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AFRICAN INSTITUTIONS UNDER COLONIAL RULE

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Abstract

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African institutions under colonial rule

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Abstract: Colonial institutions in Africa are the subject of a substantial literature, but it neglects the local institutions which governed Africans in rural areas. This paper uses new data on local African governments, or “Native Authorities” in British Africa to present the first quantitative comparison of African institutions under indirect rule in the late colonial period. Using tax revenue as a measure of state capacity, the data show that the structure and capacity of Native Authorities varied between and within colonies, based not only on underlying economic inequalities but also on the relationships between African elites and colonial governments.

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Introduction

In 1980, historian and former colonial official Anthony Kirk-Greene published a set of basic statistics on the size of British colonial governments in Africa which showed that even at the height of colonial rule, the ‘thin white line’ of European colonial administration was ‘exiguous to the point of disbelief’ (Kirk-Greene 1980, pp. 38-41). Despite this, he argued that it was never in very great danger of collapse, owing in part to the uncounted presence of Africans serving in various roles through the colonial administration, particularly in governing the rural areas of the interior where most Africans lived. This argument reflects what remains a tension in the understanding of colonial institutions in Africa. Most recent work on the legacies of colonial rule have concentrated on features of institutions based in colonial capitals, such as the identity of the colonizer or the nature of national institutions (Acemoglu and Robinson 2012; Easterly and Levine 2016; Bertocchi and Canova 2002; la Porta et al. 2008; Lange et al. 2006). This work has been criticized for taking a Eurocentric approach to understanding colonial institutions, treating colonies as an institutional ‘blank slate’ which European colonizers could decide how to govern without reference to the indigenous institutions which already existed (Bayly 2008).

At the same time, others have argued that owing to the weaknesses of the colonial state as described by Kirk-Greene, indigenous and pre-colonial institutions continued to be the most important in shaping African development through the colonial period and beyond (Michalopoulos and Papaioannou 2013, 2014; Bandyopadhyay and Green 2016). To support this argument, anthropological measures of African state centralization from the Murdock Atlas, interpreted as a measure of ‘pre-colonial’ state capacity, are correlated with later economic and political outcomes. However, such correlations say little about how interactions

with colonial governments may have influenced African institutions during the colonial period. Archibong (2018) is an exception, paying welcome attention to the relationship between African institutions and the colonial state in Nigeria. Looking beyond Nigeria, there is a rich qualitative literature on the various ways in which Africans and African institutions responded to the changing incentives of the colonial period. This work shows that African local governments, or ‘Native Authorities’ did not just preserve past institutions despite colonial rhetoric emphasizing the retention of customary laws and practices. Mahmood Mamdani (1996), for examples, argues that the colonial appointment of chiefs stripped away pre-colonial systems of accountability, creating a system of ‘decentralized despotism’. But neither were chiefs purely colonial inventions. Rather, ‘tradition was reinterpreted, reformed and reconstructed by subjects and rulers alike’ (Spear 2003, p. 4).

To date, the evidence used in these discussions has been largely anecdotal. This paper presents new data on the structure and capacity of Native Authorities for four British colonies (Nigeria, the Gold Coast, Nyasaland and Kenya), and uses these data to argue that the interaction of colonial officials and African elites during the colonial period created substantial variation in colonial institutions both between and within colonies. The data are based on a set of district-level surveys commissioned in 1948 for Lord Hailey’s five-volume report on ‘native administration’ in British Africa. The surveys were completed by district officers and are now held by the British National Archives.¹ They asked a standard set of questions about the physical, economic, and demographic characteristics of each Native Authority area (of which there were often several in a district), the structure of the Native Authority, its finances and activities. They therefore provide a rare systematic snapshot of these institutions both within and across British colonies.

¹ UK National Archives (hereinafter NA) CO 1018, various files.

This paper uses tax revenue as a measure of the capacity of Native Authorities. In economic history, the structure of tax systems and the amount of revenue they produce have become an important metric used in comparisons of state capacity in a range of different historical periods and contexts (Karaman and Pamuk 2013; Dincecco 2011). This approach has been used increasingly in comparative studies of colonial states in Africa to examine the capacity of central governments (Frankema and van Waijenburg 2014; Mkandawire 2010). However, this work has largely ignored local governments, neglecting a significant component of colonial fiscal systems.² By the end of the colonial period, local government spending as a share of total government spending was over 20 percent in highly decentralized colonies like Nigeria and Uganda, and between 5 and 10 percent in most others.³ Even where the overall share was small, local spending was nevertheless important from the perspective of the African population. The budgets of national-level colonial governments tended to be dominated by the high salaries of European officials or the construction of relatively sparse railway networks (Frankema 2011). As Kirk-Greene's data suggests, European administrations had little presence in rural areas, where most Africans lived.⁴ Instead, Native Authorities established under British systems of indirect rule provided many of the government services to which rural Africans had access, including a system of courts, local regulation of land and markets, and some local provision of education and health care. The ability of Native Authorities to collect revenue thus had wider implications for the services they could provide. The paper shows that the substantial variations in tax revenue collected by Native Authorities do not merely reflect

² Hoffman (2015: 308). For a partial exception, see Gardner (2012)

³ To put this in contemporary context, a study of decentralization levels in 2008 found for a sample of 20 countries in Sub-Saharan Africa that an average of 14 percent of total government expenditures was incurred by subnational units (Dziobek et al. 2011, p. 23).

⁴ In 1960, between 60 and 90 per cent of the labor force was employed in agriculture (Broadberry and Gardner 2016, p. 26).

regional economic inequalities but are also linked to differences in the institutional structure which developed from the interaction of indigenous systems of governance and colonial policies.

The paper proceeds as follows. The next section gives a brief history of the system of indirect rule and the development of Native Authority institutions in the four countries analyzed here, examining both the variation in institutions encountered by colonial officials and the ways in which African elites interacted with colonial governments. After that, the paper presents descriptive statistics from the surveys, providing the first quantitative snapshot of African institutions as they existed in the late colonial period. The next three sections provide a descriptive analysis of factors influencing the amount of revenue collected by Native Authorities, building on the extensive literature on the rise of fiscal states. The analysis begins by assessing the importance of economic inequalities, particularly access to markets, and finds an unsurprisingly strong relationship to revenue per capita. It then considers the relationship of Native Authorities to the colonial state and the internal institutional structures of individual Native Authorities. Even controlling for underlying economic differences, the data show a strong relationship between institutional variables and overall revenue. Section 7 concludes by examining the implications of this variation in local institutions for broader understandings of colonialism.

A short history of indirect rule in British Africa

Sub-Saharan Africa was one of the last regions to be colonized by European powers. By that stage, they were not prepared to invest large sums in establishing an administrative apparatus

in the colonies, and colonial governments had to support recurrent expenditure with limited local revenue collections (Gardner 2012). This made it necessary for them to leave many of the main tasks of governing in the hands of Africans. John Iliffe (2007, p. 193) argues that colonial states before 1914 as ‘mere skeletons fleshed out and vitalized by African political forces’. African local governments, referred to as Native Authorities, established during this period thus provided the key link between the majority of Africans and the European administration. One report from Nyasaland (1937, Appendix 1) described the Native Authority as ‘the executive government in all matters pertaining to natives’.

However, the process by which Native Authorities were established, and the degree of power that colonial governments delegated to them, differed both within and between colonies. In histories of colonial governance, it is common to contrast ‘indirect rule’ with ‘direct rule’ as though they are two distinct types (Naseemullah and Staniland 2016, p. 13). Further, in debates about which system operated in particular areas, there has been a tendency to identify ‘indirect rule’ with the institutions of specific regions, particularly the emirates of Northern Nigeria. In his book on eastern Nigeria, A. E. Afigbo (1972, p. 3) laments the ‘excessive preoccupation with the version of that system which obtained in the emirates of Northern Nigeria. The procedure has been to analyse emirate Indirect Rule, usually described erroneously as the classical pattern, to isolate its basic characteristics and from these arrive at a statement called the definition of indirect rule’.

In reality, indirect rule as a system of governance was only vaguely defined, and implemented differently across colonial Africa (Dudley 1968, pp. 13-14). For his part, Lord Hailey (1942, p. 13) intentionally avoided using the phrase as, in his words, it had ‘no claim to precision’. More recent conceptualizations of ‘direct’ and ‘indirect’ characterize them not as opposing methods but rather as part of a continuum which included varying degrees of local

autonomy for the Native Authority in question. Gerring et al. (2011, pp. 382-3) argue that in systems of indirect rule, the relationship between the central and local ruler 'depends on how statelike the polity is'. Similarly, Naseemullah and Staniland (2016) divide indirect rule into three broad types (suzerain, hybrid, and de jure rule), each representing a different degree of decentralization.

