, future scholarship could focus more on inequality, variation in access to ethnic favouritism within the President's ethnic group, and the effect of different forms of ethnic favouritism upon each other.

Second, a lack of data has precluded us from examining public or private goods with strong class-specific characteristics since questions in the Afrobarometer and DHS focus on access to commonly accessed goods. A greater focus on elite-specific goods, such as government contracts, university scholarships, and income tax, could provide more information on how and where governments focus distributional efforts on the elite rather than the non-elite. Indeed, a focus on the provision of government employment as a source of patronage (cf. Robinson and Verdier, 2013) has distracted scholars from the fact that government wages have been declining in value relative to the private sector for decades (Simson, 2020), as well as the need for governments to equitably allocate high-profile public jobs (such as cabinet positions) (Francois et al., 2015). As access to information about elite government access is often deliberately difficult to obtain, future

[17] Kenya also contrasts with many other countries in Africa in that none of its Presidents have mixed ethnic backgrounds.

research may wish to employ last name-based analysis as a means of tracking elite co-ethnic access to government favours in situations where last names provide clear information about ethnic identity (cf. Kasara, 2013). While such research is inevitably arduous, it is nonetheless imperative for scholars to focus attention on co-ethnic elite-government connections to understand the nature of ethnic favouritism in more detail.

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Table A1: Survey Data by Country, Afrobarometer

Country	Surveys	Name of Administrative Unit	Number of Units	Observations/ Unit/Round
Benin	2005, 2008, 2011, 2014, 2016/2017	Commune	77	16
Botswana	2008, 2012, 2014, 2017, 2019	Sub-District	24	50
Burkina Faso	2008, 2012, 2015, 2017	Province	55	22
Cameroon	2013, 2015, 2018	Department	33	36
Cote d'Ivoire	2013, 2014, 2017	Region	33	36
Gabon	2015, 2017	Department	39	31
Ghana	2002, 2005, 2008, 2012, 2014, 2017	District	131	14
Guinea	2013, 2015, 2017	Prefecture	34	35
Kenya	2003, 2005, 2008, 2011, 2014, 2016, 2019	County**	46	42
Madagascar	2005, 2008, 2013, 2014/2015, 2018	Region**	22	57
Malawi	2003, 2005, 2008, 2012, 2014, 2017	District	27	62
Mali	2002, 2005, 2008, 2013, 2014, 2017	Cercle	50	24
Mozambique	2002, 2005, 2008, 2012, 2015, 2018	District	138	14
Namibia	2006, 2008, 2012, 2014, 2017	Constituency	102	12
Niger	2013, 2015, 2018	Department	36	33
Nigeria	2000, 2003, 2005, 2008, 2013, 2015, 2017	State*	37	60
Senegal	2002, 2005, 2008, 2013, 2014, 2017	Department	39	31
Sierra Leone	2012, 2015, 2018	District	14	85
South Africa	2002, 2006, 2008, 2011, 2015, 2018	District	52	44
Tanzania	2001, 2005, 2017	District	133	14
Togo	2013, 2014, 2017	Prefecture	37	32
Uganda	2000, 2002, 2005, 2008, 2012, 2017	District*	43	51
Zambia	2003, 2005, 2009, 2013, 2014, 2017	District	76	16
Zimbabwe	2004, 2005, 2009, 2012, 2014, 2017	District	60	26

Notes: * = First-level administrative unit. ** = overhaul of local government administration undertaken during period in question.

