ESSAYS ON THE POLITICAL ECONOMY OF DEVELOPMENT

Submitted

By

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Abstract

This dissertation is a compilation of three papers on the political economy of development. It is an empirical Ph.D. thesis at the intersection of political economy, development, and economic history. All three papers have a pan-African approach and employ econometrics techniques to achieve causal identification. The first paper is entitled "Ancestral Institutions and the Salience of African Ethnicity: Theory & Evidence". This paper advances an institutional theory of identity. It presents evidence that pinpoints precolonial political arrangement as one explanation for the salience of ethnic identity in Africa today. A significant variation exists in the salience of ethnicity across African societies. This paper proposes a pre-colonial institutional theory to explain this variation. It posits that pre-colonial political centralization enabled the accumulation of economic and institutional advantages, thereby granting descendants of centralized ethnic groups the opportunity to exploit the resulting economic and political benefits in post-colonial arrangements. Consequently, this made ethnic identity less overriding to national identity. To test this hypothesis, the study combined individual-level survey data from the Afrobarometer with historical data on pre-colonial political centralization. Using empirical methods that include OLS, Ordered logit, a formal way of testing for omitted variables bias, and an instrumental variable, the paper finds evidence that individuals with ancestors from politically centralized pre-colonial societies are less likely to identify ethnically today. These findings call for considering precolonial institutional legacies when advancing national unity and social cohesion in ethnically diverse societies. A historical case study from within Ethiopia supports the empirical supports.

The second paper is entitled "Chinese aid projects and local tax attitudes: Evidence from Africa. This chapter presents empirical results on the link between foreign aid projects and local tax accountability. Recent studies appear to have concluded that foreign aid has no tax-discouraging effect. This paper casts doubt on that judgment. The provision of Chinese aid to African nations is characterized by a policy of minimal conditions, whereby aid is extended to African leaders in response to their requests. This approach gives African leaders more discretion and enables faster implementation of Chinese aid projects, reflecting China's development path. Nevertheless, these characteristics also make Chinese aid susceptible to corruption, as leaders may exploit it to gain political favor for a specific region without having to adjust government tax and spending policies. This paper argues that this feature of Chinese aid creates negative tax enforcement perceptions. To test this proposition, the study combines geocoded Chinese aid data from AidData with Afrobarometer surveys. We find evidence that Chinese aid is negatively associated with perceptions of tax enforcement but positively associated with tax morale or compliance. A similar analysis for World Bank aid projects does not exhibit such a relationship. The findings suggest a tradeoff whereby Chinese aid, while helping recipient governments gain compliance from beneficiaries, may also engender a perception of weaker tax enforcement. The paper implies that while the political bias in Chinese aid may enhance tax morale or compliance, it may also have unintended negative consequences for tax enforcement, ultimately eroding the government's reputation for fiscal responsibility.

The third paper is entitled "Remittees and the electoral fate of political patrons: Evidence from Sub Saharan Africa ". This chapter probes into the impact of remittances on voting behavior in Africa. In poor places such as Africa, incumbent leaders politically survive by buying political support through patronage transfers. The recent scholarship advances the hypothesis that receiving remittances erodes support for such clientelistic leaders. To my knowledge, however, little research provides a clear cut as to how receiving remittances affects African citizens' support for political incumbents. This work fills in this gap. The

paper uses data from the fourth and sixth rounds of Afrobarometer surveys. The quantitative analysis utilizes multiple linear regression, propensity score matching, and a formal method of testing for omitted variables bias. I find evidence that a remittance recipient is less likely to support incumbents. Turning to the theoretical mechanism, I find suggestive evidence that remittance inflows lower the marginal utility of patronages and raise an incumbent government's costs associated with maintaining its clientelist grip on political supporters. The results imply that remittances may potentially force incumbents to allocate a greater share of their budgets to the provision of welfare goods for the general population rather than focusing on a narrow group of voters.

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Chapter 1

Ancestral Institutions and the Salience of African Ethnicity: Theory & Evidence

1.1 Introduction

An economic theory, referred to as the ethnic theory of African stagnation, subsumes Africa's lack of progress in its ethnic diversity (see Alesina and Ferrara, 2005, for a review). This ethnic theory of African development relies on two major assumptions. First, it assumes that ethnic diversity is exogenous. Second, it also implicitly assumes that ethnic diversity makes ethnicity salient [1]. However, neither of these assumptions has solid empirical support. Recent research rejects exogeneity of African ELF (Cervellati et al., 2019; Michalopoulos, 2012; Ahlerup and Olsson, 2012; Whatley and Gillezeau, 2011; Leeson, 2005). Specifically, the exogeneity of ELF has been extensively challenged by constructivist perspectives on ethnicity by drawing from the insight that identity is a constructive process where individuals have multiple identities to choose from, which are constructed in a context-specific manner

[1] Ethnic diversity is typically measured using the ethnic and linguistic fractionalization (ELF) index, which indicates the probability that two randomly selected individuals come from different ethnic groups.

(Laitin, 1998). Likewise, there is little to no evidence to suggest that ELF does make ethnicity an overriding identity (Robinson, 2014; Masella, 2013). However, this may not necessarily indicate that ELF is completely unrelated to African development. Instead, it suggests that ethnic fractionalization is only an issue when ethnic identification, which refers to an individual's utilization of ethnic terms to associate with a group, overrides identification with the nation-state.

Ethnicity remains a salient feature in African societies, with significant implications for politics, economics, and social development. However, there is substantial variation in the strength of ethnic identification across the continent [2]. This leads to the question of what factors contribute to the salience of African ethnic identity. This study aims to provide an answer to this inquiry. The study proposes an institutional theory of ethnic identity, suggesting that contemporary African identity can be traced back to precolonial political centralization. I argue that political centralization before colonization allowed for the accumulation of economic and institutional advantages, thereby granting descendants of centralized ethnic groups the ability to benefit from the advantages generated by post-colonial states. Since identities are rationally constructed according to the needs and goals of individuals (Laitin, 1998), the contemporary national advantages stemming from precolonial centralization will ultimately lead to a diminishing incentive for prioritizing one's ethnic group over the nation [3]. I thus hypothesize that precolonial political centralization leads to a weaker ethnic identification in favor of national identity.

To empirically address this claim, I combined data from the Afrobarometer surveys with historical data from the Ethnographic Atlas (Murdock, 1967). I found evidence that members of precolonially centralized ethnic groups exhibited a greater likelihood of identifying with their nation as opposed to their ethnic groups. I pursued several strategies to overcome empirical challenges. First, I controlled for several factors. I also used insights from (Oster,

[2]See Figures 1.1 and 1.2 in the data section.

[3]This is likely because stronger precolonial political institutions allowed colonial and postcolonial African governments to better implement modernization programs in rural areas, resulting in the provision of public goods such as education, health, and infrastructure in African countries (see Gennaioli and Rainer, 2007).

2019; Altonji et al., 2005) to assess that our results did not suffer from omitted variables bias. Finally, to address the endogenous origin of precolonial political centralization (Alsan, 2015; Fenske, 2014), I instrumented the measure of pre-colonial state centralization with an indicator of the Tsetse fly. I borrow the instrumental variable from Alsan (2015), which showed that the Tsetse fly is a strong predictor of precolonial political centralization in Africa.

Overall, the manuscript argues and provides evidence that precolonial political centralization plays a significant role in shaping the salience of ethnic identity in Africa. Importantly, this influence remains robust even after accounting for the impact of colonial policies and contemporary political factors, including political competition. There can be two possible explanations for this. Colonialism introduced new institutions that overlapped with existing pre-colonial institutions in Africa. Thus, the influence of colonial institutions played a significant role in shaping the salience of ethnicity (Ali et al., 2019; McNamee, 2019). However, over time, there is a possibility for pre-colonial institutions to counteract the adverse institutional effects of colonial policies (Gennaioli and Rainer, 2006), thereby influencing the salience of ethnic identity in a negative manner. McNamee (2019) claims that the legacy of indirect colonial rule on contemporary ethnic identification in Africa appears to diminish over time due to the diverse developmental and political trajectories of post-colonial African states. Nonetheless, these post-colonial developmental and political paths bear pre-colonial footprints (Amodio et al., 2022; Michalopoulos and Papaioannou, 2013; Gennaioli and Rainer, 2007). In that regard, my results imply that the overtime decline in the effect of colonial policies on ethnic identification could be attributed to the positive legacies of precolonial centralization in the post-colonial era. Similarly, the role of contextual factors, such as political competition, is likely to be influenced by precolonial centralization. Previous studies, such as that by Eifert et al. (2010), have shown that political competition contributes to the salience of ethnic identity. However, recent research conducted by Amodio et al. (2022) indicates that higher levels of precolonial centralization actually lead to a de-

crease in contemporary political competition. This suggests that precolonial centralization can moderate the impact of contextual factors on the salience of ethnic identity. Altogether, the theory and empirical findings of this paper suggest that the salience of African ethnic identity is a construct that emerges from the interplay between past and present institutions and economic conditions, prominently influenced by precolonial political centralization.

The paper builds upon and adds to various threads of existing scholarship. First and foremost, the findings align with the conclusions of Robinson (2014) and challenge the notion that the colonial legacy creates insurmountable obstacles for the development of widespread territorial nationalism in Africa. Likewise, these findings are in line with the perspective presented by Michalopoulos and Papaioannou (2020), who argue that the contemporary effect of precolonial centralization is significant and extends beyond the influence of colonialism. Moreover, the findings are consistent with the evidence provided by Maseland (2018), suggesting that colonialism has generated a substantial yet temporary institutional shock. The paper also adds to the literature on the historical and institutional origins of ethnic salience (Ali et al., 2019; Cervellati et al., 2019; McNamee, 2019) and/or ethnic diversity (Cervellati et al., 2019; Ahlerup and Olsson, 2012; Leeson, 2005; Posner, 2005). Furthermore, it contributes to the burgeoning literature on the long-lasting impact of precolonial institutions (Chlouba et al., 2022; Amodio et al., 2022; Michalopoulos and Papaioannou, 2020). At a broader level, the paper is related to the literature documenting the long-term impacts of historic events such as the slave trade (Nunn and Wantchekon, 2011; Fenske and Kala, 2017), colonial and pre-colonial institutions (Michalopoulos and Papaioannou, 2020), the Habsburg Empire (Becker et al., 2016) and the Middle Ages Italian free cities (Guiso et al., 2016). It also adds to the identity economics literature (Atkin et al., 2021; Shayo, 2020), and the literature on nation-building (Depetris-Chauvin et al., 2020; Blouin and Mukand, 2019). It adds to this strand of the literature by demonstrating that social identity is an endogenous construct influenced by both historical and contemporary socio-economic advantages associated with membership in statehood societies. Finally, it offers evidence for the predatory

theory of the state, which relates the predatory view to the construction of identity and cultural assimilation (Caskey and Murtazashvili, 2022; Murtazashvili and Murtazashvili, 2020). It contributes to this area of economic theories by presenting evidence that more powerful states opt to implement more expensive universal regulations, whereas less powerful states implement less expensive identity-based rules (rules that are determined and enforced based on the social identity of the individuals involved, such as ethnicity, or language).

The rest of this paper is organized as follows: Section 1.2 reviews related literature. Section 1.3 presents the theoretical argument of why precolonial political centralization shapes identity today and corroborates it with illustrative examples. Section 1.4 describes the data. Section 1.5 sketches the identification strategy. Section 1.6 presents the empirical results. Section 1.7 summarizes the paper.

1.2 Related Literature

Several theories attempt to provide an explanation for Africa's underdevelopment. One of these is the ethnic theory of African stagnation (see Alesina and Ferrara, 2005, for a review). This theory, which originates from the seminar works of Easterly and Levine (1997), attributes Africa's underdevelopment to its ethnic heterogeneity. In the research that followed Easterly and Levine (1997), ethnic diversity, commonly measured by an index of ethnolinguistic fractionalization (ELF), is often treated as a covariate in African economic growth regressions. However, recent research casts doubt on the exogeneity of ELF. Regarding the origin of ELF, there are two main hypotheses (see Ahlerup and Olsson, 2012; Chandra, 2012, for a review). The first is the evolutionary approach, which contends that ethnic differences have deep roots in history and ecology and should be studied in an evolutionary context. The second is a constructivist view, which claims that ethnic diversity is essentially a product of modern states (Fearon and Laitin, 2000; Bates, 1974) and economic costs (Atkin et al., 2021).

A growing body of literature attempts to endogenize ethnic diversity. For a sample of societies around the world, Michalopoulos (2012) argues and provides evidence that geographical variation in a given area reduced inter-regional migration and led to more ethnic groups. According to the theory and empirical evidence of Ahlerup and Olsson (2012), ELF emerges among peripheral populations in response to an insufficient supply of collective goods. Although less common, there are similar attempts in Africa. Cervellati et al. (2019) theorizes and provides evidence that premodern populations relied on sexual endogamy to limit malaria prevalence, and thus, ethnic diversity in Africa today is the result of ancestral malaria in Africa. Whatley and Gillezeau (2011) claims and provides evidence that Africa's ELF is an endogenous outcome of the social conflict associated with the slave trade. Likewise, Leeson (2005) looks at how in pre-colonial Africa, heterogeneous agents relied on social distance-reducing cues to facilitate trade. According to his 'endogenizing fractionalization' thesis, colonial institutions distorted these signals and prevented agents from realizing the gains from widespread exchanges. The inability to benefit from trade's extensive benefits makes fractionalization a consequence of poor institutions. Thus, according to Leeson (2005), destructive fractionalization is endogenous to the poor institutions that create it.

It is thus fair to claim that ethnic diversity is not an exogenous construct. The question now is not whether ethnic diversity is exogenous or not. It is rather whether it is correct to assume that ethnic diversity makes ethnicity salient. Not only does the ethnic theory assume that ELF is exogenous but also makes an implicit assumption that ethnic diversity makes ethnicity salient. Nevertheless, both assumptions have received little empirical backing in the existing research. For a cross-section of individuals covered by the third round of the Afrobarometer, Robinson (2014) reports a null association between ELF and the salience of ethnic identity. Masella (2013) provides a similar finding outside Africa. Both Chad and Zambia are in the top decile on the ELF measure, yet it is the former that is a conflict-thorn country while there has been no major conflict in the latter (Desmet et al., 2012). Likewise, ethnic fragmentation predicts only one violent conflict for every 2,000 instances (see Alesina

and Ferrara, 2005). Zambia and Malawi have similar ELF, yet the Chewa and Tumbuka ethnic groups are friendly in Zambia while they are enemies in Malawi (Posner, 2005, 2004). This does not mean that ELF is not a correlate of development at all. It only means that the effect of ELF is likely to be limited to places where ethnic identity is salient.

So, the inquiry becomes: What causes ethnicity to be more salient in certain locations compared to others? One strand of research shows that the salience of ethnicity depends on contemporary political factors. For example, Eifert et al. (2010) found that ethnicity becomes more salient as elections approach, while Green (2020) demonstrated that the degree to which respondents identify with their nation or ethnic group depends on whether there is a co-ethnic president in power. However, another related line of research argues that historical factors matter above and beyond these factors. For instance, McNamee (2019) showed that differences in the colonial rule are related to the relative strength of ethnic identification, while Cervellati et al. (2019) showed that ethnic diversity and salience are the results of exposure to ancestral malaria. This work adds to this line of research by arguing that precolonial statehood matters above and beyond these factors. We are not trying to overturn conventional wisdom, but rather to provide further evidence that roots the salience of ethnicity more firmly in the history of Africa.

The paper draws on and adds to the growing body of literature on the precolonial origins of African development. According to a review by Michalopoulos and Papaioannou (2020), if pre-colonial institutions have survived anywhere, it is in Africa because (a) the influence of colonial powers was limited to the center; (b) indirect rule reinforced them, and (c) areas far from the center still largely rely on ethnic institutions. Recent research illuminates that pre-colonial political centralization across and within African countries translates into democratic functioning (Amodio et al., 2022), institutional quality (Gennaioli and Rainer, 2006), and development (see Michalopoulos and Papaioannou, 2020, for a recent review). The work builds on this strand of literature and contributes to it by examining the influence of pre-colonial political development in Africa on the relative strength of national and ethnic

identification in the contemporary context. Through this investigation, the research provides valuable insights into the potential mechanisms through which precolonial centralization may contribute to economic development in Africa (Michalopoulos and Papaioannou, 2013).

The aim is not to paint precolonial centralization in an overly positive light. Indeed, my argument emphasizes the positive effects of precolonial statehood on the relative strength of national versus ethnic identification. However, it is important to acknowledge that centralization can have negative consequences as well. Hariri (2012) argues that early statehood is associated with autocratic political systems and can hinder the development of democratic institutions. This may be because centralized power structures tend to concentrate power in the hands of a few individuals or groups, making it difficult for citizens to have a meaningful say in their governance. Similarly, Chlouba et al. (2022) found that precolonial centralization is associated with positive attitudes towards autocracy. They suggest that this is because centralized political systems are more efficient at providing public goods and services, and citizens may be willing to accept a more authoritarian style of government in exchange for these benefits. However, the concentration of power in the hands of a few individuals or groups can also lead to corruption, nepotism, and other forms of abuse of power. Therefore, while I argue that precolonial statehood can have positive effects on the relative strength of national versus ethnic identification, it is important to recognize that centralization can also have negative consequences.

1.3 Theoretical Background

Why does pre-colonial statehood matter for contemporary identity? The argument is as follows: Suppose that at a certain point in history, societies split into two types based on statehood. The first group formed a state, while the second remained stateless [4]. Following Fortes (2015), I refer to the state-based groups as Type A and the stateless groups as

[4]I do not theorize the origin of statehood in Africa, but rather rely on the available theories and evidence. In Africa, pre-colonial political centralization is an endogenous construct of long-distance trade (Fenske, 2014; Bates, 1987) and Tsetse fly ecology (Alsan, 2015).

Type B. Control of the state is a wealth-creating asset and a source of group economic power and status. Therefore, Type A societies are better equipped to accumulate economic resources. Access to power and economic benefits mutually reinforce each other, with early statehood amplifying the capacity of ethnic groups to secure the economic and political advantages within contemporary states. These mechanisms are not mutually exclusive, and a path dependence emerges where economic resources and state control mutually bolster each other. Put simply, precolonial centralization facilitated the accumulation of economic and institutional advantages, enabling the descendants of centralized ethnic groups to capitalize on the resulting economic and political benefits in modern state arrangements.

Which identities are chosen and why? Laitin (1998) proposes that identity is a constructive process that involves the selection and manipulation of cultural markers to achieve certain goals. He suggests that individuals have multiple identities to choose from, which are constructed in a context-specific manner based on their needs and goals. The next question is: Which society, Type A or Type B, prioritizes ethnic identity over national identity? Laitin (1998) highlights the role of instrumental rationality and social comparison in identity construction, emphasizing the agency of individuals in constructing their identities. In particular, instrumental rationality suggests that individuals choose an identity that benefits them economically (Chandra, 2007; Bates, 1974). Meanwhile, social identity theory posits that individuals strive for positive self-worth or positive social identity, which is achieved through inter-group comparison (Turner, 1975; Tajfel, 1982). In other words, individuals tend to align with groups that provide them with a positive sense of self and a sense of belonging.

I mainly draw from the "Instrumental rationality" explanation to argue that rational agents tend to prefer a social identity that serves their material well-being most effectively. Since it is the rich that benefit from the economic security provided by the nation, then it should prefer its national identity over ethnic identity. In a similar manner, descendants of pre-colonial centralized ethnic groups are more likely to choose national over ethnic identity

for two reasons. Firstly, individuals from statehood societies are more likely to receive economic benefits than those in stateless societies. Research lends support to this argument. For instance, Michalopoulos and Papaioannou (2013) provides strong evidence of a positive association between pre-colonial statehood and contemporary development in Africa[5]. Similarly, Gennaioli and Rainer (2007) offer evidence that pre-colonial political institutions have a lasting impact on the provision of public goods in African countries. In addition, Bandyopadhyay and Green (2016) report similar findings for Uganda. Furthermore, Gennaioli and Rainer (2006) demonstrate that pre-colonial statehood is positively correlated with contemporary institutional quality in Africa. Secondly, access to power and economic benefits reinforces each other, and early statehood enhances ethnic groups' ability to capture state power in the present. In this regard, Green (2020) argues and provides evidence that one of the key determinants of national identification in Sub-Saharan Africa is membership in a 'core' ethnic group or Staatsvolk, and whether or not that group is in power. However, the origins of such ethnic groups or Staatsvolk are not explicitly addressed by Green (2020). Our argument builds on this and posits that politically centralized groups are more likely to control state power and become the Staatsvolk. This claim can be substantiated with the help of Green (2020)'s ethnic cores in 22 African countries, such as Fon in Benin, Kikuyu in Kenya, Cheba in Malawi, Bambara in Mali, Yoruba in Nigeria, Bremba in Zambia, and Shona in Zimbabwe, among others. These ethnic groups held power and were recognized as the true rulers of their respective societies during the pre-colonial era (Mamdani, 1996), and this system was reinforced by the colonial powers and continued even after independence (Müller-Crepon, 2020).

Alternative explanations exist regarding the origins of the salience of ethnic identity in Africa, one of which relates to the logic of indirect rule during colonialism. In directly ruled colonies, like those under French control, colonial administrators were less inclined to utilize existing traditional institutions. Conversely, under the indirect rule, the opposite was true.

[5]see Michalopoulos and Papaioannou (2020) for a recent review

Recent research has shed light on how differences in colonial rule shape the salience of ethnic identity in Africa (Ali et al., 2019; McNamee, 2019). Alternatively, other research argues that the salience of ethnicity may also be influenced by factors beyond the extent of colonial policies. For instance, Green (2020) posits that belonging to a dominant ethnic group or "Staatsvolk" and whether that group holds political power are significant factors in determining national identification in Africa. Similarly, Eifert et al. (2010) find strong evidence that political competition can strengthen ethnic identities in Africa. While my approach does not entirely overturn this conventional wisdom, it goes beyond it by delving deeper into African history. I argue that, in addition to colonial policies and contemporary factors, the significance of pre-colonial statehood must be considered when explaining contemporary identity in Africa. Such an approach helps gain a clearer understanding of the intricate dynamics that shape identity in the region today.

Why is pre-colonial statehood a significant factor in explaining contemporary identity beyond colonial policies and contemporary factors? First, the influence of colonial powers was limited to the center or indirect rule reinforced pre-colonial institutions (Michalopoulos and Papaioannou, 2020). Countries with stronger pre-colonial statehood were less likely to be colonized, and if colonized, were more likely to experience indirect colonial rule, which was contingent upon pre-colonial centralization (Hariri, 2012). Moreover, British colonizers were more likely to delegate power to native authorities and employ less administrative effort in territories with centralized institutions, as argued by Müller-Crepon (2020). According to Wucherpfennig et al. (2016), indirect colonial rule in Africa resulted in lower levels of exclusion from power in the postcolonial era. The authors suggest that indirect rule allowed for the emergence of local elites who were incorporated into the colonial administration and were able to gain political power and experience that they later leveraged in the postcolonial period. This, in turn, reduced the exclusion of these elites and their ethnic groups from political power in the postcolonial era. If anything, excluded groups with centralized pre-colonial institutions can rely on these institutions to bargain more credibly with the state

and thus improve their chances of achieving economic and political benefits (Wig, 2016). In fact, colonialism introduced new institutions that overlapped with existing pre-colonial institutions in Africa. Thus, the influence of colonial institutions played a significant role in shaping the prominence of ethnicity (McNamee, 2019). Nonetheless, McNamee (2019) argues that the legacy of indirect colonial rule on contemporary ethnic identification in Africa appears to diminish over time due to the diverse developmental and political trajectories of post-colonial African states. There is ample evidence that the varied developmental and political paths taken in post-colonial African states bear precolonial footprints (Amodio et al., 2022; Michalopoulos and Papaioannou, 2013; Gennaioli and Rainer, 2007). I thus argue that, over time, the enduring and positive institutional and developmental legacies of pre-colonial centralization in Africa have the potential to counteract the negative institutional and developmental effects of colonial influences. Consequently, these pre-colonial legacies increasingly shape the salience of identity in contemporary African society.