European colonizers encountered a wide range of indigenous institutions in Africa (Osadolor and Otoide 2005, p. 159; Osafo-Kwaako and Robinson 2013). They included complex, hierarchical and highly centralized kingdoms like Asante, Buganda, and the emirates of Northern Nigeria as well as horizontally-oriented societies linked by age-sets or other structures. In their classic work on African political systems, anthropologists Meyer Fortes and Edward Evans-Pritchard (1966, p. 5) divide them into two groups – Group A, which 'consists of those societies which have centralized authority, administrative machinery and judicial institutions', and Group B, segmentary societies which lack these features and 'in which there are no sharp divisions of rank, status or wealth'.

While anthropological literature sometimes tends to treat these institutions as a static landscape of varied forms of political organization, this was not the case. Rather, the beginning of the colonial period at the end of the nineteenth century came at the end of a long period of political instability through much of the Sub-Saharan region, linked to both external and internal shifts (Boahen 1989; Iliffe 2007, pp. 164-192; Ogbomo 2005). The peak of the Atlantic slave trade in the eighteenth century followed by its end in the nineteenth, the Fulani jihads, and the Zulu Mfecane all caused disruptions of various types across wide swathes of the region. During this period, some older states, like the Oyo Empire in what became Nigeria, declined while others, like Ibadan in Nigeria or Asante in what became the Gold Coast, expanded their power at the expense of those that had begun to fade.

Colonial conquest brought its own disruptions above and beyond the considerable violence of colonial wars (Falola 2009; Huillery 2011). Colonial governments hoped that they could minimize disruption ‘by integrating existing local authorities and social systems into the structure of colonial government’ (Berry 1992, p. 329). The methods by which they did this, however, depended on both European perceptions of African institutions in each colony and on African responses to European interventions. In Northern Nigeria, where existing states were already highly centralized and the majority of the Fulani aristocracy was willing to cooperate with the British in exchange for political support, Lord Lugard ‘merely established British colonial rule as the ultimate authority’ within existing hierarchical system. In such cases the emirs often enjoyed increased internal authority even while ceding external power (Paden 1970, p. 163).

As Afigbo noted, the Northern Nigerian systems is often interpreted as the ‘classic’ form of indirect rule even though it was far from typical. In the fluid political climate of the late nineteenth and early twentieth centuries, British interventions often went further than simply responding to existing power structures. Where existing states resisted British rule, as in the case of Asante, the British government often took steps to strengthen rivals through the allocation of territorial and political authority (Berry 1992, p. 332). In Nigeria, when Ibadan proved less than cooperative, British officials attempted to revive the old supremacy of Oyo (Atanda 1970, pp. 215-16).

In regions with less identifiably centralized institutions, the creation of Native Authorities more often involved the appointment of chiefs by European district officers rather than the identification of those with existing legitimacy. In the Northern Territories of the Gold Coast, for example, those chiefs who ‘appeared to have the necessary authority ... were recognized as agencies’ for the maintenance of law and order, but ‘in other cases chiefdoms

were created by the appointment of persons who seemed to be possess local prestige or authority' (Hailey 1951, p. 262). Kenya's 1902 Village Headmen Ordinance, which made village headmen responsible for law and order in their villages, called for the appointment of said headmen by European officials and gave them little power (Hailey 1951, p. 92). Similarly, in Nyasaland, the 1912 District Administration (Native) Ordinance mandated the appointment of village headmen and principal headmen which, while it 'did not exclude the use of traditional Native Authorities as agencies of local rule', intended these headmen to act 'mainly as executive agents of the Administration' (Hailey 1951, pp. 25-6). In southeastern Nigeria, such appointees were described derisively as 'warrant chiefs', whose only authority came from their link to the British colonial administration (Afigbo 1972).

By 1913, when the initial construction of colonial administrations in Africa was largely complete, Native Authorities included everything from appointed village heads to powerful emirs who had signed treaties with the British government. As described above, they formed the 'executive government' by which British colonial administrations governed the vast majority of their African territory. During the interwar period, colonial governments across British Africa attempted to reform and expand this system, granting to Native Authorities new powers of taxation as well as new responsibilities for the provision of government services. Many histories of colonial governance in Africa explain this as an effort to channel the growing political activism of Africans towards local governance rather than national (see for example Lonsdale 1968). Decentralization also provided colonial governments a means of responding to demand for increased provision of education and other services without placing increased strain on central government budgets (Gardner 2012, pp. 161-191).

Contemporaries described reforms to the Native Authority system as an effort to transform African institutions into more bureaucratic local government. Ursula Hicks (1961,

p. 8) described this as including ‘the Native Court, the Native Treasury, and the Native Authority.’ Perhaps the most important of these changes was the establishment Native Treasuries and the granting of powers to levy local rates. In Nigeria, Native Treasuries were established in 1917 with the passage of the Native Revenue Ordinance. In the others, treasuries were not introduced until the 1930s.⁵ The establishment of Native Treasuries and increase in Native Authority revenue led to an increase in the level of fiscal decentralization in British Africa, even in colonies where decentralization had been limited in previous decades. This is shown in Figure 1, with decentralization measured as local government’s share of total government spending.

Along with powers to tax came new powers and responsibilities for service provision. In Kenya, for example, the 1937 Native Authority Ordinance handed control over a range of local government policies, from the control of water supplies, to the regulation of grazing and the cutting of timber, to Local Native Councils (Hailey 1951, p. 93) Other services included the operation of schools and clinics. The extent of these services depended on the budgets of Native Authorities. For example, the budget of the North Kavirondo Local Native Council in Kenya as submitted to the Hailey Commission shows that in 1947 the LNC spent approximately 30 per cent of its budget on education, 29 per cent on agricultural services, and another 9 per cent on public health and social welfare. Just 9 per cent was spent on administration – principally, the salary of chiefs and their councilors. By contrast, the Mlange Native Authority in Nyasaland spent 47 per cent of its budget on administration, and the District Commissioner wrote in his survey response that this did not ‘leave much’ for other priorities.

⁵ The relevant laws were: 1933 Native Authority Ordinance (Nyasaland); 1937 Native Authority Ordinance (Kenya), and; Ordinance No 25 of 1936 and the 1939 Native Administration Treasuries Ordinance (Gold Coast)

Fig 1 Fiscal Decentralization

The availability of resources was directly related to the decentralization of service responsibilities to Native Authorities. The 1937 Nyasaland memorandum cited earlier stated that responsibilities for the extension of services by Native Authorities would not be approved until the budget contained ‘full provision for the transferred or extended service’ and the Native Authority could support both capital expenditure and recurrent expenditure. This had political as well as financial reasons. ‘Unless the Native Authority actually pays’, the memorandum argued, ‘it will be difficult to make the Native Authority and people believe that the transferred service is actually transferred’. In other words, the ability of the Native Authority to act without interference from the colonial government depended on the amount of revenue it could raise. Similarly, a meeting of provincial commissioners in Kenya in 1948 regarded it as ‘a matter of importance that Local Native council members should observe some revenue accruing regularly’ from management of forests within their jurisdiction.⁶

There were clear inequalities in the extent to which Native Authorities could cope with these new responsibilities. In her study of colonial local government, Rita Hinden (1950, p. 32) noted that Native Authorities ‘are expected to organize a whole range of social services and an equitable taxation system, and to run a Treasury on European lines. In some areas the traditional native institutions have proved quite ineffective for these purposes.’ A 1948 report by the colonial administration of Kenya observed that ‘a distressing feature, accentuated during the war, is the lack of uniformity in the rate of progress between the semi-sophisticated and the

⁶ Memorandum on ‘Financing of Forests in African District Council Areas’, 14 January 1954, in Kenya National Archives (KNA) AG/48/14.

backward tribes in the colony. The inhabitants of Nyanza and Kikuyu areas of Central Province might be living in a different world from the Masai and Elgeyo, for example' (Kenya 1948).

Data on Native Authorities

Up until the 1940s, information on Native Authority administrations, and their finances, is fragmentary and often presented only in aggregate form at district or provincial level. Further, it was recorded only in internal administrative reports and not submitted in annual reports of statistics sent to the metropolitan government in London, which may be one reason local governments have been neglected in studies of colonial taxation. However, policies of decentralization from the 1930s focused the attention of the imperial government on the diversity of institutions and practices between and within colonies, which in turn generated demand for more systematic comparisons of Native Authorities. The response to this demand allows this paper to build the first quantitative picture of Native Authority institutions across four colonies in British Africa (Kenya, Nyasaland, Nigeria and the Gold Coast).