Table A2: Household Survey Data by Country, DHS

Country	Survey	Name of Administrative Unit	Number of Units	Observations/ Unit/Round
Benin	1996, 2001, 2006, 2011/2012, 2017/18	Commune	76	156
Burkina Faso	1992/93, 1998/99, 2003, 2010, 2014	Province	45	173
Cameroon	1991, 2004, **2006**, 2011, 2018/19	Department	39	168
Central African Republic	**1994**, **2000**, **2006**, **2010**	Prefecture*	16	688
Cote d'Ivoire	1994, 1998, 2011/12	Region	33	176
Ethiopia	2000, 2005, 2011, 2016, 2019	Zone	76	180
Gabon	**2000/01**, 2012	Department	44	68
Gambia	**2000**, **2005**, 2013, 2019/20	District	39	145
Ghana	1993/94, 1998/99, 2003, 2008, 2014, 2019	District	137	60
Guinea	1999, 2005, 2012, 2018	Prefecture	34	191
Kenya	**1988/89**, **1993**, **1998**, 2003, 2008/09, 2014, 2015	County**	43	262
Malawi	**1992**, 2000, **2006**, 2010, 2015/16	District	28	723
Mali	1995/96, 2001, 2006, 2012/13, 2018	Cercle	49	216
Namibia	2000, 2006, 2013	Constituency	107	57
Niger	1992, 1998	Department	35	159
Nigeria	1990, 2003, 2008, 2013, 2018	State*	37	698
Senegal	1992/93, 1997, 2005, 2008/09, 2010/11, 2017	Department	45	150
Tanzania	1999, 2003, 2017	District	169	38
Togo	1988, 1998, 2013/14, 2017	Prefecture	21	347
Uganda	**1995**, 2000/01, 2009/10, 2011, 2016	District*	39	240
Zambia	2007, 2013/14, 2018/19	District	72	151
Zimbabwe	1999, 2005/06, 2010/11, 2015	District	59	147

Notes: Underlined data is taken from the UNICEF Multiple Indicator Cluster Survey (MICS). Data that is not geocoded is in bold. * = First-level administrative unit. ** = overhaul of local government administration undertaken during period in question.

Table A3: Descriptive Statistics

Statistic	Observations	Mean	St. Dev.	Min	Max
		Panel A: Afrobarometer Data			
Year of Survey	5557	2011.241	5.008	1999	2020
Round	5557	4.956	1.683	2	8
Co-ethnic President t-1	5557	0.209	0.310	0	1
Infrastructure Index	5431	0.425	0.232	0	1
Assets Index	5050	0.468	0.182	0	1
Poverty Index	5521	0.577	0.170	0	1
Full-Time Employment	5484	0.327	0.267	0	1
Radio	5050	0.709	0.176	0	1
TV	5050	0.361	0.290	0	1
Car	5050	0.207	0.194	0	1
Mobile Phone	2363	0.823	0.182	0	1
Go without food	5521	0.529	0.228	0	1
Go without medical care	5521	0.579	0.228	0	1
Go without clean water	5521	0.505	0.239	0	1
Go without cash income	5499	0.821	0.176	0	1
Paved Roads	3784	0.369	0.401	0	1
Electricity	5429	0.508	0.419	0	1
Piped Water	5416	0.451	0.414	0	1
Sewage System	5422	0.204	0.330	0	1
Post Office	5411	0.178	0.293	0	1
Police Station	5402	0.178	0.293	0	1
School	5423	0.833	0.305	0	1
Health Clinic	5408	0.546	0.387	0	1
Market Stalls	5420	0.593	0.393	0	1
		Panel B: DHS Data			
Year of Survey	4553	2006.974	8.615	1988	2021
Round	4532	5.034	1.790	1	8
Co-ethnic President t-1	4553	0.203	0.302	0	1
Infrastructure	4427	0.214	0.210	0	1
Assets	4448	0.214	0.105	0	0.808
Piped Water	4448	0.282	0.287	0	1
Electricity	4395	0.275	0.299	0	1
Radio	4448	0.553	0.190	0	1
TV	4424	0.205	0.226	0	1
Fridge	4334	0.098	0.150	0	1
Bicycle	4448	0.272	0.249	0	1
Motorcycle	4416	0.114	0.153	0	0.830
Car	4416	0.042	0.074	0	1
Wealth	4217	0.420	0.211	0	1
		Panel C: Roads Data			
Year	68,089	1984.755	14.083	1961	2014
Paved Roads in km (log)	67,816	-0.385	4.155	-4.605	6.444
Co-ethnic President t-1	28,304	0.076	0.265	0	1