Second, contemporary factors, such as political competition (Eifert et al., 2010), are themselves endogenous to pre-colonial institutions. In recent work, Amodio et al. (2022) show that pre-colonial centralization is associated with decreased levels of political competition. If anything, my theory helps explain and reconcile these findings. As implied by my theory, pre-colonial political centralization may have set the stage for contemporary political dynamics by creating enduring political and economic hierarchies. For instance, pre-colonial centralization may have enabled certain groups to accumulate economic resources and gain political power, which in turn may have reinforced their position of dominance in the post-colonial era. This may have contributed to the exclusion of other groups from political power and resources, leading to increased ethnic identification among marginalized groups. Conversely, in societies with weaker pre-colonial centralization, there may have been more fluid and decentralized political and economic systems that allowed for greater competition and a more diverse array of power brokers.

Illustrative Examples

Ethiopia Ethiopia's multi-ethnic nature and its history of never being colonized make it an ideal laboratory for investigating the relationship between historical political centralization and the salience of ethnic identity. Ethiopia is home to more than 80 ethnic groups, with the Oromo and Amhara groups being the largest. According to Levine (2014), the historical characteristics of these two groups are vastly different, with the Amhara group being centralized and dominating the Ethiopian state for centuries under the Solomonic dynasty (1270-1974). Other ethnic groups in the country, in order to access power and economic resources, adopted Amhara culture and religion, making Amhara identity synonymous with the identity of the Ethiopian state (Levine, 2014).

However, in 1974, a military group known as "the Derg" overthrew the last king of the Solomonic dynasty and controlled state power until 1991. Even during the Derg regime, the Amhara played a significant role in the Ethiopian state. In 1991, the Derg regime was overthrown. Following this, Melese Zenawi, a Tigrayan ethnic group member, rose to power, and nine ethnic federations were created. This process equipped the nine ethnically designed regions with their own regional legislatures, media, police forces, and political parties which many scholars claim may make it easier for political leaders to mobilize co-ethnics for collective political action. This institutionalization of ethnic identity resulting from the rise of other ethnic groups led to the loss of political influence by the Amharas.

Based on this observation, one may assume that members of the Amhara ethnic group may identify more as Amhara than as Ethiopian since their group has lost state power and this will be reinforced by two other factors. First, the Tigrian-dominated political party controlled the Ethiopian state for about thirty years, and this makes the Amharas incur a high psychic loss from identifying with a nation supposedly run by a minority ethnic group (Kahneman et al., 1990). Second, the institutionalization of ethnicity in post-1991 politics may lead to a rise in ethnic identification among formerly oppressed ethnic groups, including the Oromos, due to lower incentives for identifying as Ethiopian and/or as Amhara.

Perhaps for this reason, based on available evidence from the 1984, 1994, and 2007 Ethiopian censuses, it is evident that the Amhara ethnic group has experienced a substantial decline in population size in comparison to other ethnic groups, notably the Oromo (Green, 2020). In the 1984 Ethiopian census, the population size of the Amhara was 0.7 percent smaller than the Oromo. However, in the 1994 census, the Amhara had become 2.0 percent smaller than the Oromo, and this difference further increased to 7.6 percent in the 2007 Ethiopian census.

Nonetheless, data from the eighth round of the Afrobarometer data for Ethiopia contradicts the above expectation. The data shows that respondents from the Amhara ethnic group are more likely to identify as Ethiopian than as Amhara, while the opposite is true for the Oromo and Tigrian ethnic groups. The size of the Oromo ethnic group is the largest in the country and the Amhara ethnic group lost influence in state power. Thus, neither ethnic size nor access to contemporary political power alone does explain this finding. This suggests that the institutional history of the Amharas is a persistent factor in shaping their national identity, providing further support for our hypothesis.

Ghana The prominent ethnic groups in Ghana comprise the Akan, accounting for 47.5% of the population, followed by the Mole-Dagbon (Dagaare and Dagbanli) at 16.6%, the Ewe at 13.9%, and the Ga-Dangme at 7.4%. The Akan (also known as the Ashanti) and the Ewe Ethnic groups are known to have had a more centralized system of governance in pre-colonial times, while the Mole-Dagbon group was relatively less centralized. During the period of post-colonial coups in Ghana, the Ashanti and Ewe ethnic groups emerged as significant players vying for increased political power. For instance, when Acheampong, who was of Ashanti ethnicity, staged a coup in 1972, the Ashanti people exerted considerable influence in the political landscape, while the Ewe community revived their secessionist aspirations. Conversely, when Rawlings, who had a Ewe mother and a Scottish father, assumed power in 1979, the Ashanti made attempts to overthrow Rawlings in order to counterbalance the

growing dominance of the Ewe community within the state. Anecdotal evidence shows that both the Akan and Ewe are the politically advantaged groups in the country.

Evidence from the third round of the Afrobarometer survey suggests that the Akan and the Ewe, compared to Mole-Dagbon, have a stronger sense of identification with the nation than the Mole-Dagbon (Dagaare and Dagbanli) group, likely due to their historical economic and political dominance. This observation supports my instrumental rationality theory, which suggests that early statehood enhances a group's ability to capture state power and access economic resources, leading to a greater sense of identification with the nation.

1.4 Data

Testing the hypothesis requires data. I use the Afrobarometer surveys and the Ethnographic Atlas (EA) as the primary sources of data. The Afrobarometer surveys are nationally representative public attitude surveys conducted in over 30 African countries, while the EA is a comprehensive database of ethnic groups worldwide. These data sources are relevant to our hypothesis because they allow us to analyze the relationship between pre-colonial political centralization and ethnic versus national identity in a large sample of African countries, and to compare our findings with existing knowledge.

1.4.1 The Afrobarometer Surveys

The Afrobarometer constitutes the first major source of data. The Afrobarometer is a series of nationally representative surveys covering several African countries. Similar to the Eurobarometer and Latiobarometer, the Afrobarometer is an attitudinal survey. The Afrobarometer surveys have been undertaken at periodic intervals since 1999 and their coverage has increased over time. Interviews are conducted in the local languages, and questions are standardized so that responses can be compared across countries. Questions are designed to assess African citizens' attitudes on a range of issues, including democracy and governance,

markets, civil society, institutional trust, trust towards others, civic engagement, identity, living conditions, and state legitimacy.

In this work, I rely on 5 (3 to 7) rounds of the Afrobarometer surveys. These rounds have respondent-level survey data for countries that include Benin, Botswana, Burkina Faso, Cape Verde, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe.

Ethnic versus national identification (ENI) Previous works on national identity have focused on questions that ask respondents how proud they are of their nationality. However, in the African context where at least dual identities (ethnic and national) co-exist, such questions provide no information on the relative strength of identities (ethnic versus national). Similarly, I have argued that ethnic or linguistic fractionalization measures do not necessarily reflect the salience of ethnic identity. The "Moreno question" of self-identification, after the Spanish sociologist and political scientist who invented it (see Moreno, 2006), solves this challenge. It is well suited when studying sub- and supra-state identities as it captures the degree of one identity's strength relative to another. I thus use a dependent variable that measures the relative strength of identification.

The Afrobarometer surveys ask respondents a Moreno question, which shows the strength of ethnic identification relative to national identification or vice versa. The question reads as,

"Let us suppose that you had to choose between being a national ID and being a [Respondent's Ethnic Group]. Which of the following best expresses your feelings?"

The relevant answers on variable take the values 1 for " I feel only (R's ethnic group)", 2 for "I feel more (R's ethnic group) than national ID", 3 for "I feel equally national ID and (R's ethnic group)", 4 for "I feel more national ID than (R's ethnic group)", and 5 for "I feel only national ID". This constitutes our key dependent variable. It is a five points

self-identification scale ranging from 1 to 5. In the main analysis, I recode this variable in such a way that higher values indicate that the respondent identifies more closely with his/her ethnic group relative to his/her nation. For brevity, I denote it by ENI and this is an indicator of the salience of ethnic identity over national identity in the empirical analysis.

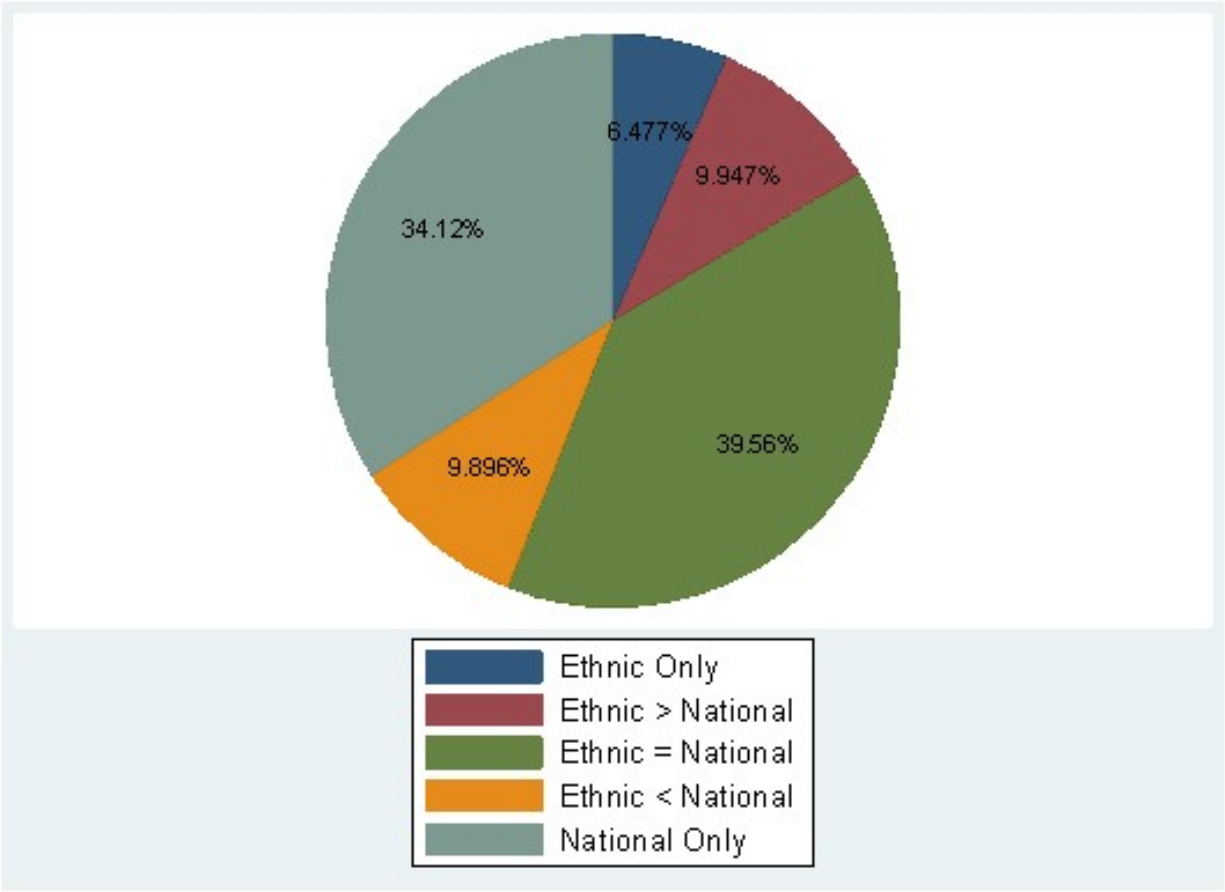

Figure 1.1: Shares of Ethnic versus National Identification across Africa

In Figure 1.1, I plot the share of respondents' preferred senses of identification. As shown in 1.1, about 39.5 percent of the population does not prefer ethnicity to national identity. Approximately 34 percent of individuals primarily identify with their respective nations rather than with their ethnicity. Nonetheless, there is significant variation in the strength of ethnic identification across the continent. This is shown in Figure 1.2, which plots the mean of national versus ethnic identification across the countries covered in the fifth round of the

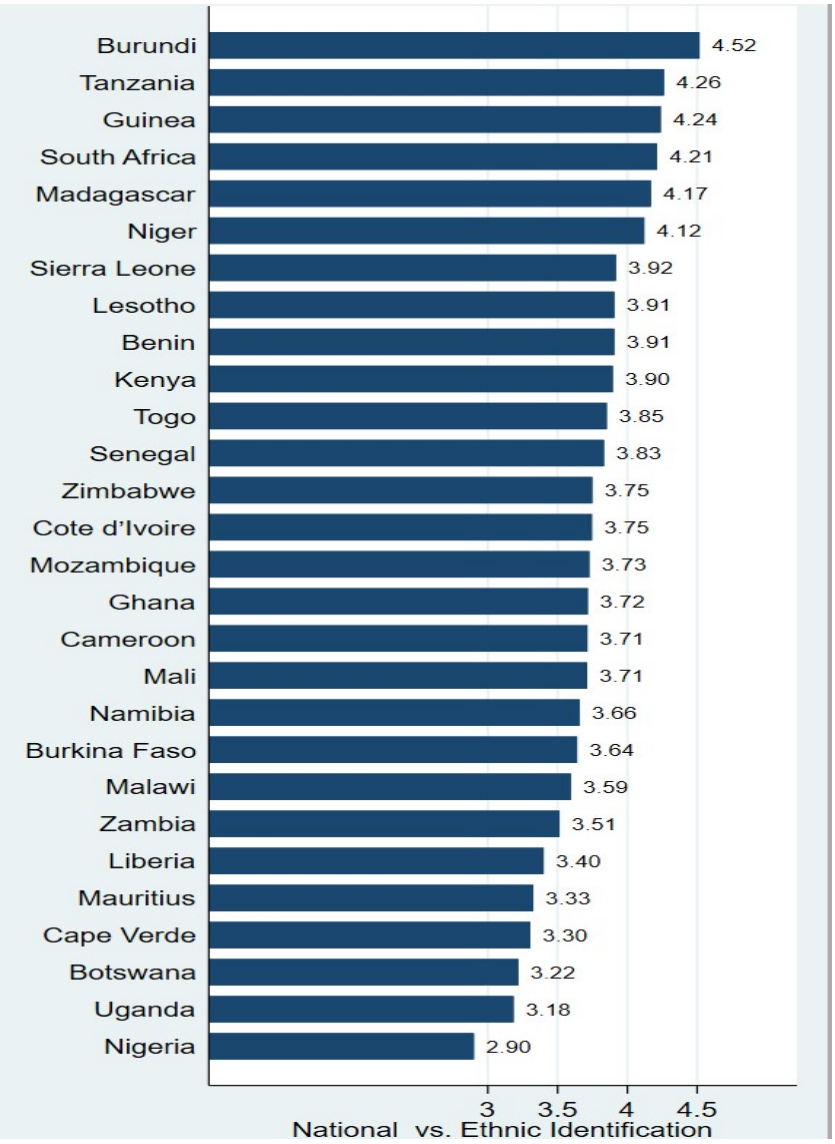

Figure 1.2: Average Ethnic versus National Identification Across Africa

Afrobarometer [6]. As plotted in 1.2, Tanzanians mostly identify with their nation and this could be attributed to Tanzania's effective nation-building policies (see Miguel, 2003). In the sample, Nigeria exhibits the lowest value, while for most countries, national identification surpasses 3. Therefore, contrary to commonly held perceptions, the majority of Africans do identify with their nations, although significant variations exist across countries.

[6]In Figure 1.2, values higher than 3 indicate a lower relative level of ethnic identification.

1.4.2 The Ethnographic Atlas

The major source of historical data is the ethnographic Atlas (EA). The Ethnographic Atlas describes a group of variables for a number of ethnic groups around the world. The EA includes variables that reflect precolonial prosperity, political systems, and economic arrangements (Murdock, 1967)[7].

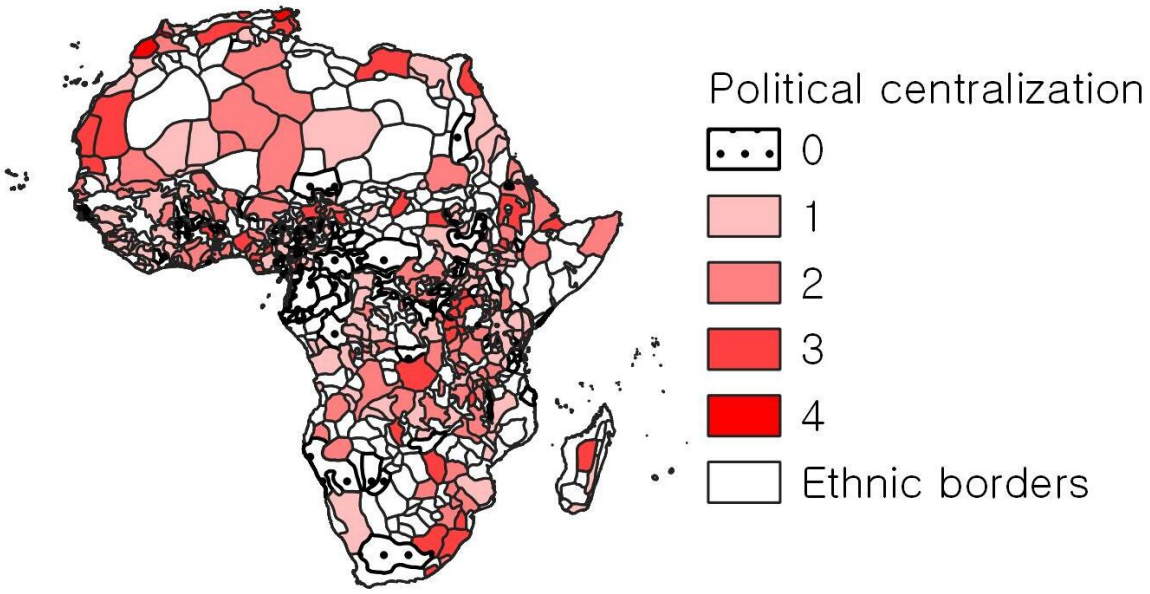

Figure 1.3: The degree of precolonial political centralization in Africa

Political centralization In our analysis, the key explanatory variable is a measure of pre-colonial ethnic political centralization from the EA. Using QGIS, I generated the map in Figure 1.3. The map shows the degree of precolonial political centralization in Africa over the African ethnic groups' map digitized by Nunn (2008).

In the EA, the political centralization variable is coded as v33. This variable is referred to as the "Jurisdictional Hierarchy Beyond the Local Community Level". The EA codes this variable as 0 for stateless societies that lacked any form of political centralization; 1

[7]See the variables in EA at https://d-place.org/contributions/EA and The Murdock map of ethnographic regions at http://worldmap.harvard.edu/data/geonode:murdock_ea_2010_3.

for petty chiefdoms; 2 for paramount chiefdoms; 3 and 4 for larger groups. Following the existing literature (e.g., Alsan, 2015), I create a dummy of political centralization which equals 1 if v33 $\geq$ 2 or 0 if v33 $\leq$ 1. The empirical analysis mainly utilizes this dummy [8]. As reported in Table A2, about 58.7% of the respondents belong to precolonially centralized ethnic groups.

The study combines individual-level survey data from the Afrobarometer with historical data on pre-colonial political centralization from the EA. Matching data from EA to data from Afrobarometer is challenging since the names of ethnic groups in each of these data sets are differently recorded. To overcome this challenge, I turn to the matching concordance developed by Müller-Crepon et al. (2022). It is an R package known as Linking Ethnic Data from Africa (LEDA). Using this method, I am able to match 248 ethnic groups from the EA to the Afrobarometer.

1.5 Identification Strategy

The baseline model is an OLS model of the form:

$$ENI_{iek} = \alpha_w + \mu_k + \beta Centralized_e + \epsilon_{iek} \tag{1.1}$$

Where ENI_{iek} is the measure of ethnic versus national identification for individual i from ethnic group e in country k, $Centralized_e$ is an index of a precolonial political centralization of ethnic group e to which a respondent i belongs to; α_w is Afrobrometer survey wave/round fixed effect; μ_k is country fixed effect and ϵ_{iek} is a normally distributed error term. As implied by the specification, the treatment occurs at the ethnic group level since this is the level at which precolonial political centralization is coded.

The parameter of interest in specification (1.1) is β. The identification of β is a challenging task. The first challenge comes from attempting to identify the impact from survey

[8] The results are robust to using the original measure of political centralization as well. We prefer the dummy since it makes it possible to interpret the results and makes it easy to implement the IV method.

data on respondents sampled from multiple countries. That is, the results may be capturing cross-country differences in contemporary institutions or the estimates may reflect indirect effects of state formation on national institutions (Gennaioli and Rainer, 2006). The result can also be due to cross-country differences in a country's stock of ethnic diversity (Bates, 2000; Collier, 2001) or the legacy of post-colonial nation-building policies (e.g., see Miguel, 2003). To deal with this confounding problem, I first control for country-fixed effects. By comparing individuals with different ethnic backgrounds within the same country, this approach minimizes the concern of capturing cross-country differences in national or other cultural institutions.

Controls I have also controlled for several other factors[9]. I have two types of controls. For brevity, these controls are labeled as pre-treatment and post-treatment controls. The pre-treatment controls refer to those sets of variables that are either ecological or likely existed prior to the establishment of precolonial centralization. The post-treatment controls are sets of variables that are plausibly correlated with the current attitudes of individuals. In their work, Cervellati et al. (2019) show that malaria affected the origin of ethnic groups. Likewise, Acemoglu et al. (2001) argue that the disease environment early European settlers faced shaped the type of colonial institutions. I thus control for malaria ecology index (borrowed from Kiszewski et al., 2004). Moreover, ecological diversity affects ethnolinguistic diversity (Michalopoulos, 2012) and pre-colonial state formation (Fenske, 2014). For that reason, I further control for ecological diversity from (Fenske, 2014). I also added geographic controls that include soil fertility and temperature in the ethnic homelands of the respondents I am considering.

Michalopoulos et al. (2019) documents that precolonial agriculture affects contemporary wealth and literacy. I thus control for the ancestral practice of intensive agriculture as well as animal husbandry (from Murdock, 1967). I also added ethnic homeland population density (from Alsan, 2015), latitude, and a dummy for the presence of a city in 1850 (all of which

[9]The summary statistics of the variables are presented in Table A1 in the Appendix.

come from Murdock, 1967). The African slave trade has been shown to be a source of ethnic heterogeneity (Whatley and Gillezeau, 2011) and mistrust Nunn and Wantchekon (2011). By extension, it may also be affecting national identity. I thus control for the log of total slave exports from (Nunn and Wantchekon, 2011).