A central figure in contemporary research efforts on this subject was Lord Hailey, a retired Indian civil service officer who became a key producer of comparative scholarship on African colonial rule. His work began with the mammoth *African Survey*, published in 1938. It contained a chapter on 'Native Administration' which gives a descriptive history of the system of African administration in each British territory, with additional sections on French and Belgian policies (Cell 1989). Hailey extended this research a few years later with a brief

study focused explicitly on Native Administration, written in 1942 and available at first only to government officials and a few scholars of colonial rule. In 1947, the Colonial Office asked him to bring his 1941 work up to date, resulting in a 5-volume report published from 1951. This request was, at least in part, linked to objections by some colonial administrations to the publication of the 1942 report for public consumption. Kenya was one of these, with one government memorandum referring to the report, which was critical of Kenya, as providing ‘yet another stick to beat this Government’.⁷ In 1946 Governor Mitchell wrote to the Secretary of State that ‘publication would be likely to result in a gratuitous and probably embittered controversy’, but that ‘we would, of course, be most happy to welcome Lord Hailey here again if he would care to return and write an up-to-date account.’⁸

To complete the report, Hailey requested information from colonial governors on the numbers of Native Authorities, their finances and the activities of the Native Courts.⁹ Further, he sent questionnaires to district officers in a number of British colonies in Africa, which asked about the physical, economic, and demographic characteristics of each Native Authority area, the structure of the Native Authority, its finances and activities.¹⁰ The responses to these questionnaires varied in their level of detail, with some providing long narrative accounts of the operations of local institutions, while others restricted themselves to very short answers. Where necessary the surveys have been supplemented with other government reports from the four colonies. Appendix 1 gives more detail on the sources of data.

⁷ ‘Lord Hailey’s Report on Native Administration and Political Development’, 7 November 1944, in KNA BW1/1/559.

⁸ Mitchell to Secretary of State, 23 August 1946, in KNA BW1/1/559.

⁹ Secretary of State to Colonial Governors, 14 July 1947, in KNA BW1/1/559.

¹⁰ The core of the survey remained the same across all colonies, though there were occasional changes reflecting local conditions. For example, questionnaires in Kenya and Malawi asked about the presence of European settlement and alienated land, which was unnecessary in the West African colonies.

Table 1 provides descriptive statistics on the area and populations of Native Treasury areas in the four countries. The first thing to observe is that the size of these areas, in terms of both physical size and population, varied widely. In Nigeria, the smallest Native Treasury had just over 3,000 people while the largest had close to 3 million. The variation was smaller in the other three countries, but still substantial.

Table 1: Area and Populations of Native Treasury Areas

Michael Crowder and Obaro Ikime (1970, p. xiii) noted in their study of chiefs in West Africa that British preoccupations with the pre-colonial ‘legitimacy’ of Native Authorities meant that colonial administrations ‘were willing to tolerate great variety in the size and shape of their Native Authorities’. Further, attempts to combine Native Authorities for administrative convenience often met with African opposition. In the Gold Coast, for example, the Kassena, Nankanni and Builsa resisted colonial efforts to unite them under one Native Authority (Ladouceur 1979, p. 55).

The political structures governing these populations were as various as their sizes. The relative influence of chiefs and councils varied, and the method by which they were selected ranged from ‘traditional’ (hereditary or selection from a small number of chiefly families, along patrilineal or matrilineal lines) to elected by the local population or appointed by the district officer. Traditional selection did not always mean that succession practices had been inherited from the pre-colonial period; in parts of Nyasaland, for example, chieftaincies initially occupied by appointees became hereditary over time. In the next section, the analysis treats ‘traditional’ selection as a measure of the autonomy of the Native Authorities. The surveys also asked whether they could be removed, by their constituents or the District Officer. In some

regions, the popular removal of chiefs (often referred to as ‘destooling’) was common, such as in the Gold Coast where two thirds of the Native Authorities had experienced ‘destooling’, while in others chiefs were effectively in post for life. In Kenya for example, none of the Native Authorities had ever recorded an act of the chief being removed by the people.

The other two ingredients of the ‘mature’ Native Authority system as identified by Hicks were treasuries and courts. In most cases, individual Native Authorities had their own treasuries, but in some cases, smaller Native Authorities would federate for financial purposes. This was much more common in Malawi and Kenya, for example, than it was in Ghana or Nigeria. In Ghana, only 10 out of 126 Native Authorities for which we have these data, consisted of a federation, and in Nigeria, about half of the Native Authorities had federated for financial purposes. In Kenya in contrast, all of the Native Authorities had federated, and in Nyasaland, all but one were part of a financial federation.

Native Authorities also had varying degrees of responsibility for managing their own assets. Native Authorities with literate members and some degree of fiscal knowledge prepared their own estimates. However, where these were lacking, Native Authorities were dependent on the District Officer for setting the estimates. Native Courts were responsible for hearing both local civil and criminal cases but varied in terms of their powers to hear appeals or inflict particular types of punishments. Table 2 summarizes measures of these various institutional differences for the four countries under study coded from the Hailey surveys.

Table 2 Summary statistics institutional structures of Native Authorities, c. 1948¹¹

¹¹ Table 2 presents summary statistics for the fixed sample. The summary statistics for the complete dataset and summary statistics for individual countries are presented in Appendix 2

The main measure of Native Authority capacity used in this paper is the per capita tax revenue collected by Native Authorities. Figure 2 maps this measure onto the boundaries of the Native Authority areas, digitized from archival maps. This paper is the first to digitize these boundaries, allowing for spatial analysis of nature and capacity of African institutions. Revenue per capita in all four maps is shown on the same scale, showing the considerable variation between levels of revenue per capita between and within colonies.¹²

Johnson and Koyama (2017, p. 2) define state capacity as the ‘ability of a state to collect taxes, enforce law and order, and provide public goods’. Tax data has long been an important source of information in work on institutions and state-building, both historically and in contemporary contexts. There are two reasons for this. One is that taxation is linked to a range of wider questions on state capacity, the relationship of governments to taxpayers, changing institutional structures, and economic development (Levi 1988; Schumpeter 1918; Tilly 1990). Today, there is a strong correlation between tax revenues and per capita income, suggesting that ‘rich states typically possess a set of political institutions that link powerful centralized tax structures with parliaments that limit executive control over public finances’ (Dincecco 2011, p. 2-3). A second is that taxation data are both widely available and ‘amenable to comparative analysis’ (Lieberman 2002, p. 89-90). Within this literature, different types of tax revenue are often interpreted as measuring different things. Some types of tax, like income or other direct taxes, may provide a better indicator of state capacity than others, like trade taxes or resource revenues. The relative shares of direct and indirect revenue are often used as an indicator of state capacity (Frankema and van Waijenburg 2014; Mkandawire 2010).¹³

¹² In all four maps, white indicates ‘no data’. This indicates areas where we were not able to match the names on colonial maps to fiscal data, or – in the case of Kenya, in particular – areas of European settlement where there were different types of local institutions.

¹³ De Roo (2017) argues that the need to establish control over trade routes to collect customs revenue means it can also act as an indicator of state capacity.

Unlike central colonial governments, Native Authorities did not collect trade taxes. Instead, their revenue came from a range of sources, of which the most important was direct taxes. Their revenue can be broken down into three categories: 1) direct taxes imposed by the Native Authorities themselves, referred to as ‘local rates’; 2) rebates on direct taxes imposed by the colonial government, and; 3) fines or license fees of various kinds.¹⁴ The third category includes fees paid for market licenses, court fines, and sometimes royalties for natural resources. These tended to be a relatively small share of total revenue, meaning the biggest source of revenue were direct taxes. In Nigeria and Nyasaland, Native Authorities were responsible for collecting tax revenue for the central government, and received a rebate from that revenue which varied over time and, sometimes, between Native Authorities. There was no revenue sharing in Kenya and the Gold Coast. As the fiscal data reported in the Hailey surveys varies in its level of detail, we have supplemented this with other government reports on Native Authority revenue (details in Appendix 1).

Figure 2. Native Authority Revenue Per Capita

To give some examples, Gonja in the northern Gold Coast in 1948 received approximately £5400 from local rates, £400 from cattle tax, £400 from market fees, £400 from fishing licenses, £600 from the rental of kralls, and £210 from Native Authority ferries. Zaria in Northern Nigeria collected £74,000 in General Tax (exclusive of payments to the central government), £10,000 in jangali or cattle tax, £5,000 in fees from Native Courts, and £1,000

¹⁴ Forced labor represented an additional source of revenue for Native Authorities. In British Africa, the use of such labour was often decentralized to Native Authorities in order to escape international oversight. However, we are not aware of any source of systematic data like the one used in van Waijenburg (2018) to measure the scale of the contribution of forced labor to Native Authority revenues.

from interest on investments. In much of Northern Nigeria, the taxes collected by Native Administrations built on elaborate systems of pre-colonial taxation, which included zakat, a Muslim charitable tax, as well as jangali and a range of other agricultural taxes (Okauru 2012, pp. 69-71).