Table A4: Regimes in the Dataset

Country	President	Tenure in Office	Ethnicity	Afrobarometer	DHS	Roads
Benin	Sourou-Migan Apithy	1/1964 – 11/1965	Fon			x
Benin	Christophe Soglo	12/1965 – 12/1967	Fon			x
Benin	Mathieu Kérékou	10/1972– 4/1991	Ditamari (Betamaribe)			x
Benin	Nicephore Soglo	4/1991 – 4/1996	Fon		x	x
Benin	Mathieu Kérékou	4/1996 – 4/2006	Ditamari (Betamaribe)	x	x	x
Benin	Thomas Boni Yayi	4/2006 – 4/2016	Yoruba	x	x	x
Benin	Patrice Talon	4/2016 – present	Fon	x	x	
Botswana	Festus Mogae	4/1998 – 4/2008	Tswana	x		
Botswana	Ian Khama	4/2008 – 4/2018	Tswana	x		
Botswana	Mokgweetsi Masisi	4/2018 – present	Tswana	x		
Burkina Faso	Blaise Compaoré	10/1987 – 10/2014	Mossi	x	x	
Burkina Faso	Roch Marc Christian Kaboré	12/2015 – present	Mossi	x		
Cameroon	Paul Biya	11/1982 – present	Beti	x	x	
Central African Republic	David Dacko	4/1960 – 1/1966	Mbaka-Mandja			x
Central African Republic	Jean-Bedel Bokassa	1/1966 – 9/1979	Mbaka-Mandja			x
Central African Republic	André Kolingba	9/1981 – 10/1993	Yakoma (Ngbandi)			x
Central African Republic	Ange-Félix Patassé	10/1993 – 3/2003	Sara-Kaba		x	x
Central African Republic	François Bozizé	3/2003 – 3/2013	Gbaya		x	x
Cote d'Ivoire	Félix Houphouët-Boigny	11/1960 – 12/1993	Baoulé		x	x
Cote d'Ivoire	Alassane Ouattara	12/2010 – present	Malinke	x	x	x
Ethiopia	Hailie Selassie	4/1930 – 9/1974	Amharic			x
Ethiopia	Meles Zenawi	5/1991 – 8/2012	Tigrayan		x	x
Ethiopia	Hailemariam Desalegn	8/2012 – 4/018	Wolayta		x	
Ethiopia	Abiy Ahmed	4/2018 – present	Oromo			
Gabon	Léon M'ba	2/1961 – 11/1967	Fang			x
Gabon	Omar Bongo	12/1967 – 6/2009	Bateke		x	x
Gabon	Ali Bongo Ondimba	10/2009 – present	Bateke	x	x	x
Gambia	Dawda Jawara	4/1970 – 7/1994	Malinke			x
Gambia	Yahya Jammeh	7/1994 – 1/2017	Jola		x	x
Gambia	Adama Barrow	1/2017 – present	Fula		x	
Ghana	Jerry Rawlings	12/1981 – 1/2001	Ewe		x	
Ghana	John Kufuor	1/2001 – 1/2009	Akan	x	x	