Ethnic homelands which historically had more developed institutions correspond to areas that are more developed today (e.g., see Michalopoulos and Papaioannou, 2013; Gennaioli and Rainer, 2007). In the presence of this evidence, one could argue that present-day institutions or current development, as opposed to historic state institutions, are shaping present-day ethnic identification. Education and religion influence participation in community (e.g., Alesina and Ferrara, 2000; Bjørnskov, 2007). To account for these and similar other explanations, I control for present development indicators such as night lights intensity, lived poverty index [10], and an index of public goods access. I also control for a respondent's education, a dummy for being male and a dummy for being an urban resident. I refer to this set of controls as post-treatment covariates.

1.6 Results

1.6.1 Baseline Estimates

Table 1.1 provides the baseline OLS estimates to specification (1.1)[11]. The unit of observation is the i^{th} individual in the c^{th} country belonging to ethnic group e. In columns 1-4, the dependent variable is the original 5-scale measure of ethnic versus national identification (ENI). In column 5, the dependent variable is a dummy of ENI that equals 1 if

[10] In the Afrobarometer, the lived poverty index (LPI) is a measure that is based on a series of survey questions about how frequently people actually go without basic necessities during the course of a year. It is calculated based on the Afrobarometer question that asks respondents "Over the past year, how often, if ever, have you or anyone in your family: Gone without enough food to eat? Gone without enough clean water for home use? Gone without medicines or medical treatment? Gone without enough fuel to cook your food? Gone without a cash income?". The responses are coded as 0 for "never" for those who experienced no shortages, 1 for "just once or twice," 2 for "several times," 3 for "many times," and 4 for "always."

[11] We have alternatively run ordered logit and presented the results in Table A2 in the appendix. The results are similar results. Due to its convenience, I will continue to use OLS.

$1 <= ENI <= 2$ or 0 if $4 <= ENI <= 5$. The Centralized Dummy is a precolonial political centralization dummy that takes a value of 1 for centralized groups or 0 for stateless ethnic groups. As the treatment assignment is likely to be correlated for respondents from similar ethnic groups, I report standard errors that are clustered at the ethnic group level. The estimates in all columns are from OLS. Country and survey wave fixed effects are considered in all columns except column 1. In column 2, only pre-treatment controls are included. These include slave exports, malaria index, latitude, temperature, soil quality, a dummy of city presence in 1800, precolonial dependence on agriculture, and animal husbandry. In columns 3, 4, and 5, the post-treatment controls are added.

I now turn to the analysis of the estimates in Table 1.1. In column 1, the point estimate for β equals -0.218. It is statistically significant at the 5 present. Column 4 reports the point estimate when all controls are included. It is statistically significant. The point estimate in column 5 is from a linear probability model (LPM), where the dependent variable is a dummy of ethnic identification. Overall, the result shows that decedents of politically centralized groups are less likely to prefer their ethnic identity over national identity. For interpretation, I may rely on the result in column 5 of Table 1.1 since both the dependent and the explanatory variables are on the same scale. The estimate in column 5 shows that decedents of precolonially centralized societies are about 5.5 percent less likely to prefer their ethnicity over their national identity.

1.6.2 Omitted Variable Bias

There may be other factors besides long-run exposures to state history that could influence contemporary ethnic identification, and these factors may be unobservable. Therefore, the point estimates reported in Table 1.1 could be biased. To assess the danger of omitted variable bias, I use a heuristic proposed by Altonji et al. (2005) and formalized by Oster (2019). The approach is to gain insight into the magnitude of unobservable factors necessary to fully attribute an estimated relationship to omitted variables.

Table 1.1: OLS estimates of Precolonial Centralization on Identification

	(1)	(2)	(3)	(4)	(5)
Centralized Dummy	-0.218**	-0.219***	-0.208***	-0.199***	-0.055***
	(0.095)	(0.050)	(0.054)	(0.051)	(0.018)
Observations	57,758	57,758	55,101	51,965	30,663
R-squared	0.008	0.077	0.082	0.088	0.116
Oster (2019)'s δ for $\beta = 0$		5.27	3.39	4.78	5.06
Pre-treatment controls	No	No	Yes	Yes	Yes
Post-treatment Controls	No	No	No	Yes	Yes
Country FE	No	Yes	Yes	Yes	Yes
Wave FE	No	Yes	Yes	Yes	Yes

Notes: In columns 1-4, the dependent variable is a 5-scale measure of the strength of ethnic versus national identification. In column 5, the dependent variable is a dummy of the strength of ethnic versus national identification. Standard errors are clustered at the ethnicity level. Wave refers to Afrobarometer survey rounds 3 to 7. OLS is ordinary least squares. FE is fixed effects. *** p<0.01.** p<0.05.

Recently, Oster (2019) provides a statistic known as δ for which one is to obtain $\beta = 0$. This statistic shows the degree of selection on unobservables relative to observables needed for the true effect of the treatment variable to be a statistical null. A value of $\delta > 1$ indicates limited scope for unobservables to pose a threat to the results. Following this, I report estimates for Oster (2019)'s δ statistic. The estimates for Oster (2019)'s δ in Table 1.1 are higher than 3, indicating that the selection on unobservables would have to be more than 3 times the selection on observables to explain away the entire statistical relationship between state history and contemporary ethnic identification. This suggests that omitted variable bias does not entirely drive the results. However, it is important to note that this does not mean there are no omitted variables at all, just that they are less likely to have a significant impact on the results.

1.6.3 Instrumental Variable Strategy

In the preceding section, I presented suggestive evidence that selection on unobservables does not represent a significant concern. However, I must still address two challenges related to

the measure of political centralization. First, the intensity of exposure to statehood is likely to matter, but the available Ethnographic Atlas data do not provide information on the length of time that an ethnic group was exposed to political centralization. Second, the results I report so far rely on the assumption that precolonial centralization is exogenous. However, precolonial African states are endogenous constructs resulting from long-distance trade (Fenske, 2014; Bates, 1987) and tsetse fly ecology (Alsan, 2015). For instance, Bates (1987) develops a "Ricardian" theory of state formation that suggests that long-distance trade was a primary cause of state formation due to the need to control trade items and protect trade routes. Fenske (2014) extends Bates (1987)' work by showing, with a sample of 440 ethnic groups, that long-distance trade predicts precolonial political centralization. To address this and other similar concerns, I adopt an instrumental variable (IV) approach and use the Tsetse fly Suitability Index (TSI) from African disease ecology. Alsan (2015) demonstrates that the Tsetse fly, an African bloodsucking fly that transmits sleeping sickness and nagana, impeded precolonial political centralization. Borrowing from Alsan (2015) and related literature (e.g., Chlouba et al., 2022), I instrument precolonial political centralization using the TSI. In this application, the average TseTse suitability on the ancestral homeland is computed, and that average value is then assigned to all respondents belonging to that ethnicity.

The estimates obtained using the instrumental variable (IV) method are presented in Table 1.2. Columns 1-4 of Table 1.2 present the results of the two-stage least squares (2SLS) regression, where the TSI index is used as the instrument for precolonial political centralization. Columns 1- 4 of Table 1.2 replicate the results in columns 1-4 of Table 1.1, with the exception that precolonial political centralization is instrumented for in the IV method. Across all specifications, the IV estimates are larger than the OLS estimates presented in Table 1.1. The preferred estimates are shown in column 4, which includes all control variables. In column 4 of Table 1.2, the 2SLS estimate of β is -0.344 and differs from the OLS estimate in column 4 of Table 1.1. These results provide suggestive evidence of

Table 1.2: IV estimates of Precolonial Centralization on Identification

	(1)	(2)	(3)	(4)	(5)
Centralized Dummy	-0.743**	-0.626***	-0.310***	-0.354***	
	(0.314)	(0.220)	(0.113)	(0.128)	
TseTse fly Index (TSI)					-0.256***
					(0.051)
1^{st} stage F statistic	11	13.55	29.17	25.87	
Observations	55,219	55,219	55,101	51,965	53,093
R-squared	-0.046	-0.021	0.010	0.014	0.527
Pre-treatment Controls	No	Yes	Yes	Yes	Yes
Post-treatment Controls	No	No	Yes	Yes	Yes
Country FE	No	Yes	Yes	Yes	Yes
Wave FE	No	Yes	Yes	Yes	Yes

Notes: In columns 1-4, the dependent variable is the 5-point scale measure of ethnic versus national identification in column 1, and it is a dummy of state centralization in column 5. Standard errors are clustered at the ethnicity level. *** p<0.01, **p<0.05.

endogeneity in the measure of political centralization.

Furthermore, the IV estimates in Table 1.2 show a significant negative (positive) association between ethnic (national) identification and precolonial political centralization, consistent with the OLS estimates in Table 1.1. Overall, the findings indicate a causal effect of precolonial political centralization on contemporary identity in Africa. Specifically, individuals whose ancestors lived in centralized precolonial states tend to identify more strongly with the nation rather than their ethnicity.

Instrument (IV) Validity

The 2SLS estimate obtained here is valid only if the IV satisfies the instrument relevance and exclusion restriction conditions. The third row of Table 1.2 reports the first stage F statistic. Irrespective of whether I limit our model to include no controls, only fixed effects, or expand it to incorporate varying sets of controls, the F-statistic pertaining to the excluded instrument exceeds ten, signifying the absence of a weak instrument problem. The first stage

results show that tsetse fly is a negative predictor of state centralization in Africa. This is basically a replication of the results of Alsan (2015).

A successful instrumental-variable design relies on the assumption of exclusion restriction, which means that the instrument used (in this case, TSI) should only impact the dependent variable through the independent variable of interest (precolonial centralization). If this assumption is not met, the results may be biased. One potential source of bias is economic development (Alsan, 2015). To address this, I follow the literature (e.g., Chlouba et al., 2022) and control for several indicators of present development such as nightlight intensity and the present population size of precolonial ethnic homelands. I also include other variables that may affect the exclusion restriction if left unaddressed. However, I acknowledge that there is still a possibility that the exclusion restriction may not be fully satisfied. The alternative is to relax the assumption and perform inference with an "Imperfect Instrumental Variable" (Conley et al., 2012; Nevo and Rosen, 2012).

I follow the "Imperfect Instrumental Variable" approach from Nevo and Rosen (2012) and present results. The estimates from this approach are plausible under two main assumptions. The first assumption needed for obtaining IIV is $\rho_{z\epsilon}\rho_{x\epsilon} \geq 0$ [12]. This assumption is known as Nevo and Rosen (2012)'s "assumption 3" and states that the instrument has (weakly) the same direction of correlation with the omitted error term as the endogenous variable. The second assumption for employing IIV is that $|\rho_{z\epsilon}| \leq |\rho_{x\epsilon}|$. This is Nevo and Rosen (2012)'s "assumption 4" and states that the correlation between the instrument and the error term shall be less than the correlation between the original endogenous variable and the error term. This is to say that the IV is less endogenous than the endogenous variable of interest (x). These assumptions yield what Nevo and Rosen (2012) refers to as an Imperfect Instrumental Variable (IIV), which is defined as an IV that has the same direction of correlation with the unobserved error term as x, however, is less endogenous than x.

Under one more additional assumption, Nevo and Rosen (2012) 's approach can be used

[12] $\rho_{x\epsilon}$ signifies correlation between the endogenous variable x and the error term ϵ. $\rho_{z\epsilon}$ signifies correlation between the instrumental variable z and the error term ϵ.

to obtain upper and lower bound IV estimates. This last assumption is that the instrument (z) is negatively correlated with the endogenous variable (x). In our case, this is indeed the case since TSI and political centralization are negatively correlated (see column 5 of Table 1.2).

Following this, I present results from Nevo and Rosen (2012)'s approach in Table 1.3 [13]. These results are computed conditional on the fact that the Nevo and Rosen (2012)'s assumptions hold. That is, $|\rho_{z\epsilon}| \leq |\rho_{x\epsilon}|$, $\rho_{z\epsilon}\rho_{x\epsilon} \geq 0$ and $\rho_{xz} < 0$. As can be seen from Table 1.3, the estimated coefficient on the Centralization dummy is between - .354 and - .2377 (with a confidence interval of - 0.605 and - 0.119). The OLS estimate of - 0.199 (from Table 1.1) is inside the confidence interval. Likewise, the IV estimates lie inside the boundary of the confidence interval. Thus, the results I obtain remain robust even when the exclusion restriction assumption is relaxed.

Table 1.3: Nevo and Rosen (2012)'s Imperfect IV bounds

Variable	Lower Bound(CI)	LB(Estimator)	UB(Estimator)	Upper Bound(CI)
Centralized	[-.60597225	(-.35442581	-.23779213)	-.11998313]

Notes: The upper and lower bounds (along their 95 % CI for Centralized are computed using Nevo and Rosen (2012)'s approach. Centralized is the dummy of precolonial political centralization. The dependent variable is the 5-point scale measure of ethnic identification. All controls are included.

1.6.4 Early Statehood, and Ethnic conditions: Some evidence

This section aims to provide some suggestive evidence on the theoretical mechanisms underlying my argument that descendants of pre-colonial states are less likely to prioritize their ethnicity over national. The proposed mechanism was that pre-colonial political centralization played a crucial role in enabling the accumulation of economic and institutional advantages, thereby granting descendants of centralized ethnic groups the ability to benefit from the economic and political advantages in post-colonial states. To support this claim, I turn to data from the Afrobarometer.

[13] The results are produced using a STATA code provided by Clarke and Matta (2018).

The Afrobarometer asks how often respondents perceive their ethnic group as being treated unfairly by the government. In particular, the Afrobarometer asks *"How often is [Respondent's ethnic group] treated unfairly by the government?" The relevant answers are 0 for "Never", 1 for "Sometimes", 2 or "Often", and 3 for "Always".* I use this as a measure of ethnic grievances. As reported in column 1 of Table 1.4, political centralization is negatively associated with perceived ethnic mistreatment by the government. This may suggest that statehood societies are less likely to be excluded from state power, providing further evidence for my argument.

.

Table 1.4: Early statehood, and Ethnic conditions today

	(1) Ethnic Mistreatment	(2) Worse Ethnic well being
Centralized Dummy	-0.104***	-0.167***
	(0.008)	(0.013)
Observations	10,659	7,063
R-squared	0.013	0.024

Notes: Estimates are from OLS. Robust standard errors in parenthesis. *** p<0.01.

Similarly, the Afrobarometer provides data on how respondents perceive the economic conditions of their ethnic group compared to others in the country. In particular, the Afrobarometer asks respondents as *"Think about the condition of [Respondent's ethnic group]. Are their economic conditions worse, the same as, or better than other groups in this country?"* The relevant answers to this question are coded as 5 for "Much worse", 4 for "Worse", 3 for "Same", 2 for "Better" and 1 for "Much better". I use this as a measure of the economic well-being of ethnic groups. The results are reported in column 2 of Table 1.4. As can be seen, politically centralized groups have better economic conditions. This provides further evidence that descendants of pre-colonial states are better off and their ethnic groups are politically dominant, making them less likely to prioritize their ethnicity over national identity.

Overall, I find support for my claim that descendants of pre-colonial states have better

conditions and that their ethnic groups are politically dominant, making them less likely to prioritize their ethnicity over national identity. These findings have important implications for policymakers seeking to promote national unity and social cohesion in ethnically diverse societies. It is crucial for policymakers to pay attention to historical institutional legacies when designing policies aimed at managing ethnic diversity and promoting social cohesion.

1.6.5 Further Robustness Checks

This subsection presents additional robustness checks to validate the results. The main findings remain consistent and robust to this set of sensitivity tests.

Estimates from ordered logit

The baseline estimates were obtained using OLS. Nonetheless, the Afrobarometer respondents' answers to the identification question are ordinal. In particular, the relevant answers on the variable are ordinal that take the values 1 for " I feel only (R's ethnic group)", 2 for "I feel more (R's ethnic group) than national ID", 3 for "I feel equally national ID and (R's ethnic group)", 4 for "I feel more national ID than (R's ethnic group)", and 5 for "I feel only national ID". An alternative strategy is to maintain the ordinal nature of the answers and instead estimate an ordered logit model. Thus, I check for the robustness of the results in Table 1.1 using an ordered logit model. Table A2 reports results from using an ordered logit model. The results are consistent with the results obtained in Table 1.1.

Excluding Outlier

To ensure that our findings are not solely driven by the presence of an outlier, I conducted a robustness check by dropping Tanzania from our sample. Tanzania has been successful in implementing nation-building policies, with the then-president Julius Nyerere declaring Swahili as the national language in 1967 and translating Shakespeare's plays into Swahili, which helped avert conflict (Bandyopadhyay and Green, 2013; Miguel, 2003; Eifert et al.,

2010; Lieberman and Singh, 2012). As shown in Figure 1.2, Tanzania has the highest level of national versus ethnic identification in our sample. The results of this robustness check are reported in column 1 of Table 1.5, and the results remain robust.

Social desirability bias

Social desirability bias refers to the tendency of respondents to give answers that they believe are socially acceptable, even if they do not reflect their true feelings or beliefs. As shown in Figure 1.1, the "national = ethnic" response option dominates within the dependent variable. This could, to some extent, reflect social desirability bias or satisficing as respondents may not want to be seen adopting a potentially controversial position. Therefore, our results may be biased due to such social desirability bias. To check for this possibility, I dropped the "national = ethnic" category, and re-estimated the main specification. The result is reported in column 2 of Table 1.5. The result remains robust. I also dropped the "national = ethnic" category and created a dummy variable that equals 1 if $1 <= ENI <= 2$ or 0 if $4 <= ENI <= 5$. The results of this exercise are reported in column 5 of Table 1.1 and in column 3 of Table 1.5, where both the dependent and explanatory variables are binary dummies.

As evident from Tables 1.1 and 1.2, the outcomes remain robust irrespective of whether I use the original 5-point scale or the dummy measure of ethnic identification (ENI). Taken together, our findings suggest that social desirability bias is unlikely to significantly impact our results. This conclusion rests on the consistency of the estimated effect of political centralization on ethnic identification across alternative measures.

Note that the IV estimate differs from the OLS estimate. In column 5 of Table 1.1, the OLS estimate shows that descendants of precolonially centralized societies are approximately 5.5 percent less likely to prioritize their ethnicity over their national identity. However, the 2SLS estimate in column 3 of Table 1.5 demonstrates that members of centralized groups are 9.5 percent less likely to prioritize their ethnic group over the nation. This discrepancy

between the two estimates provides further support for the validity of our instrumental variable (IV) approach.

Table 1.5: Robustness Checks

	(1)	(2)	(3)	(4)
Centralized Dummy	-0.325***	-0.412**	-0.095**	
	(0.126)	(0.163)	(0.047)	
Centralization(5 scale)				-0.195**
				(0.078)
Observations	51,965	30,663	30,663	51,965
R-squared	0.016	0.024	0.027	0.009

Notes: In all columns, all controls are included and the estimates are from 2SLS. Standard errors are clustered at the ethnicity level. *** p<0.01, ** p<0.05.

An alternative measure of political centralization is also utilized in this study. Specifically, in column 4 of Table 1.5, I report the 2SLS results using the original 5-point measure of political centralization. The robustness of the results is maintained under this alternative measure.

Colonial and Contemporary Factors

Thus far, the results focused on how precolonial centralization plays a role in influencing the salience of ethnicity. However, an increasing body of research suggests that colonial policies and present-day political factors have played a significant role in shaping the significance of ethnicity in modern Africa. In this section, I aim to demonstrate that the findings remain robust even when accounting for these colonial and contemporary factors. To conduct this analysis, I utilize the replication data from Robinson (2014) and McNamee (2019), as reported by McNamee (2019). The results of this exercise are reported in Table A3 in the appendix [14].

[14]Panel A of Table A3 utilizes this sample for the sake of convenience and comparability with Robinson's (2014) study, as well as with McNamee (2019), who also employed Robinson (2014)'s sample as a robustness check. However, Panel B of Table A3 includes McNamee (2019)'s cross-country sample to ensure that the results hold for larger samples as well.

The Influence of Indirectness in Colonial Rule My previous argument has emphasized the impact of precolonial centralization on the importance of ethnicity, transcending the influence of colonial rule and its policies. In Section 3.3, I illustrated this point using the example of Ethiopia. However, it is important to acknowledge that the Ethiopian case cannot be generalized to the rest of Africa due to the absence of colonial influence. In other parts of Africa, colonialism left legacies that had lasting impacts. The British colonial administration predominantly employed indirect rule, which involved the establishment of native authorities and the maintenance of customary control over land. On the other hand, the French administration commonly implemented the direct rule, relying less on pre-existing traditional institutions and striving to promote a unifying republican ideology, aiming to integrate native Africans as potential French citizens. Recent research by McNamee (2019) provides further insights by highlighting the role of the degree of indirectness in colonial rule in shaping the salience of ethnicity. Therefore, it is crucial for the analysis to take into account the level of indirectness in colonial rule.

To account for the indirectness in colonial rule, I controlled for whether the ethnic group was under British or French colonization. The second column of Table 1.5 presents the results after including this control. As shown, the relationship between precolonial centralization and national versus ethnic identification remains robust. Nevertheless, one might argue that a simple British/French dummy variable may not accurately capture the precise level of indirectness, as the extent of indirect rule varied within colonial empires. In particular, McNamee (2019) argues that the focus should be on the indirectness of colonial rule. One challenge here is that there is no direct measure of the indirectness of colonial rule at the ethnic level that I am aware of. The available measures are at the country level (e.g., see McNamee, 2019; Hariri, 2012). To utilize the country-level data, I borrow from McNamee (2019) and estimate a multi-level hierarchical model as in Robinson (2014). Robinson examines the salience of national versus ethnic identity across sub-Saharan Africa using a three-level linear probability model with random intercepts estimated at the ethnic group

and country level. This multi-level hierarchical model allows us to control for unchanging country-level characteristics, such as the degree of indirect colonial rule, which has been previously shown to be correlated with national versus ethnic identification.

Table A3 in the appendix displays the results obtained from Robinson (2014)'s multi-level hierarchical model, incorporating the measure of indirectness of colonial rule from (McNamee, 2019). Panel A of Table A3 utilizes the replication data of Robinson (2014) as reported by McNamee (2019). The results are from multi-level linear probability models from Robinson with individuals as the unit of analysis with country and ethnic group-level random intercepts. In column 1, I present estimates using only the measure of the degree of precolonial centralization. This specification reveals a negative and significant association between precolonial centralization and ethnic versus national identification (ENI). Column 2 introduces the measure of the indirectness of colonial rule at the country level from McNamee (2019). This measure of the indirectness of colonial rule is the share of customary cases recognized by colonial authorities. Consistent with McNamee's findings, this measure demonstrates a positive and statistically significant association with the salience of ethnic identity (ENI). In Panel B of Table A3, the same analysis is replicated for McNamee (2019)'s cross-country sample. Notably, even controlling for the indirectness of colonial rule, precolonial centralization maintains a negative and statistically significant association with the salience of ethnic identity (ENI).