The next three sections use the data from the Hailey surveys and other sources to attempt to explain this variation in per capita revenue. Section 4 first examines the extent to which higher per capita revenues are linked to market access and other proxies for higher agricultural incomes. Sections 5 and 6 focus on further sources of variation, linked to the relationship between Native Authorities and the colonial state, and the institutional structure of the Native Authorities themselves. It finds that neither existing economic endowments or the structure of African institutions during the early colonial period is sufficient to explain per capita revenue variation, but that variations in the way indirect rule was implemented across colonial Africa matter as well.

Explaining Native Authority revenue: Regional economic inequalities

One difficulty in using tax revenue as an indicator of state capacity is that a number of different variables other than state capacity can influence levels of tax revenue, in particular overall income levels and the structure of the economy (Karaman and Pamuk 2013, p. 607; Teera and Hudson 2004, p. 786). This section uses the data presented above to investigate the relationship of tax revenue to underlying socioeconomic conditions. In their study of Uganda, Bandyopadhyay and Green (2016, p. 499) argue that the relationship they find between pre-colonial state centralization and contemporary development outcomes was not due to local government accountability or public goods provision, which leads them to argue that ‘levels of

wealth have persisted in Uganda from the precolonial period to the present day'. It may be, therefore, that the variations in tax revenue shown in the previous section merely reflect underlying inequalities in levels of wealth. In much of Africa today, spatial inequalities at subnational level remain high and explain a substantial share of overall inequality (Lessman and Seidel 2017; Mveyange 2015).

In this analysis, our dependent variable is revenue per capita. Adjusting the revenue data for population takes into account the substantial variation in the sizes of Native Authority jurisdictions. Unfortunately, no direct measures of per capita income are available for this period at this level of spatial disaggregation.¹⁵ Wages and prices for Anglophone Africa during the colonial period are presented as national averages, and most likely reflect the situation in or around colonial capitals (Frankema and van Waijenburg 2012).¹⁶ However, data are available on various proxies for the level of taxable surplus and the availability of 'tax handles' (Chelliah 1971; Musgrave 1969).

Agricultural production that is only used for subsistence is difficult to measure and tax, as governments are often less willing to tax the main food products of their constituents (Teera and Hudson 2004, p. 789). This analysis thus includes a dummy variable for whether cash crops, such as cocoa or cotton, were produced in each Native Authority area. During the late nineteenth and early twentieth centuries, African exports of such crops expanded dramatically (Frankema et al. 2018), raising the incomes of farmers both directly and indirectly. In Uganda, for example, peasant farmers produced modest amounts of cotton to supplement subsistence production, raising their incomes above unskilled market wages (De Haas 2017). In the Gold

¹⁵ The scarcity of subnational data remains a major hurdle in Africa even today. See African Development Bank (2015).

¹⁶ Deflating revenue per capita by these wages does not eliminate the variation. However, since existing wage data does not reflect subnational variations, revenue per capita has been presented here in nominal terms.

Coast, the adoption of cocoa increased the incomes of both cocoa farmers and provided a larger domestic market for food producers (Aboagye and Bolt 2019). This expansion in the demand for marketed food meant African producers could thus benefit from export expansion even in colonies where export crops were primarily produced by foreign-owned plantations or settler farms.

The adoption of cash crops was highly uneven and dependent on both the ecological constraints of different soils as well as market access. To capture market access, the analysis includes the number of railway stations per 1,000 inhabitants in each Native Authority area and the distance to the nearest major city.¹⁷ Railway networks in Africa were comparatively thin, but where they existed transport costs were considerably lower (Chaves et al. 2014; Herranz-Loncan and Fourie 2018). They also shaped the economic geography of African countries to a considerable degree, promoting urbanization and the development of domestic markets (Jedwab and Moradi 2015; Jedwab, Kerby and Moradi 2017; Buckwalter 2018). Cities were important centres of demand for both food and export crops, as the latter were often traded through capitals before being exported. In previous work, distance to the coast is often used as an indicator of access to export markets. However, as exports were shipped from particular centres rather than from just anywhere on the coast, distance to major cities provides a more contextually relevant measure.

A simple OLS model was estimated to illustrate the relationship between economic opportunity and revenue per capita. The results of this analysis are presented for a baseline set of constant observations in Table 3.¹⁸

¹⁷ Measured as the shortest distance between the geometric mean of each Native Authority area to the nearest city with 35,000 inhabitants or more, obtained from colonial censuses.

¹⁸ The full dataset contains additional observations but the number varies per model specification owing to variations in the comprehensiveness of survey responses. We have thus used a constant set of observations so

Table 3 Subnational economic inequalities and per capita revenue

The variables on cash crop production and market access are all highly significant with the expected signs. Production of a cash crop is associated with an increase in per capita revenue of between around 8.5 and 11 pence. And an additional railway station per 1000 inhabitants is correlated with an increase in revenue of more than 11 pence. Distance to large cities is consistently associated with lower revenue collection.

One proxy for economic development that is widely used in African economic history are various measures of soil quality. In largely agricultural economies, the potential productivity of the soil is taken as an indicator of potential per capita incomes (Ashraf and Galor 2011). Michalopoulos and Papaioannou (2013, p. 124-5), for example, use a measure of the suitability of land for agriculture to control for pre-colonial incomes. Bandyopadhyay and Green (2016: 480) use indicators of the shallowness of the soils and clay content to account for geographical determinants of development outcomes. This paper uses the water holding capacity of the soil as an indicator of soil quality. In the context of Africa's low technology rain fed agriculture, the availability of water is the major determinant of agricultural crop growth (Leenaars 2018, p. 1). Following previous literature, the water holding capacity of the soil should be positively related to revenue per capita. This is the only one of the variables discussed which does not have the expected relationship with revenue per capita. The water holding capacity of the soil is actually negatively correlated with revenue per capita in all colonies except for Kenya, where the relationship is positive. However, in the baseline sample this relationship is consistently insignificant. To check this result, we substituted various

that changes in the sizes of coefficients can be interpreted. The results for the full sample are very similar to the ones shown here and are available upon request.

measures of soil quality such as soil organic carbon stock, the clay content of the soil, the capacity of the soil to contain nutrients (referred to as the cation exchange capacity), the Ph of the soil, the bulk density of the soil, and a combination of the all of these using factor analysis. None of the variables showed a strong and positive relationship with revenue per capita.

This lack of relationship is perhaps not as surprising as it seems. Soil mapping is not a precise science. In his contribution to the *History of Cartography*, Millea (2015, p. 1448) notes that maps attempting to capture the ‘general kind of soil that tends to form in a particular climate’ often miss ‘the site-scale variability that occurs as a result of local geology, slope, internal drainage, vegetation cover and prior land use’. Further, African soil maps in particular are often based on very limited and low quality data (Showers 2005, p. 215-16). Finally, the relationship of soil quality and tax revenue is potentially ambiguous. Fenske (2014) argues that African state-building is linked to ecological diversity which provided opportunities for specialization and trade, rather than overall fertility.

Native Authority revenue per capita is thus unsurprisingly related to differences in the opportunities available to African farmers for market production. However, the history of fiscal development elsewhere suggests that differences in income and economic structure are unlikely to be the whole story. In his history of European fiscal development, Dincecco (2015, p. 907-8) notes that tax receipts in England and France increased much faster than per capita incomes, and argues that ‘state capacity improvements were not simply a by-product of economic growth’. Teera and Hudson (2014) note numerous examples of countries with similar levels of per capita income but very different levels of tax revenue as a share of GDP, and find that per capita income is insignificant as a determinant of tax revenue as a share of GDP after controlling for institutional variables. Stotsky and WoldeMariam (1997) also argue that differences in tax effort can be explained by institutional differences. The next two sections

consider the relationship between per capita revenue and two sources of institutional difference, namely the relationship between Native Authorities and the colonial state, and the internal structures of Native Authority institutions.

Explaining Native Authority revenue: inter-governmental relations

The history of indirect rule in section 2 showed that African chiefs possessed varying levels of authority and autonomy under colonial rule. This section considers the implications of this variation for the ability of Native Authorities to collect tax revenue, and tests the hypothesis that Native Authorities with greater autonomy within colonial systems of governance would have higher levels of revenue per capita.