Ghana	John Atta Mills	1/2009 – 7/2012	Akan	x	x	
Ghana	John Mahama	7/2012 – 1/2017	Gonja (Guan)	x	x	
Ghana	Nana Akufo-Addo	1/2017 – present	Akan	x	x	
Guinea	Ahmed Sékou Touré	10/1958– 3/1984	Malinke			x
Guinea	Lansana Conté	5/1984 – 12/2008	Soussou		x	x
Guinea	Alpha Condé	12/2010 – present	Malinke	x	x	x
Guinea-Bissau	João Bernardo Vieira	5/1984 – 5/1999	Papel		x	
Guinea-Bissau	Henrique Rosa	9/2003 – 10/2005	Balanta		x	
Kenya	Jomo Kenyatta	12/1964– 8/1978	Kikuyu			x
Kenya	Daniel arap Moi	8/1978 – 12/2002	Kalenjin		x	x
Kenya	Mwai Kibaki	12/2002 – 4/2013	Kikuyu	x	x	x
Kenya	Uhuru Kenyatta	4/2013 – present	Kikuyu	x	x	
Madagascar	Marc Ravalomanana	6/2002 – 3/2009	Merina	x		
Madagascar	Andry Rajoelina	3/2009 – 1/2014	Merina	x		
Malawi	Hastings Banda	7/1966 – 5/1994	Chewa		x	x
Malawi	Bakili Muluzi	5/1994 – 5/2004	Yao	x	x	x
Malawi	Bingu wa Mutharika	5/2004 – 4/2012	Lomwe	x	x	x
Malawi	Joyce Banda	4/2012 – 5/2014	Yao	x		
Malawi	Peter Mutharika	5/2014 – present	Lomwe	x	x	
Mali	Modibo Keïta	6/1960 – 11/1968	Malinke			x
Mali	Moussa Traoré	11/1968 – 3/1991	Bambara			x
Mali	Alpha Oumar Konaré	6/1992 – 6/2002	Bambara/Peul	x	x	x
Mali	Amadou Toumani Touré	6/2002 – 3/2012	Malinke/Peul	x	x	x
Mali	Ibrahim Boubacar Keïta	9/2013 – 8/2020	Bambara	x	x	
Mozambique	Samora Machel	6/1975 – 10/1986	Changana			x
Mozambique	Joaquim Chissano	11/1986 – 2/2005	Changana	x		x
Mozambique	Armando Guebuza	2/2005 – 1/2015	Ronga/Makua	x		x
Mozambique	Filipe Nyusi	1/2015 – present	Makonde	x		
Namibia	Sam Nujoma	3/1990 – 3/2005	Wambo	x	x	
Namibia	Hifikepunye Pohamba	3/2005 – 3/2015	Wambo	x	x	
Namibia	Hage Geingob	3/2015 – present	Damara	x		
Niger	Hamani Diori	11/1960 – 4/1974	Djerma			x
Niger	Seyni Kountché	4/1974 – 11/1987	Djerma			x
Niger	Ali Saibou	11/1987 – 4/1993	Djerma		x	x
Niger	Ibrahim Baré Maïnassara	1/1996 – 4/1999	Hausa		x	x

Niger	Mamadou Tandja	12/1999 – 2/2010	Fula/Kanuri			x
Niger	Mahamadou Issoufou	4/2011 – present	Hausa	x		x
Nigeria	Nnamdi Azikiwe	10/1963 – 1/1966	Igbo			x
Nigeria	Johnson Aguiyi-Ironsi	1/1966 – 7/1966	Igbo			x
Nigeria	Yakubu Gowon	8/1966 – 7/1975	Angas			x
Nigeria	Shehu Shagari	10/1979 – 12/1983	Fulani			x
Nigeria	Muhammadu Buhari	12/1983 – 8/1985	Fulani			x
Nigeria	Ibrahim Babangida	8/1985 – 8/1993	Gwari			x
Nigeria	Sani Abacha	11/1993 – 6/1998	Kanuri			x
Nigeria	Olusegun Obasanjo	5/1999 – 5/2007	Yoruba	x	x	x
Nigeria	Goodluck Jonathan	5/2010 – 5/2015	Ijaw	x	x	
Nigeria	Muhammadu Buhari	5/2015 – present	Fulani	x	x	
Senegal	Léopold Sédar Senghor	9.1960 – 12/1980	Serer			x
Senegal	Abdou Diouf	1/1981 – 4/2000	Serer		x	x
Senegal	Abdoulaye Wade	4/2000 – 4/2012	Wolof	x	x	x
Senegal	Macky Sall	4/2012 – present	Pulaar	x	x	x
Sierra Leone	Milton Margai	8/1958 – 4/1964	Mende			x
Sierra Leone	Ernest Bai Koroma	9/2007 – 4/2018	Temne	x		x
South Africa	Thabo Mbeki	6/1999 – 9/2008	Xhosa	x		
South Africa	Jacob Zuma	5/2009 – 5/2018	Zulu	x		
Tanzania	Ali Hassan Mwinyi	11/1985 – 11/1995	Shirazi		x	
Tanzania	Benjamin Mkapa	11/1995 – 12/2005	Makonde	x	x	
Tanzania	John Magafuli	11/2015 – 3/2021	Sukuma	x		
Togo	Nicolas Grunitzky	1/1963 – 1/1967	Kabye			x
Togo	Gnassingbé Eyadéma	4/1967 – 2/2005	Kabye		x	x
Togo	Faure Gnassingbé	5/2005 – present	Kabye	x	x	x
Uganda	Milton Obote	4/1966 – 1/1971	Langi			x
Uganda	Milton Obote	12/1980– 7/1985	Langi			x
Uganda	Yoweri Museveni	1/1986 – present	Banyankole	x	x	x
Zambia	Frederick Chiluba	11/1991 – 1/2002	Bemba			x
Zambia	Levy Mwanawasa	1/2002 – 8/2008	Lenje/Tonga	x	x	x
Zambia	Michael Sata	9/2011 – 10/2014	Bemba	x	x	x
Zambia	Edgar Lungu	1/2015 – 8/2021	Bemba	x	x	
Zimbabwe	Robert Mugabe	12/1987 – 11/2017	Shona	x	x	