Columns 3 - 5 of Table A3 further include interaction terms between centralization and measures of the indirect colonial rule used by McNamee (2019) [15]. Though by no means exhaustive, the interaction term is added to check whether precolonial centralization holds significance despite the influence of colonial policies, or whether it is primarily the latter that

[15]The control variables I refer to as 'Controls from Robinson (2014)' in Panel A of Table A3 are control variables from Robinson (2014) and include Competitiveness of Election, Proximity to the Nearest election (number of days), Coethnic Head of State, Ethnic Group in Power, Ln of Ethnic Group Size (-0.015), Male, Formal Employment, Level of Education, Urban Residence, Ethnic Group Partition, Politically Relevant Ethnic Group, Ln of GDP Per Capita in 2005, Ethnic Fractionalization (ELF), British Colony, and Anti-Colonial War. The control variables I refer to as 'Controls from McNamee (2019)' in Panel B are the control variables from column 2 of Table 1 in McNamee's (2019) study.

impacts ethnic salience. Specifically, column 3 introduces the interaction term between centralization and the share of customary cases recognized by colonial authorities. Precolonial centralization maintains a negative and significant association with ethnic versus national identification (ENI), whereas the share of customary cases recognized by colonial authorities loses significance. A similar pattern holds when using early state history (column 4), and the proportion of the population of European descent (column 5) as measures of the indirect colonial rule. The findings align with the conclusions of Robinson (2014) and challenge the notion that the colonial legacy creates insurmountable obstacles for the development of widespread territorial nationalism in Africa. Specifically, the findings offer additional empirical support for the significance of precolonial centralization in shaping present-day identity dynamics in Africa. Likewise, the results are consistent with the evidence provided by Maseland (2018), suggesting that colonialism has generated a substantial yet temporary institutional shock. Moreover, these findings align with the perspective put forth by Michalopoulos and Papaioannou (2020), who argue for the limited impact of colonialism.

In general, the results further strengthen my argument that precolonial centralization plays a crucial role in shaping the salience of ethnicity, despite the influence of colonial factors. One possible explanation for these findings is that colonialism introduced new institutions that overlapped with existing pre-colonial institutions in Africa. Thus, the influence of colonial institutions played a significant role in shaping the salience of ethnicity. However, over time, the temporary effects of colonial influences diminished, allowing precolonial institutions to regain their significance and increasingly shape the salience of identity. The potential for precolonial centralization to reverse the positive impact of colonialism on the salience of ethnic identity highlights the importance of considering its legacy in promoting social cohesion policies in ethnically diverse societies. Nonetheless, there is one important point worth noting in passing. The results unequivocally demonstrate that precolonial political centralization is a robust predictor of ethnicity salience. However, additional analysis is warranted to ascertain whether precolonial centralization has the potential to counteract

the positive influence of colonialism on the salience of ethnic identity. In particular, it is essential to investigate the specific contexts, locations, and time periods where this is likely to be the case.

Political Competition Eifert et al. (2010) provide empirical evidence that supports situational theories of social identification and aligns with the perspective that ethnic identities hold significance in Africa for strategic purposes, particularly in the pursuit of political power. The authors demonstrate that ethnic identification tends to increase in the period leading up to presidential elections. Recent research suggests that the impact of political competition on the results in this paper is less substantial. Amodio et al. (2022) find that pre-colonial centralization is associated with lower levels of political competition. Moreover, it is important to note that the evidence presented by Eifert et al. (2010) focuses specifically on subnational identities, excluding national identities. Their study measures the relative importance of ethnic identities compared to other subnational identities using a question that asks individuals to identify their primary group affiliation. In particular, Eifert, Miguel, and Posner 2010 use the following question: *"We have spoken to many [people in this country, country X] and they have all described themselves in different ways. Some people describe themselves in terms of their language, religion, race, and others describe themselves in economic terms, such as working class, middle class, or a farmer. Besides being [a citizen of X], which specific group do you feel you belong to first and foremost?"*. Thus, the evidence by Eifert et al. (2010) evidence pertains only to the salience of different subnational identities—explicitly excluding national identities.

Although the findings of Eifert et al. (2010) specifically focus on the salience of ethnicity in relation to subnational identities, they could still be relevant in our case. This is because I measure ethnic identification relative to national identification, and there may be an overlap between the two. In order to address the potential influence of political competition, columns 3-5 of Table A3 (Panel A) include controls for the proximity to an election (measured by the

number of days to the nearest election) and the competitiveness of that election. The results, presented in Table A3 in the appendix, indicate that the main findings remain largely robust even after accounting for this contextual factor.

Politically Relevant Ethnic Group Posner (2004) suggests that the political importance of a cultural division is not determined by the division itself, but rather by the sizes of the groups it encompasses and their potential for political competition. Posner found that although the cultural differences between the Chewa and Tumbuka communities on both sides of the border are the same, their political significance varies greatly. He argues that this difference is due to the contrasting sizes of the Chewa and Tumbuka communities within each country in relation to the national political landscape. In Malawi, both groups are relatively large compared to the entire country, making them viable for forming political coalitions. Conversely, in Zambia, the Chewa and Tumbuka communities are small relative to the overall population and, therefore, not useful for mobilizing political support. Although size is arguably the most significant indicator of a group's political utility, individuals belonging to any politically mobilized ethnic group—considered "politically relevant"—are expected to have a stronger inclination towards ethnic identification. To address this possibility, columns 3-5 of Table A3 (Panel A) include a control for an indicator of politically relevant ethnic groups, and the main finding remains consistent.

Ethnic Group In Power It is plausible to suggest that holding political power increases national identification, and larger ethnic groups are more likely to have access to power. Supporting this argument, Green (2020) argues that belonging to a dominant ethnic group or "Staatsvolk" and the group's political power are significant factors in determining national identification in Africa.

Therefore, I include controls for whether an ethnic group holds political power. These include a control for group size and whether the ethnic group is in power. An ethnic group is considered to be in power if the current head of state belongs to that ethnic group. The

Ethnic Power Relations (EPR) dataset provides expert codings of which ethnic groups hold political power. According to this dataset, a respondent is coded as belonging to an ethnic group in power if their ethnic group is identified as a "senior partner" or "junior partner" in the EPR dataset (see Robinson, 2014). Including these control variables do not alter the main results, as shown in Table A3.

1.7 Conclusion

Ethnicity remains a salient feature in African societies, with significant implications for politics, economics, and social development. However, there is substantial variation in the strength of ethnic identification across the continent. This has led scholars to question what explains this variation and how can it be understood from an institutional perspective.

Building on the institutional literature, this paper proposes an institutional hypothesis of identity salience that posits precolonial statehood as a critical factor in shaping ethnic identification. Specifically, the paper argues that precolonially centralized ethnic groups have a greater likelihood of identifying with their nation rather than their ethnic group. This hypothesis is tested using individual-level survey data from the Afrobarometer and historical data on precolonial political centralization from the Ethnographic Atlas. The paper finds a strong association between precolonial political development in Africa and the contemporary relative strength of national versus ethnic identification. In particular, individuals whose ancestors are from politically centralized pre-colonial societies are now characterized by lower ethnic identification. The evidence suggests that precolonial statehood matters above and beyond colonial and post-colonial factors.

The research presented in this paper has important implications for our understanding of the institutional origins of identity salience in Africa. The findings indicate that ethnicity is not an immutable feature of African societies, but rather a construct that is shaped by the interplay between past and present conditions. This underscores the need for policymakers

to consider historical institutional legacies when seeking to promote national unity and social cohesion in ethnically diverse societies. It is worth noting that the paper does not aim to displace existing orthodoxy, but rather to bolster it with empirical evidence drawn from the African context.

The study's findings are consistent with the broader literature on the institutional underpinnings of identity salience. Specifically, the paper contributes to the scholarship on the institutional origins of ethnic fractionalization (Ahlerup and Olsson, 2012; Leeson, 2005) and ethnic identification (McNamee, 2019; Green, 2020; Eifert et al., 2010). This body of work posits that institutions play a crucial role in shaping the salience of ethnicity, and the current study's results lend support to this proposition. As such, the research underscores the importance of paying greater attention to the role of institutions in driving the salience of ethnicity, and how this can inform policy interventions aimed at managing ethnic diversity and promoting social cohesion.

The analysis offers potentially fruitful avenues for future research. First, considering heterogeneity among ethnic groups would be important. Some early states tried to build a common ethnic identity (notably the Zulu Kingdom or the Mandinka Empire), others were loose confederacies where no attempts at shaping a common identity were made (such as the Ashanti Empire). It is thus important to show how the legacies of early statehood on contemporary identity were shaped by such heterogeneity. The findings strongly suggest that there is a significant relationship between precolonial political centralization and the salience of ethnicity. However, more in-depth analysis is required to ascertain whether precolonial centralization can effectively mitigate the positive influence of colonialism on the prominence of ethnic identity. Specifically, it is essential to identify the specific circumstances, geographical areas, and historical periods in which this phenomenon is most pronounced.

It is also useful to extend the analysis by including the predatory state perspective. Caskey and Murtazashvili (2022), in their article "The Predatory State and Coercive Assimilation: The Case of the Uyghurs in Xinjiang" is a relevant reference to consider, ex-

plore how the predatory state employs coercion to construct identity and assimilate cultural groups. This and other similar research make it apparent that there are similarities between the coercive assimilation of the Uyghurs in Xinjiang and the historical attempts of colonial and post-colonial states to impose their own identities and institutions on African societies. Given the significant role of pre-colonial institutional legacies in shaping identity salience in Africa, future research could benefit from exploring the interactions between predatory states and institutional legacies in shaping identity formation and cultural assimilation.

The paper presents arguments and empirical cases demonstrating that precolonial centralization influenced the salience of ethnic identity through economic prosperity. However, it is important to acknowledge that this is not the only possible mechanism at play. Historical political centralization may have also impacted the number of ethnic groups, with politically centralized groups more likely to be found in countries characterized by lower ethnic diversity and greater homogeneity. This, in turn, could contribute to a reduced ethnic identity salience. Additionally, while the paper suggests that precolonial centralized societies are better equipped to accumulate economic resources, the specific nature of these resources remains unclear. For example, it is worth considering whether precolonial centralization facilitated the construction of infrastructure such as roads, which could enhance exchanges between ethnicities and promote economic development. Similarly, the presence of public buildings and large markets could have shaped interethnic interactions and economic opportunities. Although the paper focuses on the channel of economic prosperity, it is important to recognize the potential significance of these alternative mechanisms. Future studies could further explore these aspects to shed light on their influence on the salience of ethnic identity.

Another promising area for future research stemming from my analysis pertains to the role of customary and cultural institutions in confronting predatory states. Research by Murtazashvili and Murtazashvili (2016) on Afghanistan suggests that informal private property rights, as established through customary organizations, may be more effective than formal

private property rights, given their greater capacity, constraints, and legitimacy vis-à-vis the state. This perspective is especially relevant in states, such as Afghanistan, that were not colonized, and where diverse cultures organized along tribal lines faced varying degrees of state intervention, which may have shaped patterns of development. Accordingly, future research could explore the evolution of customary and cultural institutions as they intersect with state institutions in contexts outside of colonial Africa, in order to understand better the dynamics of institutional change and persistence in the face of state predation.

Additionally, it is important to consider the literature on the evolution of institutions, which has not been extensively engaged in this paper. Evolutionary economists such as Geoffrey M. Hodgson have written extensively on this topic. Furthermore, Bednar and Page's research on the co-evolution of culture and political institutions is particularly relevant to this discussion (e.g., see Bednar and Page, 2018). By incorporating these perspectives, a more nuanced and comprehensive understanding of the role of cultural institutions in shaping political institutions can be developed.

Finally, American Indians faced a centralized state and were coerced into adopting new organizational systems that undermined their identities. Dippel (2014) argues that this forced integration of autonomous polities into a shared governance system had severe negative long-term consequences. Moreover, Caskey and Murtazashvili (2022) employed the predatory theory of the state to analyze China's violent assimilationist campaign targeting the Uyghurs, revealing how cultural genocide could occur in tandem with economic growth. This raises important questions about the preservation of cultural institutions (Crepelle et al., 2022; Murtazashvili and Murtazashvili, 2016), which merits further investigation.

Chapter 2

Chinese aid projects and local tax attitudes: Evidence from Africa

2.1 Introduction

What is the link between foreign aid and tax enforcement behavior? The Selectorate theory posits that political leaders are primarily motivated by their desire to maximize power and maintain their positions in office, which is often achieved by providing public goods funded through tax revenues in large democracies (see De Mesquita et al., 2002). However, taxes can be unpopular and carry political costs, leading leaders in clientelistic political environments to rely on their local patronage networks. Leaders may strategically provide foreign aid to regions as a form of patronage or to finance development that would otherwise be difficult to afford or funded through taxes. For example, political leaders may grant tax exemptions to industries or groups that they believe may support them politically. Consequently, the presence of politically biased foreign aid is likely to lead to a negative relationship between foreign aid and tax enforcement because it reduces the government's incentive to generate revenue.

Despite the extensive literature on the relationship between foreign aid and taxation,

recent econometric studies suggest that the effect of foreign aid on taxes is minimal or even non-existent (e.g., see Prichard, 2016; Morrissey, 2015). However, recent scholarship has shifted towards the argument that foreign aid may impact state-society relations (e.g., see Isaksson and Durevall, 2022; Bai et al., 2022; Blair and Winters, 2020). The underlying reasoning is that foreign aid may diminish the government's motivation to negotiate with society to increase tax revenue, thus weakening the fiscal contracts between the state and its citizens. Consequently, the provision of public goods may shift from the local government to external donors, leading to reduced efforts by the government to develop its own capacity to govern and generate fiscal income from its citizens. This may lead to a perception among citizens that their government is ineffective at enforcing taxes (Blair and Winters, 2020). Although the theoretical argument suggests a potential negative effect, empirical evidence is currently inconclusive. Therefore, this study aims to contribute to the literature by investigating the impact of politically biased foreign aid on citizens' perceptions of tax enforcement.

Given China's non-interference aid policy, Chinese aid may have unique characteristics that make it particularly susceptible to local patronage networks and, therefore, may affect perceptions of tax enforcement in the recipient countries. Specifically, Chinese aid programs in Africa do not require explicit policy reform on the part of the recipients (Brautigam, 2011). Instead, Chinese aid follows a demand-driven approach, whereby African leaders receive aid in response to their requests. Perhaps due to these features, Chinese aid projects are more likely to be located in the birthplaces of African leaders (Dreher et al., 2019). This tendency towards political expediency enables recipient country leaders to utilize Chinese aid projects for domestic political gain. By strategically directing Chinese aid towards their regions of political support, African politicians may seek to purchase political support by maximizing the private benefits of supporters, as suggested by the selectorate model. Such governments may even tolerate corruption, as also suggested by the selectorate model, which may explain why Chinese aid is positively associated with paying and receiving bribes at

the local level (Isaksson and Kotsadam, 2018). The political bias in Chinese aid allocation (Dreher et al., 2019) and the resulting corruption (Isaksson and Kotsadam, 2018) may lead citizens to believe that tax officials are engaged in corrupt practices, such as accepting bribes, and thus have less incentive and ability to enforce taxes. This may eventually erode citizens' trust in the government's ability to enforce tax and thus implants negative tax enforcement perceptions. This present study puts this claim to an empirical test. It empirically examines whether political biases in Chinese aid potentially diminish citizens' perceptions of the government's tax enforcement.

To test the theoretical claim, we matched geo-referenced data on official development projects in Africa from 2000 to 2014 with data on respondents from the Afrobarometer survey. We utilized a method that enables us to recover the effects of foreign aid by comparing respondents' residing around ongoing and anticipated aid projects. The study documented interesting results. First, we find evidence that Chinese aid is associated with negative perceptions of tax enforcement. Second, Chinese aid is positively associated with tax morale or compliance. Third, no similar pattern was found when the main analysis was replicated on aid from the World Bank. The political bias in Chinese aid allocation may help secure the tax compliance of aid beneficiaries while simultaneously eroding the government's reputation for tax enforcement. The findings support the claim that political bias in Chinese aid allocation may assist in achieving compliance among aid beneficiaries while simultaneously damaging the government's image of tax enforcement.

The paper contributes to different strands of the literature. The study adds to the research on foreign aid and tax enforcement behavior by taking a micro perspective. While macro-level studies can help understand the overall impact of aid on tax revenue (e.g., Prichard, 2016; Morrissey, 2015), they may not capture the nuances of local attitudes towards taxation and how aid interventions affect them. Evidence of tax-related behavior at the local level can be informative in understanding broader attitudes towards taxation and its implications for compliance and revenue collection. The study also adds to the growing

but conflicting recent research on the impact of Chinese aid in Africa. Recent research documents that local Chinese aid projects are more likely to engender authoritarian norms (Gehring et al., 2022; Bai et al., 2022), regional favoritism (Dreher et al., 2019), corruption (Isaksson and Kotsadam, 2018), political distrust (Atitianti, 2023), ethnic division (Isaksson, 2020), social disengagement (Adera, 2023), and crime incidences (Appiah-Kubi and Jarrett, 2022). Nonetheless, there is also evidence that Chinese aid to Africa continues to be effective in boosting economic development (Dreher et al., 2021a,b; Hou et al., 2021). Economic reforms have political costs to leaders in the short run and this absence of institutional conditionality makes Chinese aid attractive to leaders who fear that institutional reform might undermine their domestic bases of support (Brazys and Vadlamannati, 2021; Mohan and Tan-Mullins, 2009). Along this line, we add to the research by documenting a negative association between Chinese aid and tax-related behavior. Finally, the paper also adds to and builds upon research that examines the determinants of tax-related attitudes (Ciziceno and Pizzuto, 2022; McCulloch et al., 2021). It adds to this line of research by showing that foreign aid is one factor that affects tax-related attitudes.

The rest of the paper is organized as follows. Section 2.2 presents the literature to which this paper is related. Section 2.3 describes the data. Section 2.4 presents the empirical method. Section 2.5 presents and discusses the results. Section 2.6 concludes the paper.

2.2 Relationship to the literature

This paper contributes to and builds upon different strands of literature. Firstly, it is related to and builds upon research that examines the determinants of tax-related attitudes. With a focus on Nigeria, McCulloch et al. (2021) investigate the factors related to tax morale. The authors find results that individuals with a perception of increased penalties and greater difficulty avoiding taxes tend to have higher tax morale. Furthermore, tax morale is higher when individuals believe that their fellow citizens pay taxes, experience less frequent bribery,

and have higher trust in tax officials. Ciziceno and Pizzuto (2022) argue that life satisfaction is one-factor affecting tax morale. Using longitudinal data from the World Value Survey, they demonstrate that individuals who report higher life satisfaction also exhibit higher tax morale. According to the authors, the positive relationship between life satisfaction and tax morale tends to be more evident when individuals' vertical trust (confidence in the government) is higher. We contribute to this line of research by providing evidence that foreign aid is another factor that affects tax-related attitudes.

Second, the study contributes to the ongoing debate on the impact of Chinese aid, as we rely on Chinese aid data [1]. China has explicitly stated that it does not seek to promote government reform with its development packages, which suggests that Chinese aid is unlikely to contribute to institutional reform (Hernandez, 2017). Several studies have explored the relationship between Chinese aid and various outcomes in recipient countries. The most recent of these studies use geocoded Chinese aid data this paper used. For instance, Isaksson and Kotsadam (2018) found that Chinese aid is associated with higher experiences of paying bribes compared to aid from the World Bank. Similarly, Dreher et al. (2019) documented that Chinese aid exhibits political bias, often favoring the birthplaces of African leaders. Moreover, Isaksson (2020) found that Chinese aid increases the salience of ethnic identity in Africa, which could have implications for social cohesion and political stability. Giovannetti and Sanfilippo (2009) show that the presence of China displaces African firms. Furthermore, Gehring et al. (2022) show that Chinese aid cultivates an increase in the acceptance of authoritarian norms. Nonetheless, Dreher et al. (2021a) argue that the local receipt of Chinese aid does not necessarily lead to worse economic outcomes, despite being more vulnerable to political capture. They suggest that this may be due to the fact that Chinese aid often comes in the form of infrastructure projects, which have the potential to boost economic growth and development. Nonetheless, (Dreher et al., 2021b) indicate that in countries where China's aid support is minimal, aid from the United States tends

[1] See (Ajakaiye and Kaplinsky, 2009) for the trade effects of China in Africa.

to be more effective. Finally, research suggests that Chinese aid serves as a means for China to gain soft power. As argued by Morgan (2019), Chinese aid programs contribute to positive perceptions of China among African citizens. However, McCauley et al. (2022) finds that the proximity of African countries to Chinese foreign direct investment decreases their perception of China's development model as the most suitable for their country. Our study contributes to this debate by investigating the link between Chinese aid and local tax enforcement perceptions.

Third, it adds to the research on the link between foreign aid and taxation, which is mostly based on macro-level analysis. The literature presents a debatable relationship between foreign aid and domestic tax revenue. While some studies argue that foreign aid has a negative impact on domestic tax efforts (Benedek et al., 2014; Thornton, 2014; Pivovarsky et al., 2003), others argue that this relationship is not robust (Morrissey, 2015; Morrissey et al., 2014; Clist and Morrissey, 2011), or that foreign aid may have a modest but positive effect on domestic tax revenue (Clist, 2016). The disagreement in the literature seems to stem from issues related to data quality (Prichard, 2016) and endogeneity, as well as differences in empirical methods used (Carter, 2013). While previous studies have focused on cross-country analysis, this study takes a micro perspective and examines the impact of aid on tax enforcement perceptions at a sub-national level. Foreign aid is typically given to governments instead of individuals and thus citizens' behavior may act as an indirect reflection of state behavior (Blair and Winters, 2020). With such a premise, our result might be taken as evidence that Chinese aid projects may lead to a lower probability of tax enforcement. By analyzing the effects of aid on tax revenue at a more granular level, we thus add a more nuanced understanding of the relationship between foreign aid and tax enforcement.

2.3 Data

The analysis uses established geocoded data. The location of Chinese aid projects comes from the AidData. Geo-coded data on self-reported tax enforcement is from the Afrobarometer surveys.

2.3.1 The Chinese aid data

The geocoded Chinese aid data is obtained from the AidData's Geo-coded Global Chinese Official Finance Version 1.1.1 dataset (e.g., see Dreher et al., 2021b; Bluhm et al., 2018). This data set includes a total of 3,485 geolocated Chinese development projects, including both Chinese aid and non-concessional official financing, implemented between 2000 and 2014 in 6190 locations across approximately 130 developing countries. The data set was established using a methodology known as Tracking Underreported Financial Flows (TUFF), which relies on open-source media and aims to reduce misreporting and underreporting of projects. The data set is organized at the project location level and includes variables such as project location, commitment year, implementation start year, status, sector, and amount of aid pledged.

According to the OECD-DAC, an aid flow qualifies as official development assistance (ODA) if it is provided by official agencies to developing countries on the DAC list of ODA recipients. It should also be concessional in nature, with a grant element of at least 25 percent, and its primary objective should be to promote economic development in developing countries. However, Chinese aid does not adhere to DAC definitions, and AidData cannot verify the financing terms. Nonetheless, the AidData pre-filtered Chinese development projects according to their flow class (namely, 'ODA-like', 'OOF-like', or 'Vague OF'), as well as their primary intent. AidData classifies aid with a non-developmental intent as OOF-like aid, while developmental aid includes both ODA-like aid and developmental loans in OOF that are not concessional enough to qualify as ODA. Among OOF-like aid, a considerable

number of projects represent a mixture of official aid and export credits, which are aid-like and flow to developing regions. However, their terms and conditions appear commercial and non-concessional, leading to a finding that part of China's official finance recorded in AidData is not subsidized and not aid based on the Chinese government's definition.