Previous work on colonial governance has speculated about the impact of this variation on later development outcomes. The results of this work vary. Lange (2004) for example finds a negative relationship between the degree of indirect rule (measured by the share of legal cases decided in Native Courts) and measures of post-independence political development. However, other work which focuses on local rather than national institutions, or the services they provide, often finds the opposite. For example, in her work on India, Iyer (2010) finds greater availability of public sector goods such as schools, health centers and roads in indirectly-ruled areas. Further, the degree of indirect rule is often used, albeit anecdotally, to explain why pre-colonial state centralization – measured by the Murdock jurisdictional hierarchy variable – is associated with better development outcomes. Gennaioli and Rainer (2007) argue that greater local accountability of chiefs from more centralized ‘pre-colonial’ states explains the greater provision of public goods in countries with a larger share of population from ‘centralized’ ethnic groups.

Looking beyond literature specific to Africa or indirect rule, theories of fiscal decentralization would also predict a positive relationship between local autonomy and per capita revenue. This work often draws a distinction between the ‘devolution of political decision-making power’ and the ‘administrative delegation of functions’ (Bardhan 2002, p. 186). Poschl and Weingast (2015) argue that local governments which primarily rely on their own revenue rather than transfers from the central government tend to be more responsive in the provision of public goods. This logic is similar to that of colonial decentralization policies discussed in section 2.

To measure the autonomy of Native Authorities within the colonial state, this paper proposes a reinterpretation of data commonly used to measure the structure of ‘pre-colonial’ institutions. These data come from George P. Murdock’s *Ethnographic Atlas* (1967). The Atlas was based on a survey of early anthropological research on a large number of societies around the world, including a large number in Africa. It codes a wide range of variables on issues from marriage practices to agriculture and religion. In the research cited here, the most widely used variable is the measure of ‘jurisdictional hierarchy’, or ‘the number of jurisdictional levels in each society’ (Murdock 1967, p. 160). Existing work often uses this as a measure of pre-colonial state centralization. This is controversial, as the period of observation of the societies included in the Murdock Atlas starts in 1830 at the earliest, with the 1920s as the most common decade of observation (Henderson and Whatley 2014). This paper instead interprets the Murdock data as reflecting early European *perceptions* of African states, which then informed colonial policies. Based on these perceptions, additional powers were devolved to African states deemed to be more centralized, while those seen as less hierarchical had fewer powers and often acted as delegates of the colonial state.

Evidence to support this argument is more than just anecdotal. For example, the colonial government in Nigeria classified Native Authorities as ‘organized’ and ‘unorganized’. Those classified as ‘organized’ were allowed to retain a larger share of the direct tax revenue they collected on behalf of the colonial state, and given greater authority over particular government functions. In particular, they had greater ‘discretionary’ powers over the allocation of expenditure, including salaries as well as capital spending.¹⁹ This classification correlates well with the Murdock scores, suggesting that those groups perceived by early European observers to be more centralized were also more likely to be classified as ‘organized’ by colonial governments. Table 4 shows the average jurisdictional hierarchy scores from the Murdock atlas for organized and unorganized Native Authorities in both northern and southern Nigeria.

Table 4 Murdock jurisdictional hierarchy scores for Nigeria Native Authorities

Table 5 gives the results of an OLS regression in which the Murdock jurisdictional hierarchy variable is added to the model tested in the previous. The degree of political centralization for each Native Authority is measured by pairing the colonial maps of the Native Authorities and a map of the geographical location of indigenous societies, originally created by Murdock (1959) and digitized by Nunn (2008) and assigning societies to Native Authorities based on this comparison. These assignments were then cross-checked using information from the Hailey surveys on the ethnic composition of the population Native Authority jurisdictions. We then calculated a weighted average of the political centralization score in which the weights

¹⁹ ‘Native Treasuries Estimates’, 1936-7, in CO 657/43.

were determined by the share of the area inhabited by different societies. As expected, this variable has a positive and significant relationship with revenue per capita. The scale of the effect is similar to that of the cash crop and railway variables above; one additional point on the jurisdictional hierarchy score (which runs from 0-4) correlates with an additional 6 and half pence in revenue. The effects of the other significant variables remain.

Table 5 Autonomy and Revenue Per Capita

It may be that the jurisdictional hierarchy score is proxying for something else. To check for robustness, several other measures of the autonomy of the Native Authorities coded from the Hailey surveys can be substituted for the Murdock score. These results appear in Table 6.

Table 6 Alternative measures of Native Authority autonomy

Owing to variations in the specificity of the survey responses, these are coded mostly as dummy variables reflecting various aspects of the division of power between the Native Authority and the colonial government. These are added to the model one at a time as they are often correlated with one another. The first describes the appointment of the Native Authority and whether it is done within the Native Authority itself, classified as ‘traditional’, generally by inheritance or selection from among a small set of ‘chiefly’ families, rather than through direct appointment by the colonial state. The relationship between revenue per capita and traditional selection is

positive and significant, and of a scale similar to the effect of producing cash crops or having an additional railway station. By contrast, being appointed by the District Officer shows a negative (though not significant) relationship.

Another such variable tested is a dummy for whether the Native Authority (that is, a chief or chief-in-council) sets its own budget estimates, as opposed to this being done entirely or partly by the District Officer. This variable has a large and significant positive relationship with revenue per capita, close to double the effect of the economic variables previously discussed. Finally, the model considers whether the Native Courts in that jurisdiction had appellate powers or not. This also has a positive and significant coefficient.

This section shows that, even controlling for differences in economic structure and market access, the degree of autonomy possessed by Native Authorities is associated with higher levels of revenue per capita. Native Authorities perceived as more centralized, which were able to select their own chiefs and set their own estimates, were able to collect more in tax revenue than those without such powers. What is shown here are correlations and the causality could run in both directions. In other words, Native Authorities better able to raise resources may have had more autonomy, or vice versa. As noted above, wider studies of decentralization support the link between the powers of local government to determine their own expenditures and their ability to collect taxes. Section 6 considers the relationship of the internal organization of such Native Authorities to their per tax revenue.

Explaining Native Authority revenue: structure of Native Authorities

There is a substantial historical literature on the relationship between political institutions and tax payments, channeled through taxpayer willingness to pay. This section tests some of the

hypotheses proposed by this literature using the data from the Hailey surveys. While this dataset does not include direct information on tax compliance per se, it can show that internal structural differences still help explain differences in revenue per capita even controlling for other possible influences.

Much of the literature on political institutions and tax revenue, whether using historical or contemporary evidence, stresses a link between political voice and tax payments. However, there remain debates about the influence of precise political structures. It has frequently been argued, for example, that representative regimes have greater fiscal capacity (Dincecco 2015; Feld and Frey 2002). However, not all studies find a direct link between type of government and fiscal capacity, and political voice may be expressed in a variety of regime types (Karaman and Pamuk 2010; Rosenthal and Wong 2011; Johnson 2006; Timmons 2010; Johnson and Koyama 2017).

The Hailey surveys allow for several indicators of institutional structure to be added to the model constructed above. Table 7 presents these results. One indicates whether the Native Authority is comprised of a Chief-in-Council rather than a solo Chief. As noted in section 2, Councils were introduced to Native Authorities particularly to allow for the voices of groups such as migrants or mission-educated Africans who were not necessarily part of traditional hierarchies. This variable is positive and significant, associated with an additional 14 pence per capita. On the contrary, Native Treasuries which serviced multiple chiefs have lower levels of revenue per capita, suggesting that challenges of coordination between multiple chiefs may have limited revenue collection.

Table 8 Native Authority structure

Native Authorities comprised only of a council are also associated with lower revenue per capita. Modern studies of traditional leadership in African countries have found that the presence of chiefs plays an important coordinating role in development projects (Baldwin 2016). The apparent importance of having both a chief and council in terms of raising revenue suggests something similar may have been true among Native Authorities.

The accountability of chiefs also appears to have been important. A dummy indicating whether chiefs can be removed from their position is also positive and significant. Iyer (2010) makes a similar argument in her study of indirect rule in India, arguing that the fact that rulers could be removed ‘in cases of “misrule” appears to be play quite an important role’. This finding also fits characterizations of African institutions under indirect rule in historical literature, which often stress that colonial interventions removed systems of checks and balances which may have ensured accountability in pre-colonial institutions, creating what Mamdani (1996) refers to as a system of ‘decentralized despotism’. The inability of a chief to become a ‘despot’ seem to have been associated with higher revenues.

Again, it is important to note that the channels of causality may run in both directions. Studies of local government taxation in other context suggest that the payment of taxes may incentivize greater vigilance on the part of taxpayers, and greater efforts to be involved in decision making. Poschl and Weingast (2015, p. 166) note that ‘if citizens are made to pay taxes, they are relatively more inclined to watch over or scrutinize the governments’ activities and to demand representation in government and influence policy discussions’. With cross-sectional data it is not possible to say whether the presence of councils drove an increase in tax revenue, or whether tax demands were behind the creation of a council. Future research may

locate sufficient data to study taxation and institutional changes among Native Authorities over time.