Notes: Ethnic group names listed in parentheses are alternative names; those with a hash are Presidents with multiple ethnic heritages.

Table A5: Main Results with Different Lags

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Data Source	Afrobarometer	Afrobarometer	Afrobarometer	Afrobarometer	DHS	DHS	Jedwab and Storeyguard
Dependent Variable:	Infrastructure Index	Assets Index	Poverty Index	Full-Time Employment	Infrastructure Index	Assets Index	Paved Roads (in Km, logged)
			Panel A: No lag				
Co-Ethnic President (no lag)	-0.031**	-0.039***	0.023*	-0.017	-0.008	0.003	-0.106
	(0.015)	(0.009)	(0.012)	(0.019)	(0.007)	(0.003)	(0.122)
Countries	23	22	23	23	23	23	19
Country-Rounds/Years	109	100	112	110	95	96	332
Districts	1317	1318	1318	1318	1102	1105	1696
Observations	5387	5025	5477	5440	4407	4428	31,350
			Panel B: Two-year lag				
Co-Ethnic President (t-2)	-0.029**	0.011	0.007	-0.019	-0.004	0.003	-0.084
	(0.014)	(0.010)	(0.011)	(0.014)	(0.007)	(0.004)	(0.118)
Countries	23	22	23	23	23	23	19
Country-Rounds/Years	110	101	113	111	95	96	332
Districts	1317	1318	1318	1318	1102	1105	1696

Observations	5431	5069	5521	5484	5250	4427	30,457

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Observations are weighted by country.

Table A6: Individual Infrastructure Variables, Afrobarometer Data

(Dependent Variable: Following are present in the enumeration area)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Paved Road	Electricity Grid	Piped Water System	Sewage System	Post Office	School	Police Station	Health Clinic	Market Stalls
Co-Ethnic President (t-1)	-0.167***	0.001	-0.060*	-0.036	-0.044*	-0.028	-0.048*	-0.049*	-0.084***
	(0.044)	(0.026)	(0.033)	(0.026)	(0.023)	(0.022)	(0.026)	(0.028)	(0.033)
Countries	24	24	24	24	24	24	24	24	24
Country-Rounds	76	110	110	110	110	110	110	110	110
Districts	1277	1317	1317	1317	1316	1317	1316	1316	1316
Observations	3784	5407	5394	5400	5389	5401	5380	5386	5398

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Results for paved roads are only available for rounds 3-6 and results for mobile phone network are only available from round 4 onwards. Observations are weighted by country.

Table A7: Individual Asset Variables, Afrobarometer Data

	(1)	(2)	(3)	(4)
Dependent Variable: Owns	Radio	TV	Car/Motorcycle	Mobile Phone
Co-Ethnic President (t-1)	-0.030** (0.013)	-0.036** (0.015)	-0.023* (0.012)	-0.072** (0.032)
Countries	23	23	23	23
Country-Rounds	101	101	101	48
Districts	1318	1318	1318	1266
Observations	5047	5047	5047	2360

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Results for mobile phone ownership are only available from round 6 onwards. Observations are weighted by country.

Table A8: Individual Poverty Variables, Afrobarometer Data
(Dependent Variable: Has gone without _ at least once in the past year)

	(1)	(2)	(3)	(4)
	Food	Medical Care	Clean Water	Cash Income
Co-Ethnic President (t-1)	0.006	0.011	-0.011	0.022**
	(0.016)	(0.015)	(0.017)	(0.010)
Countries	24	24	24	24
Country-Rounds	113	113	113	112
Districts	1318	1318	1318	1318
Observations	5499	5499	5499	5477

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Observations are weighted by country.