This paper uses the category of records in the data set that AidData designates as ODA-like projects. This follows from the existing literature and is a definition of foreign aid consistent with the Chinese government, which excludes non-subsidized and commercial loans disbursed and funded by policy banks, such as the China Development Bank. In particular, the focus is on aid cases with a clear developmental purpose, notably including infrastructure building such as roads, trains, hospitals, schools, power plants, irrigation systems, and other social facilities. The AidData data set contains the location coordinates (latitude and longitude) of these aid projects. Figure 2.1 plots the locations of ODA-like Chinese projects. These are shown by red dots.

2.3.2 The Afrobarometer surveys

The Afrobarometer surveys are extensive attitudinal surveys that aim to explore public opinions on a wide range of issues, including perceptions of tax enforcement. For the empirical analysis presented in this paper, we primarily rely on rounds 3, 5, and 6 of the Afrobarometer surveys, as these are the only rounds that contain the key-dependent variable for the empirical analysis. The 3^{rd}, 5^{th} and 6^{th} rounds of the Afrobarometer surveys cover 18, 34, and 36 countries, respectively, and were administered during the periods of 2005-2006, 2011-2013, and 2014-2015.

As in the AidData, the Afrobarometer surveys provide the latitude and longitude coordinates for survey respondents [2]. We grouped together individuals with similar point coordinates to create clusters. These clusters are represented by small green dots in Figure 2.1.

[2]The geo-coded Afrobarometer data is obtained from the Afrobarometer team through a formal request.

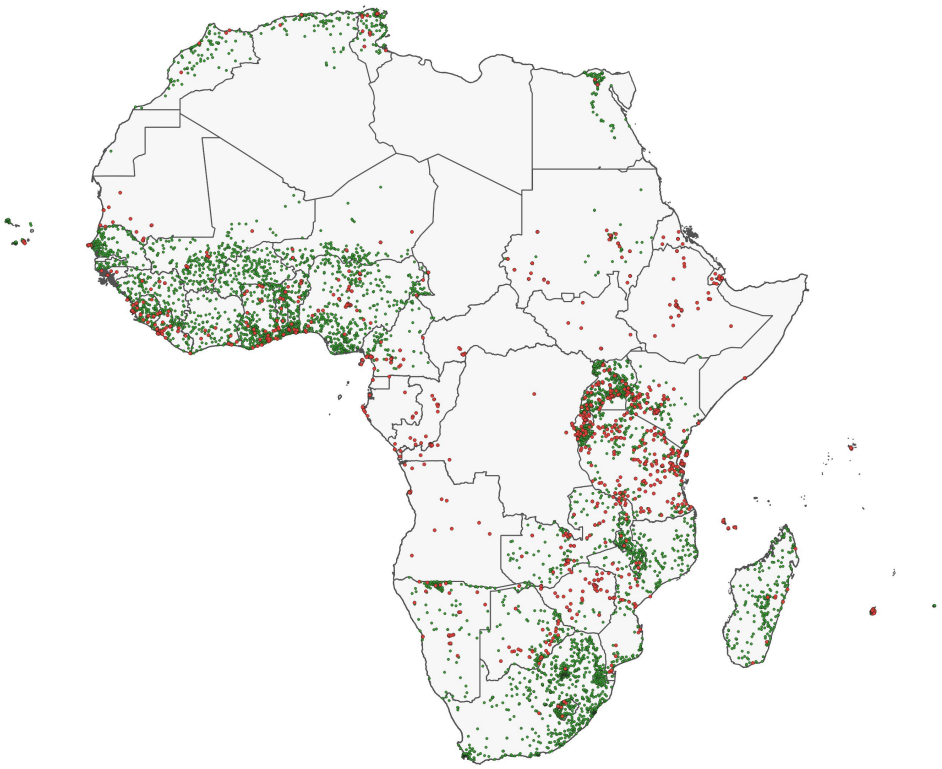

Figure 2.1: Locations of ODA-like Chinese Projects and Afrobarometer clusters

Tax enforcement perceptions The key dependent variable is an indicator of tax enforcement perceptions. The Afrobarometer includes data on the respondent's subjective evaluation of tax enforcement. However, the data on tax enforcement perceptions is available only in rounds 3, 5, and 6. Therefore, the empirical analysis primarily relies on these three rounds of the Afrobarometer surveys. In round 3, respondents were asked, "How likely do you think it would be that the authorities could enforce the law if a person like yourself did not pay a tax on some of the income they earned?" Answers were provided on a four-point scale, 1 for 'not at all likely' (1), 2 for 'Not very likely', 3 for 'Likely', and 4 for 'very likely'. Round 4 did not include a similar question. In rounds 5 and 6, a similar question was asked: "Based on your experience, how easy or difficult is it to avoid paying the income or property taxes that you owe to the government?" Respondents provided answers as 1 for 'very easy', 2 for 'easy', 3 for 'difficult', and 4 for 'very difficult'.

Based on this variable, we create a dummy of tax enforcement perceptions (TEP) that takes a value of 1 if the responses are 3 and 4, or 0 if the responses are 1 and 2 [3]. There are at least three advantages of using this dummy over the original measure. Firstly, the empirical analysis in this study depends on the mean difference between the treatment and control groups. Using the mean difference of categorical variables across groups as a valid measure is incorrect from a statistical standpoint, and it can lead to misleading conclusions. However, the dummy variable can be regarded as a quantitative variable, and therefore, it can be used to compare means across various groups. Secondly, the explanatory variable used in this study is a dummy variable. Consequently, using a dummy outcome variable can simplify the interpretation of coefficients derived from Ordinary Least Squares (OLS) analysis. Moreover, there is a slight difference in the wording of the questions used to capture the perceptions of tax enforcement. In Round 3, the question refers to the likelihood that tax authorities could enforce the law on payment of income tax, whereas in Rounds 5 and 6, it refers to the ease of avoiding paying income or property taxes. By grouping similar items

[3]Table B6 reports Afrobarometer samples by Country and Survey Waves.

together, the use of a dummy variable can help to account for differences in the wording of questions and their corresponding answers. However, we will later demonstrate that the results remain robust even when using the original measure.

Controls The analysis controls for several variables. Table B1 in the appendix reports the variables used in this study. These include age, age squared, gender (a male dummy), place of residence (an urban dummy), respondents' education level, employment status, relative living standards, the perceived performance of the president, and access to public goods. The source and description of most of these variables are provided in the Appendix.

2.4 Identification Strategy

AidData contains the location coordinates (latitude and longitude) of project sites. Similarly, the Afrobarometer surveys provide the location coordinates for survey respondents. We used the point coordinates in the aid data to identify the aid projects near each surveyed Afrobarometer respondent. We created clusters of respondents by grouping individuals with similar coordinates. All respondents with the same coordinates had the same projects identified nearby. Finally, using this information, we created a D-kilometer buffer zone around each Chinese project site. If a respondent in cluster j falls within a D-kilometer buffer zone of ongoing Chinese aid (absent any project), s/he falls into a treatment group consisting of clusters of respondents. Conversely, a respondent from cluster j falls into a control group if he/she resides outside the D-kilometer buffer zone around an ongoing Chinese project site.

In our matched sample, about 18.3%, 27.4%, 42.6%, and 63.2% of respondents respectively reside within 25, 50, 75, 100, and 200 kilometers of an ongoing Chinese aid project (OCP). Using this information, the baseline estimating specification takes the following form:

$$Y_{ijt} = \alpha_0 + \theta_{12} OCP_{Dit} + X_{ijt}{}'\beta + \mu c + S_t + \epsilon_{ijt} \tag{2.1}$$

Where Y_{ijt} is the outcome of interest for the i^{th} individual; OCP_{Di} is a dummy equal to 1 if the respondent lives within D kilometers of an ongoing Chinese project site or zero otherwise; $X_{ijt}{}'$ is the vector of controls; μ_c are country fixed effects; S_t are survey year fixed effects, and ϵ_{ijt} is the idiosyncratic error term.

In specification 2.1, the coefficient of interest is θ_{12}. Let K_g denote the observable factors for each group. These factors may include project-specific and respondent-specific characteristics. The difference between the groups that live within and outside D kilometers of an ongoing Chinese project (OCP) is $[\theta_{12} + K_1 - K_2]$. Thus, the causal identification of θ_{12} requires two assumptions. First, individuals living near ongoing projects are basically similar to those living far from those Chinese projects. Second, the location of Chinese projects is randomly decided, or there is no localization in Chinese projects. However, both of these assumptions are less likely to hold. For instance, (Dreher et al., 2019) show that Chinese aid projects are more likely to be in the home regions of African political leaders. In the presence of such non-randomness, it is not possible to recover the causal effect of Chinese aid on tax enforcement from a comparison of people living close to and far away from project sites.

To address the challenge of identifying the effects of Chinese aid, we adopt a temporal-spatial differences in differences (DID) identification strategy. This approach involves comparing ongoing and anticipated Chinese aid projects (e.g., see Isaksson, 2020; Isaksson and Kotsadam, 2018). The Afrobarometer typically visits different areas in different years and this hinders us from following specific localities over time, before and after a project was initiated. Yet, Afrobarometer does cover different areas at different times. We exploited this time variation in the data to set us the DID. Similar to Isaksson and Kotsadam (2018), we classify a project as either 'Ongoing' (OCP) or 'Planned' (PCP) based on the time of the Afrobarometer survey visit to a specific project area. For instance, if China launches two projects in 2006 and 2010, respectively, and the 2005 Afrobarometer survey covers the area where the 2006 project will be completed, the project from 2006 is designated as planned for

a survey respondent covered in the 2005 Afrobarometer survey. Similarly, the 2010 project is marked as Ongoing if the Afrobarometer survey covers the locality of the project in 2011. This identification strategy leverages temporal and spatial variation in the data, wherein some areas are surveyed earlier and others later, providing a basis for the DID. Thus, the spatial DID identification strategy enables us to overcome the challenge of identifying the effects of Chinese aid by utilizing time and spatial variation in the data.

In particular, the method relies on the comparison of one treatment group with three control groups. The treatment group is composed of respondents living within D kilometers of an Ongoing project site (group 1). Meanwhile, the three control groups consist of respondents living outside the D kilometers of an Ongoing project site (group 2), living within D kilometers of a planned Chinese project (group 3), and living outside the D kilometers from a planned Chinese project (group 4). Using this information, we re-specify the empirical model as follows:

$$Y_{ijt} = \alpha_0 + \theta_{12} OCP_{Dit} + \theta_{34} PCP_{Dit} + X_{ijt}{}'\beta + \mu c + S_t + \epsilon_{ijt} \tag{2.2}$$

In specification 2.2, PCP is a variable that represents a planned Chinese project. Specifically, it is a binary variable that takes a value of 1 for an individual residing within D kilometers of a planned project that is yet to start, provided that there are no completed projects in the same area. In our matched sample, about 2.6%, 4.6%, 6.7%, and 8.7% of respondents respectively reside within 25, 50, 75, 100, and 200 kilometers of a planned Chinese aid project (PCP).

To better understand the estimation process, let us define K_3 and K_4 as observable project-specific and respondent-specific characteristics for groups 3 and 4, respectively. The difference between group 1 and group 2 is given by $[\theta_{12} + K_1 - K_2]$, while the difference between group 3 and group 4 is given by $[\theta_{34} + K_3 - K_4]$. When there are no Ongoing projects, θ_{34} captures a selection effect. The differences between the treatment group and

control groups can be expressed as $[\theta_{12} + K_1 - K_2] - [\theta_{34} + K_3 - K_4]$. By assuming that $[K_1 - K_2]$ - $[K_3 - K_4]$=0, we can obtain the spatial DID estimator, which is $\theta_{DID} = \theta_{12} - \theta_{34}$. This estimator reflects the impact of a Chinese project after controlling for the endogenous selection in the Chinese project locations. The idea behind this approach is that by taking the difference between these two parameters, we can isolate the causal effect of aid on tax effort behavior from the combined selection and causal effect (Isaksson and Kotsadam, 2018).

2.5 Results

The main results are presented in Table 2.1. The unit of observation is an individual respondent in cluster j. To account for the correlation of errors among respondents from the same cluster, standard errors are clustered at the Afrobarometer cluster level. The dependent variable is a dummy of an individual's subjective assessment of tax enforcement. The results are for 25 kilometers cut-off. The estimates presented in the Table are based on the Linear Probability Model (LPM), which uses OLS to estimate the binary dependent variable [4].

2.5.1 Baseline Estimates

The first row of Table 2.1 presents the estimates for the baseline specification in equation 2.1. In column 1, the point estimate for θ_{12} is -0.019, which is statistically significant at the 1 percent level. This estimate suggests that the tax enforcement perception of a respondent residing within 25 km of Chinese project sites is lower by about 1.9 percentage points compared to individuals who live outside the 25 km cut-off. Column 2 introduces

[4]Given that the dependent variable is binary, logit or probit may provide better estimates. In our case, the marginal effects estimated from the logit estimator are similar to those obtained using OLS. For example, the marginal effect estimate for OCP in column 1 of 2.1 is -.018698 with a standard error of 0.00595, which is statistically significant and close to the estimate obtained using OLS. However, the difference-in-differences (DID) estimates require taking mean differences between treatment and control groups, making OLS a better option. Using a logit estimator produces log odds ratios, which makes it difficult to generate the DID estimates.

country-fixed effects and baseline controls, such as age, age squared, a gender (male) dummy, and place of residence (an urban dummy). Accounting for these factors, the point estimate for θ_{12} in column 2 is -0.027, which is statistically significant at the 1 percent level.

As noted above, there is a difference in the wording of the dependent variable between round 3 and the other two rounds. While both may capture tax enforcement behavior they are not identical - one could believe that authorities could enforce the law (even if they choose not to) and that it is easy to avoid paying tax (especially property tax). To account for this difference, column 3 reports results after excluding the data from round 3. As can be seen, results are not very sensitive to the wording of the dependent variable.

Column 4 adds respondents' education level, employment status, relative economic standing, the perceived performance of the president, interaction with local authorities, and access to public goods. We refer to this set of controls as 'endogenous controls', as they could potentially be an outcome of Chinese aid. However, we include them to demonstrate that our results remain robust despite their inclusion. Among these controls, the male dummy, education level, relative economic standing, and access to public goods are statistically significant and show a positive correlation with tax enforcement perceptions.

As can be seen from column 4 of Table 2.1, the results are robust to the inclusion of the 'baseline' as well as the 'endogenous' controls. With these controls and the country fixed effects, the point estimate for θ_{12} in column 2 is -0.026, which is statistically significant at the 1 percent level. In column 5, survey year-fixed effects are further added.

Overall, the results remain consistent. The most conservative estimate for θ_{12} is -0.017. It indicates that the enforcement perception of a respondent residing within 25 km of Chinese project sites is lower by about 1.7 percentage points compared to a respondent who lives outside the 25 km cut-off.

2.5.2 Estimates from comparing Ongoing and Planned projects

The estimates from comparing and Planned projects are also presented in Table 2.1. These are shown by the estimates on $OCP_{25i} - PCP_{25i}$. As previously argued, there is non-randomness in the selection of Chinese project sites. Notably, the statistically significant estimates of θ_{34} demonstrate the importance of accounting for non-randomness in the selection of Chinese project sites. Specifically, Chinese aid projects are often located in areas with higher pre-existing tax enforcement perceptions. Neglecting to consider the estimate of PCP_{Di} when interpreting the estimate on OCP_{Di} could lead to an overestimation of the effect of Chinese aid. Therefore, we rely on the $OCP_{25i} - PCP_{25i}$ estimates reported in Table 2.1.

Table 2.1: Chinese Aid and Tax Enforcement Perceptions: Main Estimates

	(1)	(2)	(3)	(4)	(5)
Cut off	25 km	25 km	25 km	25 km	25 km
Ongoing (OCP_{25i})	-0.019***	-0.027***	-0.013**	-0.026***	-0.017***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Planned (PCP_{25i})	0.070***	0.063***	0.117*	0.064***	0.021*
	(0.012)	(0.012)	(0.062)	(0.013)	(0.013)
$OCP_{25i} - PCP_{25i}$	-0.0892***	-0.0896***	-0.130**	-0.0896***	-0.0387**
Observations	92,970	92,260	71,531	76,694	76,694
R-squared	0.001	0.029	0.026	0.033	0.039
Baseline Controls	No	Yes	Yes	Yes	Yes
Endogenous Controls	No	No	No	Yes	Yes
Country FE	No	Yes	Yes	Yes	Yes
Region FE	No	No	No	No	No
Survey Year FE	No	No	No	No	Yes
Included Survey Waves	3,5,6	3,5,6	5,6	3,5,6	3,5,6

*Notes: The dependent variable is a dummy of an individual's subjective assessment of income tax enforcement. Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

The null hypothesis that the difference $[OCP_{25i} - PCP_{25i}]$ is zero is rejected at the five

percent level. This is represented by the stars on the estimates of $[OCP_{25i} - PCP_{25i}]$, which indicate the p-values from the F-test that tests whether the difference $[OCP_{25i} - PCP_{25i}]$ is zero. The estimates on $[OCP_{25i} - PCP_{25i}]$ suggest that individuals living near a Chinese project are more likely to hold lower tax enforcement perceptions. The preferred estimate is presented in column 5 of Table 2.1, where we have accounted for all relevant controls. According to this estimate, individuals living close to Chinese project sites are 3.9 percentage points more likely to hold lower tax enforcement perceptions as compared to those residing near planned Chinese project sites. This differs from the baseline estimates reported in the first row of Table 2.1. These results provide evidence supporting the argument that Chinese aid projects may have an adverse effect on tax enforcement perceptions due to their tendency to foster incidences and norms of corruption.

2.5.3 Chinese aid, Tax Morale or Tax Compliance

The findings thus far suggest a negative correlation between Chinese aid and tax enforcement perceptions. Previous research has established a positive correlation between tax morale and enforcement perceptions (e.g., McCulloch et al., 2021; Filippin et al., 2013). In the sample, there is also a positive and statistically significant correlation between tax enforcement and tax morale. Therefore, it is plausible that the results obtained so far may reflect tax morale - i.e., perceptions of tax compliance or the probability of being detected and penalized for non-compliance, in addition to enforcement perceptions.

To test whether this is the case in our context, we estimate the main specification using Afrobarometer data on tax compliance and tax morale. The results are reported in Table 2.2. The findings on tax compliance are presented in columns 1-2, while column 3 reports the result on tax morale. In all columns, the estimates are from the linear probability model (LPM) where the outcome variables are dummies. As can be seen from Table 2.2, Chinese aid is positively correlated with tax compliance and tax morale. For instance, the estimate in column 1 of 2.2 shows that a respondent living near an Chinese project is 19.8

percentage points less likely to refuse to pay taxes. One concern may be that the differences in the samples used in Table 2.2 and Table 2.1 could affect the comparability of the two sets of results. To address this concern, we re-estimated the results in Table 2.2 using the same samples as in Table 2.1 [5]. The results are similar, suggesting that the differences observed are not solely due to differences in the samples. Overall, Chinese aid is negatively associated with perceptions of tax enforcement, but positively associated with tax morale or compliance.

Why does Chinese aid seem to be associated with high levels of tax compliance or morale, while at the same time being linked to lower perceptions of tax enforcement? As mentioned earlier, Chinese aid is characterized by a policy of minimal conditions and a demand-driven approach, which affords political leaders in recipient nations more discretion. This allows politicians to reward Chinese projects as political support for a locality without needing to adjust government tax and spending policies, potentially boosting the morale of people in the area and leading to higher tax compliance or morale. However, this discretionary approach also has its downsides. Chinese aid projects may have characteristics associated with corrupt behavior, as highlighted by Isaksson and Kotsadam (2018). This can lead to perceptions among citizens that tax collectors are being paid off, or that state institutions including the tax officials corrupt. Thus, the negative tax enforcement perceptions associated with Chinese aid may reflect citizens' generic perception of the corruption in state institutions, rather than their own tax morale or need for tax compliance.

A similar explanation, which follows from the selectorate model, is that politicians may be incentivized to associate themselves with Chinese aid projects as a means of rewarding local support. While this political strategy may help to garner the support of aid beneficiaries, it may also lead to a decline in the government's reputation for tax enforcement. High tax compliance or morale, in the absence of strong tax enforcement, may indicate the presence of patronage networks between the government and citizens. In other words, citizens may

[5]The results of this exercise have been omitted to save space but can be made available upon request to the author(s).

comply with tax obligations out of loyalty to political leaders, rather than a genuine belief in the importance of paying taxes for public goods and services. Thus, a respondent may have high tax compliance or morale, even when he or she believes that there is a lower tax enforcement mechanism.

Table 2.2: Chinese Aid, Tax Compliance and Tax Morale

	(1)	(2)	(3)
Cut off	25 km	25 km	25 km
Dependent variable	Not-Refused Taxes	Punish Non-Payers	Tax Morale
DID ($OCP_{25i} - PCP_{25i}$)	0.198***	0.217**	0.052***
Observations	73,044	68,812	98,794
R-squared	0.036	0.059	0.048
Baseline Controls	Yes	Yes	Yes
Endogenous Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Included Survey Waves	5,6	5,6	3,4,5,6

*Notes: Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

Tax Compliance : Tax compliance refers to the extent to which citizens decide to comply with tax laws. Afrobarometer has two questions that are related to respondents' attitudes toward tax compliance. These questions ask respondents to indicate their perception of the ethical and legal implications of not paying taxes owed on income. We use these variables to categorize respondents as more or less compliant with tax regulations. The first question reads as: "Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have [Refused to pay a tax or fee to the government]?". The original answers are coded as 4 for "Often", 3 for "Several times", 2 for "Once or twice", 1 for "Would if had the chance" and 0 for "Would never do this". Based on this variable, we create a dummy of 'Non-Tax Refusal (NRPT)' that takes a value of 1 if the ordinal variable

has a value of 0 or zero if the original variable has a value of 1-4.

Another measure of tax compliance comes from the question that reads as: "I am now going to ask you about a range of different actions that some people take. For each of the following [Not paying the taxes they owe on their income], please tell me whether you think the action is not wrong at all (1), wrong but understandable (2), or wrong and punishable (3)". Based on this question and its answers, we create a dummy of 'Punish Not Paying Taxes (PNPT)' that takes a value of 1 if the original variable has a value of 3 or 0 if the original variable has a value of 1-2.

Tax Morale (TM): Tax morale is the extent of belief a citizen has about paying taxes voluntarily. Afrobarometer asks respondents to indicate their level of agreement or disagreement with the statement, which reflects their moral stance on the legitimacy and power of tax authorities. The question reads as "The tax authorities always have the right to make people pay taxes". This question is answered as 1 for 'Strongly Disagree', 2 for 'Disagree' 3 for 'Neither Agree Nor Disagree', 4 for 'Agree', and 5 for 'Strongly Agree'. Based on this question and its answers, we create a dummy of tax morale that takes a value of 1 if the answers to the original question are coded as 4-5 or 0 if the original answers are 1-2.