One counter-argument might be, particularly given the limited data on per capita incomes, that these results simply reflect the wider implications of higher levels of state centralization as measured by Murdock. A number of papers cited previously have argued that subnational inequalities in Africa are largely the result of the persistent legacies of historical affluence, whether through wealth (Bandyopadhyay and Green 2016) or through some function of centralized ‘pre-colonial’ institutions (Michalopoulos and Papaioannou 2013; 2014). To address this point, Table 8 presents the same analysis for only those Native Authorities without centralized state structures²⁰. Substituting for the Murdock measure of autonomy, which not surprisingly is not significant in this sub-sample, is a dummy for whether the Native Authority sets its own estimates. This proxy for autonomy of the Native Authority remains positive, significant, and substantial in magnitude throughout the analysis.

The results remain quite stable, with coefficients similar in magnitude to the full model presented in previous sections, though some of the variables lose significance in this smaller sample.²¹ Importantly, the variables that capture both autonomy and political voice and accountability of the Native Authorities all remain similar to the full model, except whether or not the people could destool the chief and whether the NA consists of only a council. The size of the coefficients of both indicators drops substantially and are no longer significant.

Table 9: Results for sub-sample of decentralized Native Authorities

²⁰ Included are only those Native Authorities with a score of 3 or less on the jurisdictional hierarchy measure from Murdock.

²¹ For full results for the sub-sample of decentralized societies see appendix 3

Further, the indicators of political voice and accountability of Native Authorities also point at similar mechanisms at work in the limited sample compared to the full model presented above. Most importantly, the dummy indicating the presence of a chief-in-council structure remains positively associated with revenue per capita, while the number of chiefs per treasury remains negative. In the Native Authorities perceived by early European officials to be less centralized, both autonomy and political voice and accountability developed during the colonial period played a significant role in the development of fiscal capacity. This suggests that the story is not merely driven by the underlying affluence or capacity of African states which were centralized early on.

Conclusions

Existing work on colonial institutions and their legacies take two different approaches when it comes to understanding the relative importance of Africans and Europeans in shaping them. The first focuses exclusively on European decision-making, ignoring the influence of the existing institutional landscape. The second approach minimizes the impact of relatively skeletal European institutions and argues that what they refer to as ‘pre-colonial’ structures are more important in determining development outcomes today. This paper argues that both approaches miss a foundational feature of colonial rule, namely the dynamic interaction between African institutions and the colonial state.

Using new data on tax revenues collected by Native Authorities in four British colonies in Africa in 1948, the paper shows that differences in fiscal capacity were driven by a range of economic, social and political factors. These included market access, the relationship between

Native Authorities and the colonial state, and the structure of the Native Authorities themselves. One important implication of these results is that path dependence does not explain everything. Even among those Native Authorities perceived as less ‘organized’ by colonial officials early in the period, policy decisions by chiefs and their councils could influence revenue collections. Another implication is that looking exclusively at central government institutions or at anthropological data is insufficient to understand the institutions developed under colonial rule.

This paper is not intended to provide a comprehensive picture of local institutions during the colonial period or the ways in which they developed over time. The collection of subnational data represents one of the new frontiers of African economic history and it is to be hoped that future data collection efforts will yield more systematic information on Native Authorities. As Hoffman (2015, p. 327) writes more generally of the economic history of state institutions, there are ‘other growth enhancing goods and services that cry out for study’, including the role of courts and other government services. It is likely that the same factors discussed above with regard to revenue also influenced the expenditure side of Native Authority budgets, and the extent to which Native Authorities helped shape current subnational variations in African political organization, described by Catherine Boone (2003) as an ‘uneven institutional topography’, remains largely unknown territory. Historian David Killingray once joked that the ideal exam question for a course on African colonialism might be: ‘During colonial rule, Africa was mainly governed by Africans. Discuss’ (Institute of Commonwealth Studies 2012). If he was right, economic historians have a long way to go in understanding the role they played and how it shaped the development of the continent. This paper provides what we hope is a first step in this direction.

Table 1: Area and Populations of Native Treasury Areas

	Population				
	Number of Native Authorities	Mean	Std. Dev.	Min	Max
Gold Coast	92	37,685	56,920	1,587	378,586
Nyasaland	17	140,708	82,828	15,593	323,923
Kenya	27	168,470	170,876	15,341	633,568
Nigeria	226	153,796	312,249	3,273	2,882,414
	Area (km2)				
	Number of Native Authorities	Mean	Std. Dev.	Min	Max
Gold Coast	92	2,639	5,020	11	36,307
Nyasaland	17	5,663	3,292	310	14,681
Kenya	27	15,523	18,556	279	78,770
Nigeria	226	6,325	10,985	68	84,826

Sources: See Appendix 1

Table 2: Summary statistics institutional structures of Native Authorities, c. 1948²²

		N	Present	Average
Autonomy	Traditional Selection	189	136	
	NA sets estimates	189	34	
	Appointed by DO	189	16	
	Presence of appeal court	189	118	
Voice and accountability	NAs per Treasury	189		5
	Removal by people	189	58	
	Elected NA	189	37	
	Chief in council	189	98	
	Council only NA	189	36	

Source: See Appendix 1

²² Table 2 presents summary statistics for the fixed sample. The summary statistics for the complete dataset and summary statistics for individual countries are presented in Appendix 2

Table 3: Subnational economic inequalities and per capita revenue

	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita
Cash crop dummy	10.91*** (3.54)	8.740*** (2.66)	10.30*** (3.19)	9.249*** (2.76)
Distance to large city		-0.0455*** (-3.62)	-0.0422*** (-3.47)	-0.0410*** (-3.31)
Railway stations per 1000 population			11.77*** (2.61)	11.81** (2.59)
Soil water capacity				-0.501 (-1.46)
Constant	54.24*** (10.11)	62.03*** (9.22)	57.66*** (8.63)	67.83*** (6.52)
Country dummies	Yes	Yes	Yes	Yes
N	189	189	189	189
R-sq	0.230	0.256	0.283	0.287

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

Table 4: Murdock jurisdictional hierarchy scores for Nigeria Native Authorities

	Northern Nigeria	Southern Nigeria
Organized	2.25	3.6
Unorganized	1.85	1.96

Source: 'Native Treasuries Estimates', 1936-7, in CO 657/43. Comparatively low scores for Northern Nigeria on jurisdictional hierarchy reflects the practice of giving centralized emirates control over less centralized societies in the area. See, eg Paden (1975, p. 172)

Table 5: Autonomy and Revenue Per Capita

	Revenue per capita
Cash crop dummy	7.302** (2.30)
Distance to large city	-0.0442*** (-3.50)
Railway stations per 1000 population	10.52** (2.40)
N.A. jurisdictional hierarchy (Murdock)	6.726*** (3.01)
Constant	42.49*** (5.15)
Country dummies	Yes
N	189
R-sq	0.307

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

Table 6: Alternative measures of Native Authority autonomy

	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita
Cash crop dummy	10.53*** (3.37)	7.823** (2.52)	9.591*** (2.84)	9.233*** (3.01)
Distance to large city	-0.0436*** (-3.58)	-0.0407*** (-3.41)	-0.0379*** (-2.87)	-0.0428*** (-3.53)
Railway stations per 1000 population	11.36*** (2.64)	11.42** (2.21)	11.53** (2.52)	11.25** (2.60)
Traditional selection NA	10.34*** (3.86)			
NA sets budget		20.10*** (3.59)		
Appointed by the DO			-4.715 (-1.36)	
Presence appeal court				7.716** (2.14)
Constant	46.51*** (6.89)	51.86*** (8.01)	58.02*** (8.54)	54.99*** (8.11)
Country dummies	Yes	Yes	Yes	Yes
N	189	189	189	189
R-sq	0.307	0.353	0.285	0.301

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

Table 7: Native Authority structure

	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita
Cash crop dummy	8.461*** (2.67)	8.104** (2.53)	9.653*** (3.14)	6.582** (2.10)	8.768*** (2.85)
Distance to large city	-0.0443*** (-3.51)	-0.0344** (-2.54)	-0.0563*** (-4.45)	-0.0343*** (-2.99)	-0.0605*** (-4.72)
Railway stations per 1000 population	10.61** (2.46)	10.61** (2.60)	10.79*** (2.65)	11.68*** (2.76)	9.711** (2.24)
N.A. jurisdictional hierarchy (Murdock)	5.374** (2.41)	6.764*** (3.03)	5.970*** (2.70)	7.182*** (3.09)	5.973*** (2.69)
Number of chiefs per NA	-0.541*** (-3.69)				
Removal by the people		10.61* (1.78)			
Elected NA			-11.73*** (-2.99)		
Chief in Council				13.88*** (4.81)	
Council only NA					-13.25*** (-3.23)
Constant	45.82*** (5.36)	30.51*** (2.74)	42.40*** (5.17)	25.89*** (2.87)	43.91*** (5.27)
Country dummies	Yes	Yes	Yes	Yes	Yes
N	189	189	189	189	189
R-sq	0.327	0.323	0.326	0.351	0.332