Table A9: Individual Infrastructure Variables, DHS Data
(Dependent Variable: Following are present in the household)

	(1)	(2)	(3)
Dependent Variable	Piped Water	Electricity	Flush Toilet
Co-Ethnic President (t-1)	-0.012	0.011	-0.022***
	(0.014)	(0.010)	(0.006)
Countries	23	23	23
Country-Rounds	96	94	96
Districts	1105	1099	1105
Observations	4427	4374	4427

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the regional level are in parentheses. All specifications include the same controls as in Table 1. Observations are weighted by country.

Table A10: Household Asset Variables, DHS Data
(Dependent Variable: Following are present in the household)

	(1)	(2)	(3)	(4)	(5)	(6)
	Radio	TV	Fridge	Bicycle	Motorcycle	Car
Co-Ethnic President (t-1)	0.020**	0.008	-0.006	-0.016*	0.017***	-0.004*
	(0.009)	(0.009)	(0.005)	(0.008)	(0.006)	(0.002)
Countries	23	23	23	23	23	23
Country-Rounds	96	95	93	96	95	95
Districts	1105	1105	1105	1105	1105	1105
Observations	4427	4403	4313	4427	4395	4395

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Observations are weighted by country.

Table A11: Roads Data, Additional Results

	(1)	(2)	(3)
Dependent Variable:	Share of new roads	All roads (logged)	Share of all new roads
Co-Ethnic President (t-1)	-0.290	0.007	-0.051***
	(0.376)	(0.018)	(0.018)
Countries	19	19	19
Country-Rounds	219	332	226
Districts	1696	1560	1696
Observations	19,867	26,936	19,555

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Columns 1 and 3 drop observations where the change in road length by country is negative. Columns 2-3 include improved roads as well as paved roads and highways. Observations are weighted by country.

Table A12: Main Results with a Democracy Interaction

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Data Source	Afrobarometer	Afrobarometer	Afrobarometer	Afrobarometer	DHS	DHS	Jedwab and Storeygard
Dependent Variable:	Infrastructure Index	Assets Index	Poverty Index	Full-Time Employment	Infrastructure Index	Assets Index	Paved roads (in Km, logged)
Co-Ethnic President (t-1)	0.204***	-0.041	-0.097**	0.024	-0.016	0.012	0.023
	(0.057)	(0.039)	(0.046)	(0.064)	(0.020)	(0.009)	(0.254)
Co-Ethnic President (t-1) *	-0.425***	0.013	0.165**	0.004	0.016	-0.021	-0.249
V-Dem Polyarchy Index	(0.091)	(0.060)	(0.073)	(0.103)	(0.040)	(0.017)	(0.532)
District FEs	yes	yes	yes	yes	yes	yes	yes
Country-Round/Year FEs	yes	yes	yes	yes	yes	yes	yes
Countries	23	22	23	23	23	23	19
Country-Rounds/Years	110	101	113	111	95	96	332
Districts	1318	1318	1318	1318	1102	1105	1696
Observations	5410	5047	5499	5462	4406	4427	31,192

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Observations are weighted by country.

Table A13: Main Results with President's Birth District

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Data Source	Afrobarometer	Afrobarometer	Afrobarometer	Afrobarometer	DHS	DHS	Jedwab and Storeygard
Dependent Variable:	Infrastructure Index	Assets Index	Poverty Index	Full-Time Employment	Infrastructure Index	Assets Index	Paved roads (in Km, logged)
President's Birth district (t-1)	-0.056**	-0.003	-0.022	-0.003	-0.010	0.002	0.081
	(0.026)	(0.012)	(0.017)	(0.027)	(0.012)	(0.005)	(0.261)
District FEs	yes	yes	yes	yes	yes	yes	yes
Country-Round/Year FEs	yes	yes	yes	yes	yes	yes	yes
Countries	25	25	25	25	28	28	31
Country-Rounds/Years	117	108	118	118	115	116	540
Districts	1338	1335	1338	1338	1448	1451	2776
Observations	5490	5124	5543	5542	5580	5601	25,252

* $p \leq 0.10$, ** $p \leq 0.05$; *** $p \leq 0.01$; robust standard errors clustered at the district level are in parentheses. All specifications include the same controls as in Table 1. Observations are weighted by country