2.5.4 Heterogeneity: Does Regime Type Matter?

The main argument of the paper is that the observed effects are driven by the political bias in Chinese aid allocation and the specific type of political system in which the aid is received. In particular, in the absence of strong institutions such as tax capacity, Chinese aid is more likely to undermine tax enforcement. The idea is derived from the theory of the selectorate, which suggests that political favoritism is less likely to prevail in democratic regimes. This is due to the presence of a larger coalition, which imposes constraints on the utilization of patronage networks. When applied to the present case, the model suggests that the impact of foreign aid on taxes is more pronounced in small coalition systems or in political

Table 2.3: Chinese Aid, and Tax Attitudes By Regime Type

	Democratic			**Non-Democratic**		
	(1)	(2)	(3)	(4)	(5)	(6)
Diff in Diff (DID)	-0.013	0.015	-0.009	-0.045***	-0.041***	0.0801***
Observations	27,090	27,089	32,784	49,604	49,604	66,009
R-squared	0.044	0.093	0.101	0.038	0.064	0.074
Baseline Cont	Yes	Yes	Yes	Yes	Yes	Yes
Endogenous Cont	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	No	No	Yes	No	No
Region FE	No	Yes	Yes	No	Yes	Yes
Survey Year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	3,5,6	3,5,6	3,5,4,6	3,5,6	3,5,6	3,4,5,6

*Notes: Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01.*

systems that can be characterized as autocracies. This is because providing private goods, such as patronage, to crucial supporters becomes an optimal political survival strategy in such systems. Conversely, leaders in large coalition systems may maintain political power by offering benefits to all members of society. Thus, as the coalition size increases, the negative effects of foreign aid arising from its political bias will diminish. This implies that the effects are expected to be more noticeable in political systems characterized by low levels of democracy or small political coalitions, commonly referred to as autocracy (De Mesquita et al., 2002).

Therefore, the aforementioned results should exhibit weaker tendencies in democracies. If this is indeed the case, it can be considered as evidence that the effect of Chinese aid stems from its role in facilitating political patronage in autocracies. To empirically address this inquiry, we use data on democracy versus autocracy from Geddes et al. (2014) and split the sample by regime type to check whether heterogeneity exists along this dimension [6].In particular, we replicate the main analysis for democratic and non-democratic sub-samples.

[6]The regime types data from Geddes et al. (2014) is accessed at https://sites.psu.edu/dictators/.

The results are presented in Table 2.3. In columns 1, 2, 4, and 5, the dependent variable is the measure of perceived tax enforcement, while in columns 3 and 6, it is the measure of tax morale. The results indicate that the observed effects hold for non-democratic samples, where the estimates are statistically significant. However, in the case of democratic sub-samples, the estimates are not statistically significant. This suggests that the impact of Chinese foreign aid in augmenting resources available for patronage is more pronounced in non-democratic regimes. Consequently, foreign aid weakens governments' incentives to raise taxes by increasing the resources available for patronage, and this effect is particularly noticeable in small coalition systems. Thus, the effects under investigation have heterogeneity across different regime types and are not independent of regime types.

2.5.5 Robustness Checks

This section reports additional sets of robustness checks. First, we use 50,75, 100, and 200 kilometers cut-offs as alternative specifications. Second, we undertook a falsification test. We estimate the main specification for non-Chinese type aid. The same analysis is replicated for world bank aid and no similar pattern is observed. This exercise helps to sort out the nature of foreign aid that is bad for tax efforts. Third, we estimate the specification with regional fixed effects instead of country-fixed effects. Finally, we re-estimated the main results for Chinese aid using the original measures of tax attitudes.

Estimates for 50, 75, 100, 200 km cut-offs

Our earlier estimates were based on a 25 km cut-off. To assess the robustness of our findings, we re-estimated the results in column 5 of 2.1 using a 50 km cut-off and presented them in column 1 of Table 2.4. Remarkably, the results reveal a consistent pattern in the estimates. Specifically, the estimate for $\theta_{12} - \theta_{34}$ at 50 km is -0.0340, which is lower than the estimate of -0.0387 obtained with a 25 km cut-off, but the difference is not statistically significant. This suggests that the earlier estimates are robust and not sensitive to a slight change in

the choice of the cut-off distance.

The identification strategy in this paper relies on two assumptions. First, the selection process for anticipated project locations is not systematic. This assumption is likely to hold for two reasons. First, the political actors in the office are responsible for the planning and execution of aid projects, thereby enhancing our confidence in the robustness of our findings. Secondly, our comparative analysis of four distinct groups of individuals overcomes the potential identification bias stemming from non-random selection in the location of projects. We believe that this enhances the validity of our conclusions and increases the credibility of our analysis.

Nonetheless, it is important to show that differences in project-specific and respondent-specific characteristics do not pose a significant challenge. Specifically, the difference between $K_1 - K_2$ and $K_3 - K_4$ should be negligible: $[K_1 - K_2]$ - $[K_3 - K_4] = 0$. Thus, the first type of information required is showing that groups that receive and don't receive Chinese projects are similar on pre-treatment observables. Table B2 in the appendix presents results from a balance test. Except for the two variables, treated and control groups are similar. Chinese aid is associated with urban and educated respondents. This poses less challenge as the analysis has already controlled for these variables.

The empirical method also requires showing that locations that receive and don't receive Chinese projects are similar on pre-treatment observables. Directly testing this assumption is challenging as it requires knowledge of all relevant (un)observable project-specific and respondent-specific characteristics. To address this, we perform an implicit test by widening the cut-off distance. With a large cut-off distance, the difference between untreated individuals and the treatment group should approach zero. Therefore, we expect $\theta_{12} - \theta_{34}$ to diminish as one moves further away from OCP locations. To check for this, we estimate specification (7) for cut-offs of 50, 75, 100, and 200 kilometers and report the results in columns 1-4 of Table 2.4. Our findings indicate a decline in the size of the estimates as the distance from the project sites increases. This decline supports our identification assumption

Table 2.4: Chinese Aid and Tax Enforcement (TEP): Robustness to other cut-offs

VARIABLES	(1) 50 km	(2) 75 km	(3) 100 km	(4) 200 km
Diff in Diff ($OCP_{Di} - PCP_{Di}$)	-0.0340***	-0.0323***	-0.0227***	-0.0136*
Ongoing (OCP_{50i})	-0.008*			
	(0.005)			
Planned (PCP_{50i})	0.026***			
	(0.009)			
Ongoing (OCP_{75i})		-0.009*		
		(0.005)		
Planned (PCP_{75i})		0.023***		
		(0.008)		
Ongoing (OCP_{100i})			-0.009**	
			(0.005)	
Planned (PCP_{100i})			0.014*	
			(0.008)	
Ongoing (OCP_{200i})				0.009*
				(0.005)
Planned (PCP_{200i})				0.022***
				(0.008)
Observations	73,412	71,756	71,374	71,888
R-squared	0.040	0.040	0.041	0.040
Baseline Controls	Yes	Yes	Yes	Yes
Endogenous Controls	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes	Yes
Included Survey Waves	3,5,6	3,5,6	3,5,6	3,5,6

*Notes: The dependent variable is a dummy of an individual's subjective assessment of income tax enforcement. Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

and suggests that there is no systematic difference between PCP and OCP as one moves further away from OCP locations. As a result, we can regard these findings as supportive of the validity of the identifying assumption employed for the spatial DID analysis.

Estimates with Region Fixed Effects

So far, the analysis has controlled for variations in average tax attitudes over time by using survey wave fixed effects. However, there may also be variations in tax attitudes across different locations. As mentioned earlier, this could pose a challenge because areas that receive Chinese projects and those that do not may differ in various ways. The distribution of Chinese aid across sub-Saharan Africa can be influenced by several factors that are likely to shape contemporary tax attitudes. To address this concern, this section attempts to take these issues into account by including region-fixed effects in the specifications. By doing so, only tax attitudes among individuals within the same region are compared. This helps control for both observable and unobservable differences specific to each region, leaving residual differences in tax attitudes that are more likely attributable to variations in Chinese aid across space.

Table 2.5 replicates the DID estimates presented in Table 2.4. The only modification is that Table 2.5 incorporates region-fixed effects instead of country-fixed effects. The results demonstrate that the findings remain robust even after considering both temporal and spatial variations in tax attitudes.

Estimates for World Bank aid: As a falsification Test

Whether the observed effect on tax enforcement is unique to Chinese-type aid or a general pattern is important in understanding the broader implications of our findings. Our initial argument was that the features of Chinese aid, such as non-interference in domestic affairs and the lack of conditionality, may contribute to the negative effect on tax enforcement efforts. In contrast, other donors, such as the World Bank, often attach conditions to their aid, which may affect tax enforcement differently.

As observed in past studies such as Dreher et al. (2019), Chinese aid is likely to be located in the birth regions of African leaders. Similarly, it is associated with higher experiences of corruption (Isaksson and Kotsadam, 2018). Yet, there has not been evidence that such

Table 2.5: Chinese Aid, and Tax Enforcement (TEP) with Region FE

	(1)	(2)	(3)	(4)
Cut-off	50 km	75 km	100 km	200 km
$OCP_{Di} - PCP_{Di}$	-0.0342**	-0.0373***	-0.0325***	-0.0278 ***
Observations	77,518	75,888	75,658	76,361
R-squared	0.070	0.071	0.072	0.071
Baseline Controls	Yes	Yes	Yes	Yes
Endogenous Controls	Yes	Yes	Yes	Yes
Country FE	No	No	No	No
Region FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Included Survey Waves	3, 5, 6	3, 5, 6	3, 5, 6	3, 5, 6

*Notes: The dependent variable is a dummy of an individual's subjective assessment of tax enforcement. Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05.*

regional favoritism in Chinese aid has made it ineffective for development (e.g., see Dreher et al., 2021a; Xu et al., 2020). Nonetheless, there is evidence that foreign aid from the US is less effective in the presence of Chinese aid (Dreher et al., 2021b). Since Chinese aid, unlike world bank aid, has regional favoritism (Dreher et al., 2019), it is likely to be instrumentalized for local patronage networks. Following this, we conducted a falsification exercise to test this hypothesis by replicating our main regression analysis for World Bank aid projects. This exercise helps to identify the nature of foreign aid that undermines tax efforts.

Data on World Bank projects comes from *"World Bank Geocoded Research Release, Version 1.4.2."*. This geocoded dataset includes all World Bank projects in the IBRD and IDA lending lines approved from 1995-2014. It tracks 5,684 projects across 61,243 locations in the world. Figure 2.2 presents the locations of World Bank Projects and Afrobarometer clusters. In the Figure, the red dots are the locations of World Bank projects, whereas the green dots are the locations of Afrobarometer clusters.

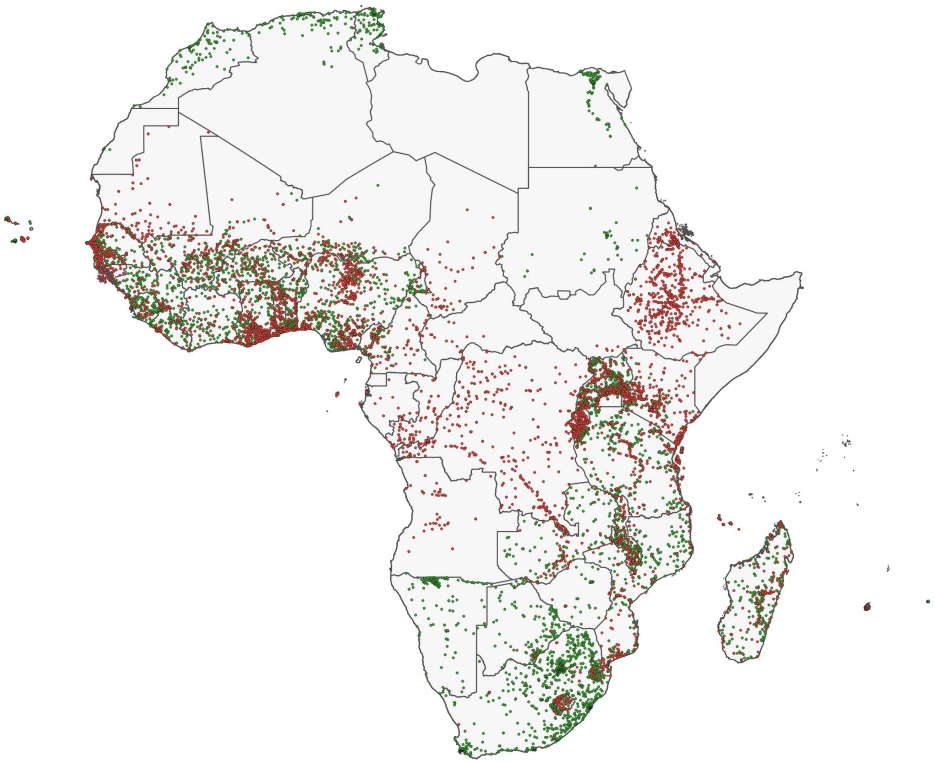

Figure 2.2: Locations of World Bank Projects and Afrobarometer clusters

The results from replicating our main regression analysis for World Bank aid projects are reported in Table 2.6. The DID ($OWBP_{Di} - PWBP_{Di}$) estimates for the difference between ($OWBP_{Di}$ and planned $PWBP_{Di}$) world bank project are reported in the first row of the Table along with P-values for the F-test ($OWBP_{Di} - PWBP_{Di}$)=0. In all cases, the null hypothesis that $OWBP_{Di} - PWBP_{Di} = 0$ is not rejected. Overall, the results indicate that the estimates for World Bank aid do not suggest a similar pattern in terms of crowding out tax enforcement efforts. This finding supports our initial hypothesis that the effect is peculiar to Chinese-type aid. In sum, our results highlight that foreign aid's tax effort-reducing effect depends on whether it has the potential of ending up in clientelistic local networks.

We also replicate Table 2 for World Bank projects. The results are reported in Table

Table 2.6: World Bank Aid & Tax Enforcement (TEP): A Falsification Test

VARIABLES	(1) 25 km	(2) 50 km	(3) 75 km	(4) 100 km
Diff in Diff ($OWBP_{Di} - PWBP_{Di}$)	0.0107	0.0194	0.0129	0.0201
P-value for F-test on $OWBP_{Di}$ - $PWBP_{Di}$=0	[0.255]	[0.0913]	[0.330]	[0.240]
Ongoing ($OWBP_{25i}$)	-0.003			
	(0.005)			
Planned ($PWBP_{25i}$)	-0.014			
	(0.010)			
Ongoing ($OWBP_{50i}$		0.006		
		(0.007)		
Planned ($PWBP_{50i}$)		-0.013		
		(0.012)		
Ongoing ($OWBP_{75i}$)			-0.016**	
			(0.008)	
Planned ($PWBP_{75i}$)			-0.029**	
			(0.014)	
Ongoing ($OWBP_{100i}$)				-0.017*
				(0.009)
Planned ($PWBP_{100i}$)				-0.037**
				(0.018)
Observations	73,341	74,269	76,020	77,133
R-squared	0.040	0.040	0.040	0.039
Baseline Controls	Yes	Yes	Yes	Yes
Endogenous Controls	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes	Yes
Survey Waves	3,5,6	3,5,6	3,5,6	3,5,6
Difference in difference				

*Notes: The dependent variable is a dummy of an individual's subjective assessment of income tax enforcement. Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

B5 in the appendix. There is no significant relationship between WB projects and tax compliance or morale.

Using the Original measures for Tax Attitudes

Finally, the main analysis uses dummy variables to represent tax attitudes, although the original tax attitude measures are not in the form of dummies. To check whether this affects the results, we re-estimated the main results presented in Tables 2.1 and 2.2 using the original measures of tax attitudes. In Table B4, in the appendix, we report results using the original measures instead of the dummies. The results are robust to using the original measure.

2.6 Conclusion

The increasing Chinese presence in Africa has brought about alternative sources of finance, political alliance, trade, and foreign aid. However, the Sino-Africa relationship is not without controversy. One of these debates lies in whether the net effect of Chinese aid is positive or negative. Unlike Western aid, Chinese aid is aid with no conditionalities as China follows a policy of non-interfering inside aid-receiving nations' domestic affairs (Wang and Elliot, 2014). This unconditionality has been found to make Chinese aid rampantly corrupted at a sub-national level in Africa, whereas World Bank's aid has no such an effect (Isaksson and Kotsadam, 2018). Even worse is that the conditionality of the World Bank gets less stringent in the presence of China (Hernandez, 2017).In particular, a World Bank aid project co-located with a Chinese project is more likely to be corrupted (Brazys et al., 2017). Likewise, Chinese aid is found to inhibit economic reforms (Brazys and Vadlamannati, 2021). Moreover, Chinese aid is found to make aid from countries such as the United States less effective (Dreher et al., 2021b). Furthermore, Chinese aid follows a demand-driven approach, where African leaders receive aid in response to their requests. This is perhaps one reason why Chinese aid is more likely to be placed in the birthplaces of African regions (Dreher et al., 2019). All of these raise important questions regarding the potential externalities of Chinese aid.

This paper examines the impact of Chinese aid on tax enforcement perceptions in Africa. Chinese aid provided to African countries is characterized by a policy of minimal conditions and a demand-driven approach. This approach affords political leaders in recipient nations more discretion, potentially reflecting China's own development trajectory, and allows for the implementation of development projects at a faster pace. However, these attributes also render Chinese aid vulnerable to corruption by government officials, as it may be used to serve domestic political objectives. This paper contends that such conditions may give rise to negative perceptions among citizens towards the government's ability to enforce taxes, as corrupt behavior among state officials erodes public trust in the performance of

tax enforcement authorities. Drawing from the selectorate theory of political survival, we hypothesize that Chinese aid undermines the tax enforcement perceptions, as the provision of aid may decrease the political incentives to tax core supporters. To test this claim, we rely on geocoded foreign aid data and the Afrobarometer surveys, applying a spatial-temporal DID that exploits the timing of Afrobarometer surveys. In particular, the paper employs an empirical methodology that compares and planned Chinese aid projects. We have found evidence suggesting that Africans living close to Chinese aid projects hold negative perceptions of tax enforcement, but display higher tax morale or compliance. However, when we replicated the same analysis using World Bank projects, we did not observe a similar pattern. One possible explanation for our results is the presence of patronage networks between the government and citizens. Political leaders may reward a locality with Chinese aid in exchange for citizens' support which manifests itself in the form of tax compliance. Therefore, citizens comply with tax authority not out of a civic duty to contribute to public goods and services, but as a means of demonstrating loyalty and gaining access to benefits. Such networks can lead to high tax compliance or morale, even when enforcement is weak or perceptions of enforcement are low. Overall, our study suggests that Chinese aid projects in Africa can harm the government's image on tax enforcement, but have a minimal effect on tax morale or compliance.

This study contributes to the literature on the impact of Chinese aid and highlights the need for greater attention to the potential negative externalities of aid in recipient countries. The findings have important policy implications for both Chinese aid donors and African governments. Chinese aid should be designed in a way that promotes transparency, accountability, and good governance, rather than reinforcing patronage politics. African governments should also take steps to improve their tax enforcement efforts and reduce their reliance on aid as a source of revenue. This could include improving tax administration, enhancing tax compliance, and promoting economic diversification. Moreover, our results contribute to the growing literature on the varying effects of aid on state-society relations,

highlighting the need to consider the nature of the donor in understanding the implications of aid. Specifically, our results suggest that the negative effects of aid on tax enforcement are more behavioral, rather than simply a result of financial competition. Policy reforms associated with the conditionality of aid may help to neutralize these negative effects. Overall, our findings underscore the importance of carefully examining the nature of aid and its potential impact on domestic institutions and governance.

The paper provides interesting issues for further study. First and foremost, the paper relies on the subjective evaluation of tax enforcement. Thus they do not necessarily imply lower tax payments and may not affect government tax behaviour more generally. Conversely, the results should be interpreted within the framework that foreign aid has the potential to influence government behavior, which in turn can affect citizen behavior and ultimately reflect in state behavior. This means that the findings may not necessarily imply a direct causal link between Chinese aid and reduced tax revenue. Rather, they suggest a complex interplay between foreign aid, government behavior, and citizen behavior that requires further investigation. Second, while the study provides important insights into the impact of Chinese aid on tax enforcement behavior, further research is needed to better understand the mechanisms behind our findings. Third, future studies could explore the role of political connections, local institutions, and other factors that may affect the relationship between Chinese aid and tax enforcement behavior. Our study underscores the importance of considering potential negative externalities when designing aid programs, particularly in the context of developing countries where aid plays a crucial role in development. One issue is that self-reported responses do not measure tax performance or actual behavior, but rather tax morale - perceptions of tax compliance or the likelihood of being caught and punished for non-compliance. While this issue should not be ignored, self-reported responses can provide valuable insights into government behavior. It is important to note that foreign aid is typically given to governments rather than individuals, and can potentially affect citizens' perceptions of their government's behavior. According to a recent review by Blair

and Winters (2020), foreign aid may weaken citizen confidence in the state, mainly due to its impact on state behavior. Therefore, we believe that citizens' subjective tax assessments may reflect the government's efforts towards taxation.

Chapter 3

Remittees and the electoral fate of political patrons: Evidence from Sub-Saharan Africa

3.1 Introduction

To stay in power, incumbent leaders frequently engage in tactical redistribution of benefits to essential political supporters (Finan and Schechter, 2012; Schaffer et al., 2007). This is particularly salient in developing economies such as Africa, where an incumbent is free to exploit state revenues for vote buying (Keefer, 2007). Indeed, African politics is characterized by neopatrimonialism, where politicians secure the loyalty of citizens by providing state resources to core supporters (Erdmann and Engel, 2006; Wantchekon, 2003).

Political support buying, as a political strategy, is especially effective if the potential supporter is sufficiently poor (Jensen and Justesen, 2014; Manacorda et al., 2011). This is because the marginal utility of the transfers is higher for the poor (Dixit and Londregan, 1996). For an African poor, a financial transfer from the incumbent represents a larger relative share of their individual income. In most cases, the value of the transfers may

amount to the cost of basic foodstuff or a t-shirt. As these benefits are large for the poor, they are more likely to support the politician offering the transfer. How do economic factors, such as improvements in the economic status of voters, impact this phenomenon of political clientelism?

In this work, I seek to uncover how non-patronage foreign transfers affect political support. We in particular focus on the role of international remittances. Economic voting theories suggest that remittances may spur anti-incumbent tendencies in the African context (Dixit and Londregan, 1996). The marginal benefit of transfers is higher for an incumbent if it targets the poor. As the poor receive remittance and gets richer, however, the efficacy of political support buying through targeted transfers weakens. This is because remittances lower the marginal utility of patronage transfers. In other words, receiving remittances raises the cost of buying political support from those individuals whom remittances have made richer. This may ultimately work against the political survival of clientelist incumbents.

Although this prediction is theoretically appealing, little research directly links remittances to support for incumbents in Africa. With the aim of bridging this gap, this paper considers the role of remittances in supporting incumbents. The paper uses data from the fourth and sixth rounds of Afrobarometer surveys. The quantitative analysis utilizes multiple linear regression, propensity score matching, and a formal method of testing for omitted variables bias. I find evidence that remittance recipients are less likely to support incumbents. Turning to the theoretical mechanism, I find suggestive evidence that remittance inflows lower the marginal utility of patronages and raise an incumbent government's costs associated with maintaining its clientelist grip on political supporters. When examining the sample of countries based on regime type, I observe that the erosion of electoral support for incumbent parties is primarily observed in non-democratic regimes. This suggests that a surge in remittances could pose challenges for autocratic governments, potentially destabilizing their hold on power.

The rest of this paper is organized as follows: Section 3.2 reviews related literature. Section 3.3 presents the theoretical argument of how receiving remittances shape support for incumbent political leaders. Section 3.5 describes the data. Section 3.4 describes the empirical method. Section 3.6 presents the empirical results. Section 3.7 summarizes the paper.