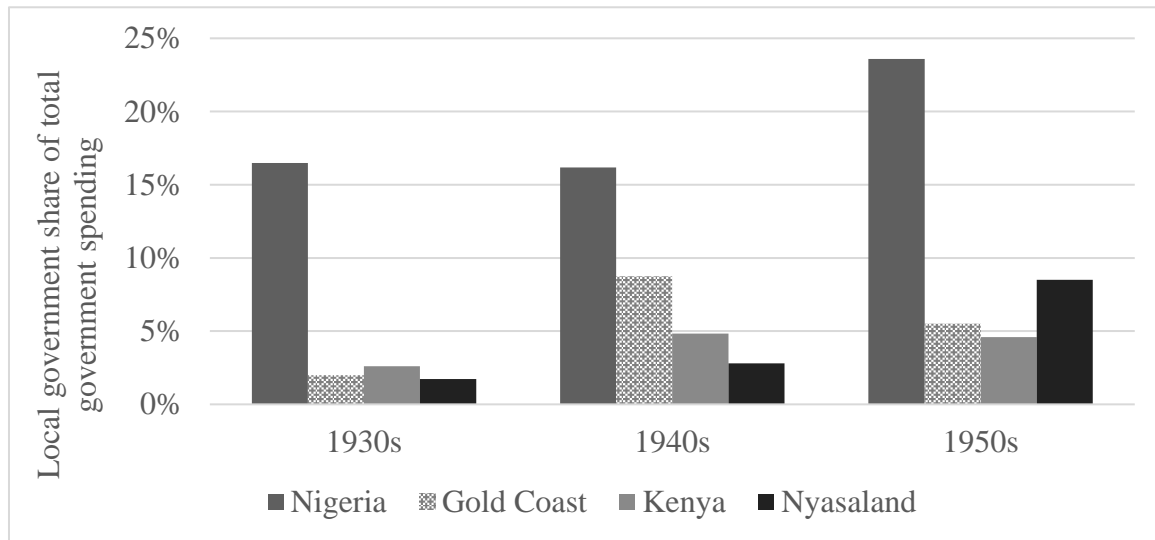
Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

Table 8: Results for sub-sample of decentralized Native Authorities

	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita
Cash crop dummy	8.539*** (2.78)	7.852** (2.57)	10.46*** (3.70)	7.829** (2.59)	8.222*** (2.73)
Distance to large city	-0.0117 (-0.73)	-0.00848 (-0.51)	-0.0363* (-1.93)	-0.0101 (-0.63)	-0.0258 (-1.39)
Stations per population	5.879 (0.84)	5.755 (0.77)	6.132 (1.03)	6.508 (0.96)	4.814 (0.65)
NA sets budget	26.19*** (3.22)	27.48*** (3.41)	27.49*** (3.44)	25.75*** (3.11)	26.45*** (3.18)
Number of chiefs per NA	-0.395*** (-2.67)				
Removal by the people		1.739 (0.28)			
Elected NA			-13.76*** (-2.92)		
Chief in Council				6.517** (2.32)	
Council only NA					-6.813 (-1.58)
Constant	30.81*** (5.77)	28.46*** (3.21)	27.81*** (5.54)	23.98*** (4.43)	30.73*** (5.82)
Country dummies	Yes	Yes	Yes	Yes	Yes
N	124	124	124	124	124
R-sq	0.301	0.279	0.320	0.294	0.288

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

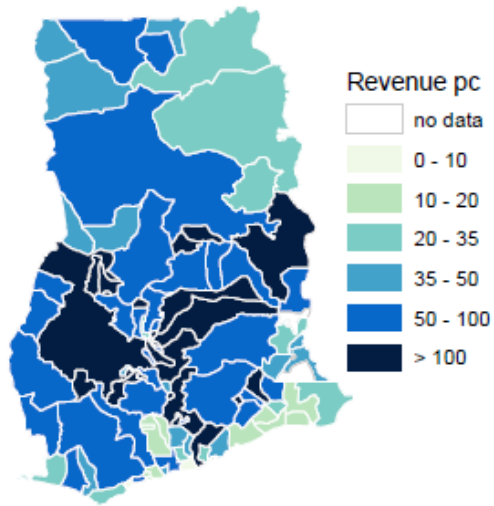
Figure 1: Fiscal Decentralization



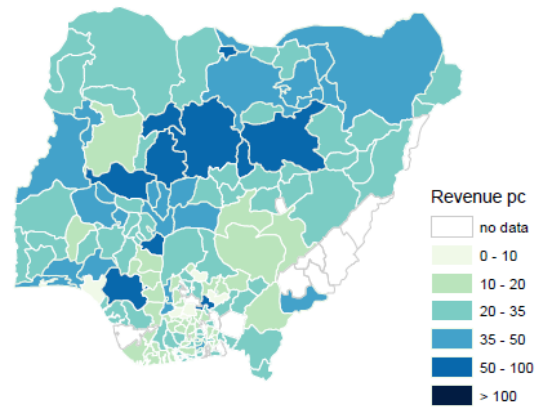
Source: See Appendix 1.

Figure 2: Native Authority revenue per capita (current pence)

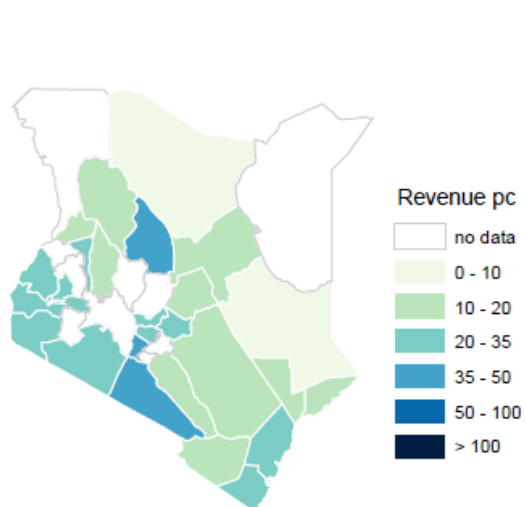
A: Gold Coast



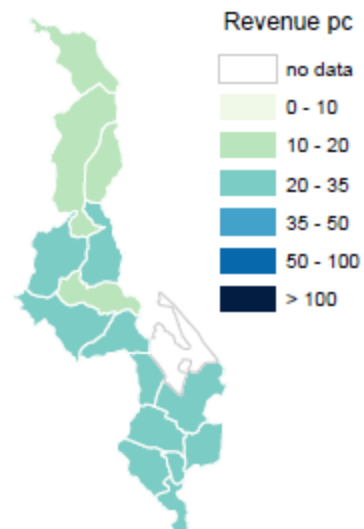
B: Nigeria



C: Kenya



D: Nyasaland



Appendix 1

Data sources:

Sources of local government data and population data vary by colony, as below:

Gold Coast, Report on Local Government Finance. Accra: Government printer, 1952

Kenya, Report on Native Affairs 1946-47. Nairobi: Government Printer, 1949.

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Nyasaland, 'Economic Statistics', in CO 1015/522; Provincial Annual Reports.

Nyasaland. Report of the Native Welfare Committee for the Year Ending 31st December 1936. Blantyre: Government Printer, 1937.

Population and cities:

Gold Coast, Census of Population 1948: Report and Tables (Accra 1948)

Kenya, Report on Native Affairs 1946-47 (Nairobi, 1949)

Nigeria, Population Census 1952-3 (Lagos, 1955)

Nyasaland, 'Economic Statistics', in CO 1015/522.

Colonial maps

Gold Coast: Colonial map GP.D./W/. 792/525/5/46, Survey H.Q. Accra, Gold Coast, 1946

Kenya: Map of the colony and Protectorate of Kenya Shewing district boundaries and provinces (1936).