3.2 Existing Literature

Remittances are a substantial inflow of income for African countries. According to the African growth initiative at Brookings, remittance inflows to Sub-Saharan Africa in the year 2019 are larger than foreign direct investment (FDI) inflows and are comparable in size to official development assistance. Their large presence prompts a growing scholarly interest in understanding their socioeconomic consequences. A branch of the research provides evidence that remittances stabilize households' wealth, reduce poverty, and facilitate economic development (Adams Jr, 2011).

Most of the existing research on international remittances dwells on their economic effects. Unlike other sources of unearned foreign income such as oil rents or aid, remittances accrue directly to its recipients (individuals and households). Due to these characteristics, remittances may also have a direct effect on the political behavior of recipients. Accordingly, a recent scholarship links remittances to political behavior. Most of this research is on Mexico or Latin America (e.g., López García and Maydom, 2021; Ahmed, 2017; Pfutze, 2012).

As far as Africa is concerned, there is a dearth of evidence as to what the electoral effects of remittances are. The exceptions are Dionne et al. (2014) and Ebeke and Yogo (2013), each of which links remittances to political participation. Both Dionne et al. (2014) and Ebeke and Yogo (2013) provide evidence that remittance receipts shrink electoral turnouts. Dionne et al. (2014) reports that remittances enhance non-electoral political participation.

Dionne et al. (2014) further reports that remittees contact government officials and are more likely to protest[1]. These researches on Africa do not provide a clear cut as to how receiving remittances affects electoral behavior towards the incumbent. Nor are they clear on the mechanisms tying remittances to political behavior. In this work, we go a step further and consider the role of remittances on electoral support for political incumbents.

3.3 Theoretical Background

This section presents a simple conceptual framework. The aim is to illustrate the effect of remittances on support for incumbents. The model is guided by the logic of patron–client transactions. It is borrowed from the works of Dixit and Londregan (1996); Pfutze (2009) and (Ahmed, 2017). These works provide a framework to understand the electoral support role of financial transfers by political parties. In particular, Pfutze (2009) and (Ahmed, 2017) apply the logic of support buying to remittances. I borrow from these scholars and present a simple model that guides my empirical analysis.

The clientelist arrangement involves two key actors: patrons and clients (i_s). The primary objective of an incumbent patron is to uphold and consolidate their political power. In pursuit of this goal, the patron engages in the practice of purchasing the support of individual clients through patronage transfers (τ). These transfers act as incentives for clients to provide their loyalty and backing. To fund these patronage transfers, the patron relies on domestically generated tax revenues. By utilizing these funds, the patron can distribute resources and benefits to their clients, thereby reinforcing the client-patron relationship and strengthening their political influence. This financial mechanism plays a critical role in sustaining and expanding the patron's power base within the clientelist system.

The patron is assumed to have i_s clients, categorized into two types: m (belonging to migrant households) and n (from non-migrant households). Each client, regardless of type, earns an after-tax income denoted as I. Clients belonging to migrant households (m) receive

[1]See also (Escribà-Folch et al., 2018) for the impact of remittances on anti-government protesting.

non-taxable remittance income (r), while clients from non-migrant households (n) do not receive any remittance income.

A political supporter's utility is a function (V) of her consumption(C): $V_i(C) = f(I, r, \tau)$. (Ahmed, 2017) defines the voter's utility function as linear in consumption. In contrast, (Pfutze, 2009) defines voter's utility as an increasing, strictly concave function in consumption. For simplicity, I prefer the utility function in (Ahmed, 2017). Following him, the utility of a remittee from supporting the incumbent is stated as [2]

$$V_m(C) = \theta[I + r_i + \tau_i] \tag{3.1}$$

In equation 3.1, the parameter $\theta \in (0, 1)$ is a measure of how supportive the client is towards a patron's policies including patronage or its political ideology. It gauges how much a political client's "baseline" utility increases by supporting the patron. In the limiting case, it can be taken as a measure of the responsiveness of the client to transfers offered by the patron. For instance, higher θ may imply that the client is supportive of the incumbent's ideological orientation.

A remittee supports an incumbent leader if

$$\theta[I + r_i + \tau_i] \geq [I + r_i] \tag{3.2}$$

Equation 3.2 says that a remittance-receiving client will support an incumbent patron if her utility with the transfer is higher than the one without it.

Note that the marginal utility (MU) of the targeted patronage transfer (τ) is denoted as θ, such that $\frac{\partial V_m}{\partial \tau} = \theta$. It is evident from Equation 3.2 that remittances lead to a decrease in θ. Thus, the following result emerges:

[2] (Dixit and Londregan, 1996), defining the utility for voting for the incumbent as $U_i(C) = \theta_i \frac{C_i^{-\rho}}{1-\rho}$.Using this definition either does not alter the main theoretical prediction.

$$\frac{\partial V_m}{\partial r} = \theta - 1 < 0 \tag{3.3}$$

Equation 3.3 generates a nice testable hypothesis:

Hypothesis 1: A remittee is less likely to support the incumbent because remittances diminish the marginal utility of targeted patronage transfers.

What is the mechanism, if any? It follows from 3.2 that the minimum transfer τ_i for buying support is:

$$\tau_i \geq (\theta^{-1} - 1)[I + r_i] \tag{3.4}$$

Equation 3.4 states that remittances increase the cost of purchasing political support for the incumbent. In other words,

$$\frac{\partial \tau}{\partial r} = \theta^{-1} - 1 > 0 \tag{3.5}$$

Equations 3.4 and 3.5 result in the following testable mechanism:

Hypothesized Mechanism: The receipt of remittances may weaken the ability of political patrons to "buy" the support of remittance recipients, as remittance income increases a voter's overall income.

3.4 Empirical Strategy

I now turn to provide evidence for the predictions in section 3. To that end, I estimate a specification that takes the form

$$ProIncumbent_{ict} = \beta Remit_{ict} + X_{ict}'\pi + \kappa_c + S_t + \kappa_c * S_t + \epsilon_{ict} \tag{3.6}$$

Where $ProIncumbent_{ict}$ is an indicator of incumbency support for an individual i residing in of country c at time t; $Remit_{ict}$ is an indicator of receipt of remittance for individual i, ${X_{ict}}'$ is the vector of individual level controls; κ_c are country fixed effects; S_t are survey rounds fixed effects; $\kappa_c * S_t$ are country-specific time trends, and ϵ_{ict} is the idiosyncratic error term.

Besides remittances, several other factors may affect incumbency support. Accordingly, I consult the existing literature and extract a set of control variables. These include local public goods, place of residence (rural vs. urban), socioeconomic status, education, employment status, age, gender (Weghorst and Lindberg, 2013; Harding, 2010; Ishiyama and Fox, 2006). Similarly, time-invariant observable and unobservable factors may matter. Such factors are generally less time variant for leaders and individuals from within the same country. These refer to cross-country variations in the prevailing macroeconomic conditions, the quality of political institutions, colonial legacy, or ethnic heterogeneity. Besides, there could be some time variant factors. I thus include country and survey round fixed effects, which effectively control for variations across time and countries. Additionally, I include the term $\kappa_c * S_t$ to capture country-specific time trends, which may arise from seasonal shocks in remittance inflows, electoral competitiveness, and changes in the financial resources of incumbents.

For the analysis, I utilize multiple linear regression, a matching method, and a formal method of testing for omitted variables bias. The primary method employed to estimate the empirical specification in equation 6 is ordinary least squares (OLS). I also employ the propensity score matching method. Finally, Oster (2019)'s method is employed to assess whether omitted variables pose a significant challenge. Given the available data, these are the only viable methods that can be employed. The paper's analysis is conducted at the individual level, minimizing concerns regarding endogeneity resulting from reverse causation. If anything, remittances predominantly originate from migrant destination countries, which places them largely beyond the control of receiving states. As demonstrated below, the results remain robust regardless of whether multiple linear regression or the matching method

is utilized.

3.5 Data

I employ data from the Afrobarometer surveys. The Afrobarometer data are gathered based on a stratified random sampling procedure, generating a largely representative sample of adult individuals in the sample of countries. The Afrobarometer questionnaire consists of a standardized set of questions, making the data comparable across countries. The questions include the African public attitude toward poverty, identity, elections, governance, economic perceptions, and other related issues. The interviews were conducted face-to-face, in the local language, and by people outside the local community. This ensures that interviews are conducted with anonymity and that respondents can answer questions without fear of social repercussions from the local community.

So far, there are 8 rounds of the Afrobarometer surveys. Of these surveys, I will utilize round 4 (2008) and round 6 (2014) of the surveys. This is because of data availability issues. By combining these two rounds, I am able to create a micro pseudo-panel data set. My sample of individuals comes from 18 African countries that include Botswana, Burkina Faso, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Kenya, Ghana, Nigeria, Namibia, Uganda, Senegal, South Africa, Zambia, and Zimbabwe.

3.5.1 Measuring incumbency support

The Afrobarometer survey asks the question *"If elections were held tomorrow, which party's candidate would you vote for?"* Based on this question, I create a dummy variable for incumbent support coded as 1 if the respondent names the incumbent party, and 0 otherwise[3]. This serves as the measure of incumbency support ($ProIncumbent$).

[3]For most countries, I collected the names of incumbents from the African Democracy Encyclopaedia Project. For the countries not covered by this project, I relied on different news media.

3.5.2 Measuring remittance receipts

The key explanatory variable is a measure of remittances. In Africa, it is difficult to find data on the amount of remittance receipts at the individual level. To overcome this problem, I utilize the Afrobarometer question on receiving remittances. Such questions on remittance receipts are asked as,

"How often, if at all, do you or anyone in your household receive money remittances from friends or relatives living outside of the country?"

This question is answered as 5 for "At least once a month",4 for "At least every 3 months", 3 for "At least every 6 months",2 for "At least once a year", 1 for "Less than once a year, and 0 for "Never". This question is asked in round 4 and round 6 of the Afrobarometer survey. Based on this question, I create a variable denoted as *Remit*, which is an indicator variable equal to 1 if individual i receives any remittance income from abroad and zero otherwise.

Table 3.1 provides a summary of statistics of the variables used in the analysis.

Table 3.1: Summary Statistics

VARIABLES	N	Mean	SD	Min	Max
Dependent variables					
Incumbent Support	37,575	0.508	0.500	0	1
Trust the president	36,699	1.823	1.156	0	3
Key explanatory variable					
Remittance (0-5)	37,575	0.533	1.305	0	5
Remit (0,1)	37,575	0.177	0.382	0	1
Control variables					
Socioeconomic status (SWB)	37,337	2.668	1.221	1	5
Local Public Goods	38,354	0.952	0.214	0	1
Interest in Public Affairs	39,815	0.652	0.476	0	1
Formally educated	37,511	0.846	0.361	0	1
Age	37,247	36.21	14.27	18	110
Rural	37,575	0.644	0.479	0	1
Male Dummy	37,575	0.512	0.500	0	1
Jobless	37,426	0.606	0.489	0	1

3.6 Main Results

Table 3.2 reports the main results from Ordinary Least Squares (OLS). The unit of observation is the individual respondent. The dependent variable is a dummy of incumbency support at the individual level. The main specification controls for factors that existing research has linked to individual voting behavior. These include age, gender, employment status, education; and self-reported measures of political interest, socioeconomic status, and local public goods.

Column 1 of Table 3.2 reports the main results on the point estimate with no controls at all. Here the point estimate is -0.061. Column 2 adds country-fixed effects. The point estimate drops and settles at -0.024. In column 3, survey round fixed effects are added. This leaves the point estimate at -0.024. Column 4 reports the estimate after controlling for individual-level controls; country-fixed effects; survey rounds fixed effects; and country-specific time trends. Overall, the results are consistent in showing that a remittance recipient is less likely to vote for the incumbent. For instance, column 4 (this is our preferred estimate) indicates that a remittance recipient is 2.2 percent less likely to vote for the incumbent.

The results from the control variables are also consistent with the existing literature. The positive coefficient on the socioeconomic status variable is in line with the economic voting theory which suggests that an individual's voting behavior depends positively on his personal economic conditions (Lewis-Beck and Stegmaier, 2013). A majority of Africans live in rural areas and governments favor rural interests at the expense of the urban minority, thereby resulting in dissatisfaction on the part of urban voters (Harding, 2010). This explains the positive coefficient on the rural dummy.

3.6.1 Omitted Variables Bias

Omitted variable bias is a common concern in statistical analysis. It occurs when a relevant variable is not included in a regression model, leading to biased estimates of the effect of

Table 3.2: Remittances and incumbent support: Main Estimates

	(1)	(2)	(3)	(4)
Remit (1 vs 0)	-0.064***	-0.023**	-0.024**	-0.022**
	(0.019)	(0.010)	(0.010)	(0.010)
Socioeconomic status				0.031***
				(0.004)
Local public goods				-0.006
				(0.004)
Interest in politics				0.005
				(0.003)
Rural dummy				0.065***
				(0.011)
Formally educated				-0.056***
				(0.010)
Jobeless				0.009
				(0.009)
Age				0.002***
				(0.000)
Male dummy				-0.035***
				(0.006)
Observations	39,683	39,683	39,683	37,096
R-squared	0.002	0.181	0.185	0.272
Oster (2019)'s δ for $\beta = 0$		1.73	1.79	1.53
Controls	No	No	No	Yes
Country FE	No	Yes	Yes	Yes
Survey Wave FE	No	No	Yes	Yes
Country FE*Wave FE	No	No	No	Yes
Survey rounds	4 & 6	4 & 6	4 & 6	4 & 6

Notes: Standard errors in parentheses.** p<0.05 ; *** p<0.01.

other variables in the model. In the context of the analysis presented in Table 3.2, omitted variable bias may occur if there are other unobservable factors that affect incumbency besides remittances.

To assess the risk of omitted variable bias, the heuristic proposed by Altonji et al. (2005) and formalized by Oster (2019) is employed. The underlying principle of this approach is to gain insight into the magnitude of unobservable factors necessary to fully attribute an

estimated relationship to omitted variables. The approach helps to quantify the degree of selection bias due to unobservable factors relative to observable factors. This heuristic has recently been formalized by Oster (2019). In this formalization, Oster (2019) provides a statistic known as δ for which one is to obtain $\beta = 0$. This helps to gauge the magnitude of unobservable factors that would be required to fully attribute an estimated relationship to omitted variables. A value of $\delta > 1$ suggests limited scope for unobservable factors to undermine the results.

Table 3.2 reports the estimates for Oster (2019)'s δ statistic. In this analysis, the estimates for δ are above 1.5, which implies that the selection bias due to unobservable factors would need to be over 1.5 times greater than that of observable factors to fully explain the statistical relationship between remittance and incumbency support. Therefore, omitted variable bias is unlikely to be the sole driver of the results, although there could still be some unobservable variables that have a minor impact on the results.

3.6.2 Estimates from the matching method—accounting for selection

In this section, I turn to techniques to mitigate concerns with "selection" on observables and unobservables. Remittances might flow mostly to certain areas or individuals. It is also possible that families that afforded to have a family member abroad are intrinsically different than others. Similarly, political parties are likely to strategically target voters on certain observable characteristics such as education. This could lead to over or underestimation of the role of remittances. Hence, I take into account selection effects. To mitigate potential concerns with the selection on observables, I resort to a matching technique.

Table 3.3 presents the outcomes derived from propensity score matching. The average treatment effect on the treated (ATT) is calculated using three matching techniques: Nearest neighbor, Kernel, and local linear matching. Only observations falling on the common support were utilized for matching. The estimates range from 2.1 % to 6.6 %, depending on

Table 3.3: Estimates from Propensity Matching Method

	Nearest Neighbor		Kernel Matching		Local Linear	
	1	2	3	4	5	6
	ATT	ATT	ATT	ATT	ATT	ATT
Remit (1 vs 0)	-0.062	-0.021	-0.064	-0.024	-0.062	-0.026
	(0.0076)	(0.0079)	(0.0069)	(0.007)	(0.010)	(0.010)
Observations						
Total Observations	37,096	37,096	37,096	37,096	37,096	37,096
Common support (Treated)	6,270	6,270	6,270	6,268	6,270	6,268
Common support (Untreated)	30,826	30,826	30,783	30,809	30,783	30,809
Controls	Yes	Yes	Yes	Yes	No	Yes
Country FE	No	Yes	No	Yes	No	Yes
Survey Wave FE	No	Yes	No	Yes	No	Yes
Country FE*Wave FE	No	Yes	No	Yes	No	Yes
Survey rounds	4 & 6	4 & 6	4 & 6	4 & 6	4 & 6	4 & 6

Notes: The dependent variable is the dummy of incumbency support. ATT refers to the average treatment effect on the treated. Standard Errors (SE) in parenthesis.

the matching procedures and the controls included. The estimates are statistically significant at the 5 percent level and slightly close in magnitude compared to the OLS estimates in Table 3.2. Irrespective of the matching methods employed, the findings demonstrate a substantial and negative impact of receiving remittances on voting for incumbent leaders. As per this PSM estimation, individuals who receive remittances are less inclined to vote for the incumbent.

Balance Test

Propensity Score Matching (PSM) necessitates that the covariates in the matched samples exhibit balance between the treated and untreated groups. There are various methods available to assess whether this requirement is met. In this study, for the sake of brevity, I employ Rubin's B and Rubin's R statistics, which offer a summary of covariate balance within the sample (Rubin, 2001). Rubin's B measures the absolute standardized difference of

Table 3.4: Matching sensitivity analysis using Mantel-Haenszel (MH) bounds

Panel A: Nearest Neighbor (NN) Matching				
Gamma (Γ)	Q_mh+	Q_mh-	p_mh+	p_mh-
1	2.43208	2.43208	.007506	.007506
2	20.2038	15.226	0	0
3	30.8479	25.7565	0	0
4	38.5872	33.3823	0	0
Panel B: Kernel Matching				
Gamma (Γ)	Q_mh+	Q_mh-	p_mh+	p_mh-
1	9.30322	9.30322	0	0
2	35.0288	15.7252	0	0
3	51.1937	30.8006	0	0
4	63.5281	41.9761	0	0
Panel C: Local Linear Matching				
Gamma (Γ)	Q_mh+	Q_mh-	p_mh+	p_mh-
1	1.60337	1.60337	.054426	.054426
2	19.2738	15.9782	0	0
3	29.8465	26.4748	0	0
4	37.5296	34.0811	0	0

Notes: Gamma (Γ): odds of differential assignment due to unobserved factors. Q_mh+: Mantel-Haenszel statistic (assumption: overestimation of treatment effect). Q_mh-: Mantel-Haenszel statistic (assumption: underestimation of treatment effect). p_mh+: significance level (assumption: overestimation of treatment effect). p_mh-: significance level (assumption: underestimation of treatment effect).

the means of the propensity score between the treated and control groups (both unmatched and matched). Rubin's R, on the other hand, represents the ratio of the variances of the propensity scores between the treated and control groups. According to Rubin (2001), an acceptable level of balance is indicated when B is below 25 and R falls between 0.5 and 2. By examining the changes in these test results before and after the matching procedure, both Rubin's B and Rubin's R provide valuable insights into the trade-off between bias and variance across the treatment and control groups.

The results from Table 3.5 demonstrate that balance has been achieved. This is evi-

Table 3.5: Balance Test before and After matching

	Nearest Neighbor		Kernel Matching		Local Linear Matching	
	U	M	U	M	U	
Rubin's B	31.3*	4.2	31.5*	3.0	31.3*	7.2
Rubin's R	1.06	1.05	1.06	1.03	1.06	1.05

Notes: * if B > 25%, R outside [0.5; 2]. U denotes Unmatched or before matching. M denotes matched or after matching.

dent as the B value after matching is below 25, and the R-value falls between 0.5 and 2. Nonetheless, the matching method takes into account only selection on observables. If there are unobserved variables that affect the assignment into treatment and the outcome variable simultaneously, a hidden bias might arise to which matching estimators are not robust (Rosenbaum, 2002). This problem can be addressed with the bounding approach proposed by Rosenbaum (2002). The idea here is to determine how strongly an unmeasured variable must influence the selection process to undermine the finding. The empirical application of the bounding approach is advanced by Becker and Caliendo (2007).

For binary outcomes, the use of the Mantel and Haenszel test statistic (Q_MH) is recommended (Becker and Caliendo, 2007). Given that the outcome variable is binary in my case as well, I employed the bounding technique to calculate the upper and lower bounds of the Q_MH statistic. The results of this analysis can be found in Table 3.4. In this table, the value of Gamma (Γ) represents the odds of differential assignment caused by unobserved factors. When Gamma (Γ) is equal to 1, the bounds correspond to the base scenario where no hidden bias is present. As Gamma (Γ) increases, the bounds diverge, indicating a higher level of uncertainty regarding the test statistics in the presence of unobserved selection bias. As shown in Table 3.4, significance levels for the upper and lower bounds for Γ values for 2 to 4 are below 1 %. These values demonstrate that the estimate remains unaffected by a bias that would either double, triple, or quadruple the odds of receiving remittances. Over-

all, my findings suggest that there is no over- or under-estimation of the treatment effects attributable to an "unobservable variable."

Evidence on the mechanism

Equation 3.4 implies that the receipts of remittance income raise a voter's income and in doing so may weaken the ability of leaders to "buy" the support of remittance recipients. This implies that remittances decrease support for the incumbent by decreasing his ability of political support buying. Directly identifying this support buying mechanism is difficult, however. This is due to the difficulty of not being able to observe whether a voter does in fact exchange her support for political transfer. Nonetheless, a central tenet of models of vote buying is that the marginal utility of transfers from an incumbent is decreasing in income. This means that support buying is especially effective if the supporter seller is sufficiently poor. I take advantage of this logic and estimate the main specification across income groups. If the claim that remittances make support buying difficult is correct, we should then find evidence that the effect of remittances should be the strongest among the poor. That is, remittances mostly decrease support for incumbents among recipients who would have been very poor had they not received remittances.

For the empirical exercise, I look for a measure of individual income in the Afrobarometer. Like most surveys, however, the Afrobarometer does not contain a direct measure of respondent income. Nonetheless, the Afrobarometer asks a series of questions as: "Over the past year, how often, if ever, have you or your family gone without: (a) enough food to eat; (b) enough clean water for home use; (c) medicines or medical treatment; (d) electricity in your home; (e) enough fuel to cook your food; and (f) a cash income." Responses to the question are ordinal: "never," "just once or twice," "several times," "many times," or "always." I leverage answers to this question. Following the existing literature, I combine the items in this question into an aggregate index of lived poverty. This index takes a value of zero for an individual that never experienced any of the above problems.

Table 3.6: Support Buying—estimates by income groups

	(1) (Poor Sub Sample)	(2) (Rich Sub Sample)
Remit (1 vs 0)	-0.021**	-0.033
	(0.010)	(0.024)
Observations	31,503	5,262
R-squared	0.292	0.186
Controls	Yes	Yes
Country FE	Yes	Yes
Survey Wave FE	Yes	Yes
Country FE*Wave FE	Yes	Yes
Survey rounds	4&6	4&6

Notes: Standard errors are clustered by geographic region and are reported in parentheses. ** p<0.05.

I now estimate separate models for poor and rich respondents. The result of this exercise is given in Table 3.6. This table reports the effect of remittances on incumbent support among rich and poor respondents in our sample. For the poor (in column 1), remittance recipients are 2.1 percent less likely to vote for the incumbent. The size of this estimate is similar to the one we obtained in column 4 of Table 1. For the rich, in contrast, receiving remittances has no statistically significant effect on vote buying. The results demonstrate that remittances have a more pronounced effect on support buying among the poor. Altogether, this implies that remittances enable the African poor to exit patronage networks.

3.6.3 Further Robustness Analysis

This section runs robustness checks. The main findings are robust to alternate econometric specifications, a measure of incumbent support, and a measure of remittances.

Alternative specifications

First, I alternatively employed logistic regression. The marginal effect of the logistic regression is reported in column 1 of Table 3.7. The estimate is similar to the one obtained earlier.

Second, I use an alternative measure of the dependent variable. This measure is based on the Afrobarometer question that asks respondents how much they trust the president of their country. The relevant answers to this question are 0 for "Not at all", 1 for "Just a little", 2 for "Somewhat" and 3 for "A lot". The result of using this variable as the dependent variable is reported in column 2 of Table 3.7. The result shows that remittees are more likely to distrust the ruling president.

Intensive Versus extensive Margin

Third, I consider the original measure of receiving remittances. Thus far, the analysis has been based on a binary variable indicating the receipt of remittances. This gives extensive margins. However, it is crucial to consider the intensive margin as well. The dummy is silent on the intensity of receiving remittances. For instance, individuals who report receiving remittances are also likely to have received them in the past, and this can have implications for interpreting the results. To investigate this possibility, I use the original 6-point scale measure of remittance receipts. The point estimate of using this variable is given in column 3 of Table 3.7.

Table 3.7: Robustness

	(Logit)	(Trust President)	(Remittance (0-5))
Remit (1 vs 0)	-0.022**	-0.067**	
	(0.010)	(0.020)	
Remittance (0-5)			-0.006**
			(0.003)
Observations	35,273	36,286	37,096
R-squared		0.217	0.272
Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Survey Wave FE	Yes	Yes	Yes
Country FE*Wave FE	Yes	Yes	Yes
Survey rounds	4 &6	4&6	4&6

Notes: Standard errors are clustered by geographic region and are reported in parentheses.** p<0.05 ; *** p<0.01.

Accounting for regime types (Democratic Versus Not)

The Selectorate theory suggests that patronage politics is mostly effective in small coalition or non-democratic systems (De Mesquita et al., 2003). The implication of this is that the effect of remittances should be the strongest in non-democratic systems. Accordingly, we split the sample by regime type and report estimates for democratic and non-democratic samples. As can be seen from column 1 of Table 3.8, the estimates are weak for the democratic sub-samples. This is in line with the predictions of the selectorate theory.

Table 3.8: Results by regime types

	(Democratic Sub-samples)	(Non-democratic Sub-samples)
Remit (1 vs 0)	-0.015	-0.026**
	(0.014)	(0.013)
Observations	14,544	22,552
R-squared	0.151	0.349
Controls	Yes	Yes
Country FE	Yes	Yes
Survey Wave FE	Yes	Yes
Country FE*Wave FE	Yes	Yes
Survey rounds	4&6	4&6

Notes: Robust standard errors in parentheses.** p<0.05.

3.7 Conclusion

Recent scholarship has begun to suggest that remittances have political effects. In this column of the literature, this paper considers the effect of remittances on support for incumbent leaders. The focus here is Africa.

In this study, I have examined the political effects of remittances, focusing specifically on their impact on support for incumbent leaders in African countries. Through analysis of data from two rounds of the Afrobarometer survey, I have found compelling evidence that individuals who receive remittances are less likely to support the incumbent government. The

underlying theoretical mechanism driving this phenomenon is the notion that remittances lower the value of patronage and increase the costs associated with maintaining clientelist relationships. As individuals receive financial support from abroad, they may become less reliant on the incumbent government for resources and favors, thus reducing their support for the ruling party. This finding sheds light on the role of remittances in shaping political dynamics in African countries.

The findings have significant policy implications. When examining the sample of countries based on regime type, I observe that the erosion of electoral support for incumbent parties is primarily observed in non-democratic regimes. This suggests that a surge in remittances could pose challenges for autocratic governments, potentially destabilizing their hold on power. Furthermore, the analysis indicates that remittances raise the cost of buying electoral support. This may potentially compel an incumbent to spend a greater share of its budget on the provision of welfare goods to the masses and reduce its payments to a narrow group of voters.

Overall, this study adds to the research on the political consequences of remittances in Africa and provides insights into the dynamics between remittance inflows, support for incumbent leaders, and regime types. Understanding these relationships can inform policymakers and researchers in their efforts to navigate the complex intersection of economics and politics in the context of migration and development.

The findings of the study imply that the effect of remittances on reducing support for the incumbent is driven by the income effect resulting from receiving remittances. However, it is worth noting that receiving remittances from abroad may also influence support for the incumbent through other mechanisms. Migrant networks facilitate the flow of social remittances, which encompass ideas, behaviors, identities, and social capital, to receiving communities (Levitt, 1998). It is possible that families in wealthier countries may share opinions and views in favor of reforms or towards more democratic politicians. While we do not have data to substantiate this claim, it presents a valuable area for future studies to

explore.

Appendix A

Ancestral Institutions and the Salience of African Ethnicity: Theory & Evidence

Table A1 presents the summary statistics of the variables used in the study. In the sample, 22.5 % of the respondents strongly prefer their ethnic identity over their national identity. About 58.7% of the respondents belong to precolonially centralized ethnic groups.

Table A2 reports the baseline estimates of the paper using an ordered logit model. The estimated coefficients reported in the top panel of the table are negative and statistically significant. The estimates show that if an individual's ancestors were more heavily exposed to early statehood, then he or she is less likely to identify in ethnic terms. Marginal effects from the ordered logit are reported in the lower panel of Table A2. Each row of the panel reports the marginal effect for each of the five possible responses to the ethnic versus national identification question. According to the estimates in column 3 of Table A2, being a member of a centralized ethnic group is associated with being 5.4 % more likely to identify only in national terms, 14.6 % more likely to identify in national than in ethnic terms, 3.3 % less likely to identify in ethnic than in national terms, and 2.9 % less likely to identify only in

Table A1: Summary Statistics

Variable	(1) N	(2) Mean	(3) SD	(4) Min	(5) Max
Ethic identification (ENI, 1-5)	57,758	2.363	1.192	1	5
Ethic identification dummy (ENI, 0-1)	34,358	0.225	0.417	0	1
Ethnic unfairly treated	10,659	0.486	0.852	0	3
Ethnic economic conditions	7,107	3.095	1.004	1	5
Centralized (0-4)	57,758	1.798	1.018	0	4
Centralized Dummy	57,758	0.587	0.492	0	1
Soil quality Index	57,758	5.472	0.415	2.329	6.810
Log light density	57,758	0.239	0.384	0	2.734
TseTse Suitability Index	55,219	-0.0808	1.075	-3.119	1.495
Malaria ecology index	55,219	13.14	10.31	0	34.49
Lived poverty index	57,151	1.268	0.919	0	4
Urban dummy	57,758	0.377	0.485	0	1
Male dummy	57,758	0.499	0.500	0	1
Education	57,598	3.211	2.139	0	9
Public Goods index	55,295	2.974	1.693	0	6
Ethnic homeland population density	57,758	58.68	95.28	0.0190	963.1
Ethnic had city in 1850	57,640	0.0994	0.299	0	1
Temperature	57,640	8,588	1,326	5,295	10,830
Ecological diversity	57,640	0.356	0.209	0	0.694
Mostly agriculture	57,640	0.966	0.182	0	1
Mostly husbandry	57,640	0.0254	0.157	0	1
Log of slave exports	57,758	0.523	0.867	0	3.656
British colony	57,758	0.588	0.492	0	1
France colony	57,758	0.308	0.462	0	1

ethnic terms.

Table A2: Ordered Logit Estimates of Precolonial Centralization on Identification

	(1)	(2)	(3)
Centralized Dummy [Estimated coefficient]	-0.352**	-0.358***	-0.349***
	(0.151)	(0.091)	(0.089)
Category of Responses & Marginal Effects after logit			
Feels only National ID (ENI=1)	0.080**	0.059***	0.054***
	(0.035)	(0.016)	(0.015)
Feels national ID than ethnic group (ENI=2)	0.007**	0.015***	0.146***
	(0.003)	(0.004)	(0.0037)
Feels ethnic group equally as national ID (ENI=3)	-0.046**	-0.011	-0.066
	(0.019)	(0.009)	(0.008)
Feels ethnic group than national ID (ENI=4)	-0.024**	-.033***	-0.033***
	(0.011)	(.008)	(0.0082)
Feels only ethnic group (ENI=5)	-0.017**	-0.029***	-0.029***
	(0.007)	(0.008)	(0.0076)
Observations	57,758	55,101	51,965
Pseudo R-squared	0.008	0.034	0.037
Pre-treatment controls	No	Yes	Yes
Post-treatment Controls	No	No	Yes
Country FE	No	Yes	Yes
Wave FE	No	Yes	Yes

Notes: Standard errors are clustered at the ethnicity level. *** p<0.01, ** p<0.05.

Table A3: Replications of Robinson (2014) and McNamee (2019)

	(1)	(2)	(3)	(4)	(5)
Panel A: Replicating results of Robinson (2014)					
Centralized (0-4)	-0.034***	-0.035***	-0.084**	-0.049***	-0.030**
	(0.011)	(0.011)	(0.042)	(0.017)	(0.012)
Share of Customary Court Cases		0.511***	0.213		
		(0.111)	(0.221)		
Centralized (0-4) * Customary Court Cases			0.085		
			(0.062)		
Early state history				-0.032	
				(0.201)	
Centralized (0-4) * Early State History				0.096	
				(0.062)	
Proportion of European Descendant Population					-3.694***
					(1.163)
Centralized (0-4) * European Descendant Pop.					-0.108
					(0.293)
Country-Level Observations	16	14	14	14	14
Ethnic Group-Level Observations	202	170	170	170	170
Individual-Level Observations	16,064	15,302	15,169	15,169	15,169
Controls from Robinson (2014)	No	No	Yes	Yes	Yes
Panel B: Replicating results of McNamee (2019)					
Centralized (0-4)	-0.059***	-0.060***	-0.190***	-0.081***	-0.042**
	(0.019)	(0.020)	(0.065)	(0.026)	(0.019)
Share of Customary Court Cases		0.765**	0.701		
		(0.347)	(0.475)		
Centralized (0-4)*Customary Court Cases			0.211**		
			(0.100)		
Early state history				0.095	
				(0.383)	
Centralized (0-4)*Early state history				0.117	
				(0.104)	
Proportion of European Descendant Population					-1.228
					(2.952)
Centralized (0-4)*European Descendant Pop.					-1.154**
					(0.519)
Respondent- Level Observations	57,382	57,382	52,507	52,507	52,507
Ethnic Group-Level Observations	204	204	202	202	202
Country-Level Observations	20	20	20	20	20
Controls from McNamee (2019)	No	No	Yes	Yes	Yes

Notes: The results are from Multi-level linear probability models with individuals as the unit of analysis with country and ethnic group-level random intercepts. The data source is McNamee (2019). *** p<0.01, ** p<0.05.

Appendix B

Chinese aid projects and local tax attitudes: Evidence from Africa

Table B1 reports variables used in this study. The discussion of how each of these variables is constructed is given in this section.

Urban dummy This is a variable that takes a value of 1 if a respondent lives in an urban area or 0 if the respondent lives in a rural area.

Local Public goods index This variable is constructed as a summative index of dummies showing the availability of electricity, school, health center, market, sewage, and pipe water in the Enumeration Area of the Afrobarometer surveys.

Education In the Afrobarometer, education is coded on a scale from 0 (no schooling) up to 9 (postgraduate education). Thus higher values on this indicator show a higher education level.

Employment status Employment status is based on the question, "Do you have a job that pays cash income? Is it full-time or part-time? And are you presently looking for a job (even if you are presently working)?". The answers are 0 for "No (not looking), 1 for "No

(looking)", 2 for "Yes, part-time (not looking)", 3 for "Yes, part-time (looking)", 4 for "Yes, full time (not looking)" and, 5 for "Yes, full time (looking)".

Percieved Economic Standing The measure of perceived equality comes from the question that asks "In general, how do you rate your living conditions compared to those of other (Batswanians/kenyanias...?" The answers have a code 1 for "Much worse, 2 for "Worse", 3 for "Same", 4 for Better", and 5 for "Much better". From this variable, we create a dummy measure of perceived equality that equals 1 if the individual feels her or his living condition is the same as other countrymen, and zero if she or he feels "Much worse, Worse, Better, Much better".

Corruption experience Afrobarometer asks questions on experiences of bribing. In particular, the survey asks respondents if they, in the preceding year, have "had to pay a bribe in order to get a document or a permit or avoid a problem with the police (avoid a fine or arrest or pass a checkpoint)". The responses to these questions range between 0 and 3, which consecutively captures the response categories 'Never', 'Once or twice', 'A few times', and 'Often'. We use these Afrobarometer questions on experiences with bribes to generate two binary variables that show if the respondent has encountered the described situations at least once in the past year. We refer to these variables as bribing the police or bribing for a document.

Government Performance "Do you approve or disapprove of the way that the following people [The President] have performed their jobs over the past twelve months, or haven't you heard enough about them to say?" Relevant answers are coded as 1 for "Strongly Disapprove", 2 for "Disapprove", 3 for "Approve", 4 for "Strongly Approve".

Table B1: Summary Statistics by Project Status

	Ongoing				Planned			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Ongoing= 0		Ongoing= 1		Planned =0		Planned =1	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
For 25 Kilometers								
Tax Enforcement	0.158	0.365	0.168	0.374	0.162	0.369	0.0903	0.287
Tax Morale	0.795	0.404	0.806	0.395	0.799	0.401	0.743	0.437
Not Refused Paying Taxes	0.727	0.445	0.735	0.441	0.729	0.444	0.436	0.502
Punish Not Paying Taxes	0.530	0.499	0.561	0.496	0.537	0.499	0.289	0.460
Bribed Police	0.195	0.397	0.251	0.434	0.209	0.407	0.116	0.320
Bribed for Documents	0.202	0.402	0.241	0.428	0.212	0.409	0.141	0.348
Economic Standing	2.833	1.010	2.943	1.015	2.854	1.012	2.841	1.016
Urban	0.332	0.471	0.710	0.454	0.397	0.489	0.574	0.494
Male Dummy	0.499	0.500	0.499	0.500	0.499	0.500	0.499	0.500
Education	3.103	2.104	4.032	2.067	3.270	2.131	3.514	2.000
Employment Status	1.313	1.385	1.509	1.348	1.338	1.367	1.789	1.752
Public Goods Index	3.114	1.719	3.691	1.683	3.215	1.728	3.453	1.683
Government Performance	2.773	0.983	2.660	0.974	2.748	0.982	2.872	0.980
Age	37.09	14.63	36.02	13.95	36.94	14.52	35.02	14.09
Age	15.89	13.08	14.92	12.16	15.75	12.93	14.25	12.21

Table B2: Balance Table

	(1) Mean/(SE)	(2) Mean/(SE)	(3) Mean difference
Panel A: Ongoing ODA-like Chinese projects			
	$OCP_{25i} = 0$	$OCP_{25i} = 1$	(2)-(1)
Age	37.018	36.097	-0.921***
Age2	15.770	14.900	-0.870***
Male	0.513	0.511	-0.002***
Urban	0.329	0.758	0.429***
Education	3.152	4.207	1.055***
Employed	0.568	0.645	0.077***
Economic standing	0.324	0.340	0.016
Public Goods Index	0.943	0.977	0.034***
Performance	0.176	0.239	0.063***
Bribed Police	0.212	0.259	0.047***
Bribed for ID	0.209	0.246	0.036***
F-test of joint significance (F-stat)			33.307***
Panel B: Planned ODA-like Chinese projects			
	$PCP_{25i} = 0$	$PCP_{25i} = 1$	(2)-(1)
Age	36.931	34.400	-2.532***
Age2	15.676	13.737	-1.939***
Male	0.513	0.505	-0.008
Urban	0.393	0.628	0.235***
Education	3.317	3.622	0.305***
Employed	0.582	0.601	0.019
Economic standing	0.326	0.366	0.040
Public Goods Index	0.948	0.947	-0.002
Performance	0.185	0.220	0.035
Bribed Police	0.222	0.135	-0.088
Bribed for ID	0.217	0.163	-0.054
F-test of joint significance (F-stat)			1.712*

Notes: Panel A presents the observed mean difference for groups residing within ($OCP25i = 1$) and outside ($OCP25i = 0$) a 25-kilometer radius of Ongoing ODA-like Chinese projects. The F-test of joint significance (F-stat) indicates a significant difference between the two sets of groups. Panel B presents the observed mean difference for groups residing within ($PCP25i = 1$) and outside ($PCP25i = 0$) a 25-kilometer radius of Planned ODA-like Chinese projects. The F-test of joint significance (F-stat) suggests only a weak difference between the two sets of groups. *** p<0.01, ** p<0.05, * p<0.1.

Table B3: Chinese Aid and Tax enforcement: Main Estimates with Controls

	(1)	(2)	(3)	(4)	(5)
Cut off	25 km	25km	25 km	25 km	25 km
Ongoing ($0CP_{25i}$)	-0.019***	-0.027***	-0.013**	-0.026***	-0.017***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Planned (PCP_{25i})	0.070***	0.063***	0.117*	0.064***	0.021*
	(0.012)	(0.012)	(0.062)	(0.013)	(0.013)
$OCP_{25i} - PCP_{25i}$	-0.0892***	-0.0896***	-0.130**	-0.0896***	-0.0387**
Age		-0.000	-0.000	-0.000	-0.001
		(0.000)	(0.001)	(0.000)	(0.000)
Age squared		0.000	-0.000	0.000	0.001
		(0.000)	(0.001)	(0.001)	(0.001)
Male dummy		0.012***	0.016***	0.005**	0.005**
		(0.002)	(0.003)	(0.002)	(0.002)
Urban dummy		0.017***	0.026***	0.004	0.004
		(0.004)	(0.004)	(0.005)	(0.004)
Education				0.005***	0.004***
				(0.001)	(0.001)
Employment status				-0.002*	0.000
				(0.001)	(0.001)
Economic standing				0.009***	0.009***
				(0.002)	(0.002)
Public goods				0.004***	0.004***
				(0.001)	(0.001)
Govt performance				0.000	0.003
				(0.002)	(0.002)
Contacted local councilor				0.006***	0.007***
				(0.002)	(0.002)
Observations	92,970	92,260	71,531	76,694	76,694
R-squared	0.001	0.029	0.026	0.033	0.039
Baseline Controls	No	Yes	Yes	Yes	Yes
Endogenous Controls	No	No	No	Yes	Yes
Country FE	No	Yes	Yes	Yes	Yes
Survey Year FE	No	No	No	No	Yes
Included Survey Waves	3,5,6	3,5,6	5,6	3,5,6	3,5,6

*Notes: The dependent variable is a dummy of an individual's subjective assessment of income tax enforcement. Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

Table B4: Chinese Aid and Tax Attitudes: Robustness Using The Original measures

VARIABLES	25 km	25 km	25 km	25 km
DID ($OCP_{25i} - PCP_{25i}$)	-0.135***	0.178***	0.347***	0.132***
Observations	76,694	73,044	68,812	108,520
R-squared	0.049	0.034	0.063	0.056
Baseline Controls	Yes	Yes	Yes	Yes
Endogenous Controls	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Waves	3,5,6	5,6	5,6	3,4,5,6

*Notes: The dependent variable is tax enforcement perceptions in column 1, Not-Refused to pay taxes in column 2, Punish Non-tax complaint in column 3 and tax morale in column 4. Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

Table B5: World Bank Aid, Tax Compliance and Tax Morale

	(1)	(2)	(3)
Cut off	25 km	25km	25 km
Dependent variable	Not-Refused Taxes	Punish Non Payer	Tax Morale
$OWBP_{25i} - PWBP_{25i}$	0.0314	-0.0315	-0.0196
Observations	68,843	64,528	103,577
R-squared	0.037	0.060	0.053
Baseline Controls	Yes	Yes	Yes
Endogenous Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Survey Year FE	Yes	Yes	Yes
Included Survey Waves	5,6	5,6	3,4,5,6

*Notes: Baseline controls include age, age squared, gender (a male dummy), and place of residence (an urban dummy). Endogenous controls include respondents' education level, employment status, living standards, the perceived performance of the president, interaction with local authorities, and access to public goods. Standard errors are clustered at the Afrobarometer cluster level. *** p<0.01, ** p<0.05, * p<0.1.*

Table B6: Afrobarometer Samples by Country and Survey Waves

	(Round 3)				(Round 5)				(Round 6)			
	(1) TEP	(2) NRPT	(3) PNPT	(4) TM	(5) TEP	(6) NRPT	(7) PNPT	(8) TM	(9) TEP	(10) NRPT	(11) PNPT	(12) TM
Benin	1134	0	0	944	976	1132	1189	967	1076	1185	1197	1105
Botswana	1109	0	0	932	742	1080	1026	1012	714	907	881	851
Cape Verde	613	0	0	506	545	588	594	537	383	437	418	393
Ghana	1104	0	0	1045	1992	2350	2337	2267	1895	2315	2271	2209
Kenya	857	0	0	667	1202	1303	1306	1221	1504	1717	1677	1537
Lesotho	717	0	0	561	496	748	703	691	573	762	744	648
Madagascar	1279	0	0	910	862	1062	1008	821	1099	1186	1188	1107
Malawi	1146	0	0	1031	2109	2347	2331	2248	2127	2336	2296	2252
Mali	1113	0	0	1037	1099	1189	1193	1126	1154	1192	1190	1105
Mozambique	1060	0	0	879	1838	2165	1800	1856	1897	2181	2027	1781
Namibia	1145	0	0	831	697	1087	1094	946	805	1053	1048	962
Nigeria	2219	0	0	1834	2045	2274	2267	2038	2062	2328	2242	1934
South Africa	2117	0	0	1657	1746	2334	2258	1914	1866	2310	2275	2101
Senegal	1113	0	0	979	977	1131	1155	1081	846	1156	1162	1108
Tanzania	1188	0	0	981	2085	2279	2239	2160	2157	2220	2195	2007
Uganda	2364	0	0	2101	2100	2228	2292	2160	2023	2311	2278	2206
Zambia	1021	0	0	869	912	1071	1033	1010	687	1028	954	991
Zimbabwe	1013	0	0	878	1912	2298	2212	2022	1741	2267	2189	2029
Algeria					0	1012	0	828	494	659	648	533
Burkina Faso					994	1116	1126	997	1049	1169	1181	1077
Burundi					990	1089	1099	1006	1041	1168	1148	1055
Cameroon					908	1102	1127	1051	1012	1162	1128	1114
Cote D'Ivoire					979	1164	1121	1082	975	1165	1169	1098
Egypt					0	947	0	829	371	669	645	520
Guinea					1060	1147	1115	1064	1065	1172	1176	1125
Liberia					945	1115	1043	1081	959	1135	1124	1112
Mauritius					888	1041	1029	904	774	1006	994	915
Morocco					0	1142	0	934	768	1113	1082	930
Niger					994	1162	1125	1090	1004	1158	1151	1072
Sierra Leone					1121	1174	1154	1100	820	1155	1111	1101
Sudan					0	906	0	866	660	770	735	677
Swaziland					875	1085	1079	998	841	1133	1109	1059
Togo					971	1044	1058	1000	996	1107	1117	1092
Tunisia					0	1052	0	1002	1042	1097	1099	1077
Gabon									1034	1143	1144	1126
São Tomé and Príncipe									949	1057	1063	1030

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