Nigeria: Colonial regional, provincial and divisional map of Nigeria, 4000/413/5-53, Survey department, Lagos, 1953; Provincial maps for Abeokuta, 1933; Benin, 1949; Colony, Abeokuta and Ijebu, 1935; Ijebu, 1935; Ondo, 750/809/4-50, 1949; Oyo, 750/1002/8-50, 1949; Warri, 1949; Northern Nigeria, July 1930; Northern Nigeria Native Authority areas; Eastern Nigeria, 450/450/5-57, 1954, printed and published 1957

Nyasaland: Colonial map of Nyasaland, 1906, revised boundaries, railways and roads and reprinted at the War office, 1923

Table A1: Definition of variables and sources

General sources		
Variable	Definition	Source
Cash crop dummy	Dummy for the presence of cash crop production	Haily survey, question 3
Soil water capacity	water holding capacity of the soil	ISRIC World Soil Information: https://data.isric.org/geonetwork/srv/eng/catalog.search#/metadata/9cce26c0-456d-4519-aeac-cb3ab7d616ed , accessed September 2019
State Centralization	Average of jurisdictional hierarchy score from the Murdock atlas, weighted by area the ethnic groups occupied in each Native Authority	Murduck atlas group boundaries are obtained from Nathan Nunn. The Native authorities boundaries are obtained from digitizing original colonial maps
Traditional selection NA	Dummy indicating whether the appointment of the Native Authority is done within the Native Authority itself, usually by inheritance or selection from among a small set of 'chiefly' families	Haily survey, question 7b
Variable	Definition	Source
NA sets budget	Dummy indicating that the Native Authority sets its own budget estimates	Haily survey, question 8e
Appointed by the DO	Dummy indicating that the Native Authority is appointed by the District Officer	Haily survey, question 7b
Presence appeal court	Dummy indicating whether the Native Courts had appellate powers or not	Haily survey, question 11b
Number of chiefs per NA	The number of chiefs per Native Treasury	Haily survey, question 8a
Removal by the people	Dummy indicating whether the people could remove or 'destool' the chief	Haily survey, question 7f
Elected NA	Dummy indicating whether the Native Authorities were elected by the people	Haily survey, question 7b
Chief in Council	Dummy indicating whether the Native Authorities consisted of Chief and a council to balance power	Haily survey, question 7c
Council only NA	Dummy indicating whether the Native Authorities consisted of only a council	Haily survey, question 7c

Country specific sources

Variable	Definition	Source
Gold Coast		
Revenue collected		Report on Local Government Finance (Accra 1952)
Population		Census of Population 1948: Report and Tables (Accra 1948), table 14, p. 79

Variable	Definition	Source
Distance to large city	Shortest distance between the geometric mean of each Native Authority area to the nearest city with 35,000 inhabitants or more, obtained from colonial censuses	Colonial map and Census of Population 1948: Report and Tables (Accra 1948)
Railway stations per 1000 population	Number of railway station per 1000 population	Colonial map GP.D./W/. 792/525/5/46, Survey H.Q. Accra, Gold Coast, 1946
Kenya		

Variable	Definition	Source
Revenue collected		Report on Native Affairs 1946-47 (Nairobi, 1949)
Population		Report on Native Affairs 1946-47 (Nairobi, 1949)
Distance to large city	Shortest distance between the geometric mean of each Native Authority area to the nearest city with 35,000 inhabitants or more, obtained from colonial censuses	Colonial map and Report on the Census of the native population of Kenya colony and protectorate, section E - Urbanization
Railway stations per 1000 population	Number of railway station per 1000 population	Map of the colony and Protectorate of Kenya Shewing district boundaries and provinces (1936)

Nigeria		
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Variable	Definition	Source
Revenue collected		Native Treasury Estimates, 1947-8, in TNA CO 1019/41
Population		Population Census 1952-3 (Lagos, 1955)
Distance to large city	Shortest distance between the geometric mean of each Native Authority area to the nearest city with 35,000 inhabitants or more, obtained from colonial censuses	Colonial maps and Population census of Nigeria 1952-53 (Lagos, 1955), table 9
Railway stations per 1000 population	Number of railway station per 1000 population	Colonial regional, provincial and divisional map of Nigeria, 4000/413/5-53, Survey department, Lagos, 1953; Provincial maps for Abeokuta, 1933; Benin, 1949; Colony, Abeokuta and Ijebu, 1935; Ijebu, 1935; Ondo, 750/809/4-50, 1949; Oyo, 750/1002/8-50, 1949; Warri, 1949; Northern Nigeria, July 1930; Northern Nigeria Native Authority areas; Eastern Nigeria, 450/450/5-57, 1954, printed and published 1957

Nyasaland		
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Variable	Definition	Source
Revenue collected		'Economic Statistics', in CO 1015/522; Provincial Annual Reports

Variable	Definition	Source
Population		'Economic Statistics', in CO 1015/522; Provincial Annual Reports
Distance to large city	Shortest distance between the geometric mean of each Native Authority area to the nearest city with 35,000 inhabitants or more, obtained from colonial censuses	Colonial map and Population census of the Federation of Rhodesia and Nyasaland, 1956, table 2, p. 40
Railway stations per 1000 population	Number of railway station per 1000 population	Colonial map of Nyasaland, 1906, revised boundaries, railways and roads and reprinted at the War office, 1923

Appendix 2

Table A2-1: Institutional structures of Native Authorities, c. 1948, full sample

		N	Present	Average
Autonomy	Traditional Selection	294	203	
	NA sets estimates	286	54	
	Appointed by DO	294	19	
	Presence of appeal court	296	165	
Voice and accountability	NAs per Treasury	294		6
	Removal by people	279	77	
	Elected NA	294	71	
	Chief in council	293	157	
	Council only NA	293	66	

Table A2-2: Institutional structures of Native Authorities, c. 1948, Gold Coast

		N	Present	Average
Autonomy	Traditional Selection	90	87	
	NA sets estimates	91	36	
	Appointed by DO	90	0	
	Presence of appeal court	91	47	
Voice and accountability	NAs per Treasury	91		1.4
	Removal by people	88	66	
	Elected NA	90	3	
	Chief in council	90	83	
	Council only NA	90	2	

Table A2-3: Institutional structures of Native Authorities, c. 1948, Kenya

		N	Present	Average
Autonomy	Traditional Selection	25	4	
	NA sets estimates	23	2	
	Appointed by DO	25	19	
	Presence of appeal court	27	11	
Voice and accountability	NAs per Treasury	25		15.3
	Removal by people	22	0	
	Elected NA	25	2	
	Chief in council	24	2	
	Council only NA	24	0	

Table A2-4: Institutional structures of Native Authorities, c. 1948, Nigeria

		N	Present	Average
Autonomy	Traditional Selection	163	97	
	NA sets estimates	157	15	
	Appointed by DO	163	0	
	Presence of appeal court	160	92	
Voice and accountability	NAs per Treasury	163		7
	Removal by people	153	8	
	Elected NA	163	66	
	Chief in council	163	69	
	Council only NA	163	64	

Table A2-5: Institutional structures of Native Authorities, c. 1948, Nyasaland

		N	Present	Average
Autonomy	Traditional Selection	15	15	
	NA sets estimates	14	1	
	Appointed by DO	15	0	
	Presence of appeal court	17	15	
Voice and accountability	NAs per Treasury	14		6.6
	Removal by people	15	3	
	Elected NA	15	0	
	Chief in council	15	3	
	Council only NA	15	0	

Appendix 3

Full results for sub-sample of decentralized societies

Table A3-1: Subnational economic inequalities and per capita revenue

	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita
Cash crop dummy	8.628*** (2.70)	8.454** (2.59)	9.289*** (2.90)	8.798*** (2.68)
Distance to large city		-0.00524 (-0.32)	-0.00238 (-0.15)	-0.00118 (-0.07)
Railway stations per 1000 population			6.998 (1.59)	7.153 (1.59)
Soil water capacity				-0.209 (-0.68)
Constant	38.47*** (6.35)	39.16*** (5.95)	36.97*** (5.51)	41.26*** (4.47)
Country dummies	Yes	Yes	Yes	Yes
N	124	124	124	124
R-sq	0.104	0.104	0.117	0.118

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

Table A3-2: Table 6 Autonomy and Revenue Per Capita

	Revenue per capita
Cash crop dummy	6.979** (2.07)
Distance to large city	-0.00444 (-0.27)
Railway stations per 1000 population	59.80 (1.38)
N.A. Jurisdictional hierarchy (Murdock)	5.964 (1.43)
Constant	24.51** (2.42)
Country dummies	Yes
N	124
R-sq	0.131

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

Table A3-4: Alternative measures of Native Authority autonomy

	Revenue per capita	Revenue per capita	Revenue per capita	Revenue per capita
Cash crop dummy	10.10*** (3.37)	7.608** (2.52)	8.094** (2.55)	7.739*** (2.63)
Distance to large city	-0.00600 (-0.40)	-0.00972 (-0.61)	0.0117 (0.65)	-0.00367 (-0.23)
Railway stations per 1000 population	7.106** (2.00)	5.582 (0.76)	6.722 (1.48)	7.302* (1.91)
Traditional selection N.A.	11.17*** (4.14)			
N.A. sets budget		27.21*** (3.32)		
Appointed by the D.O.			-8.804** (-2.50)	
Presence appeal court				8.865** (2.41)
Constant	24.15*** (3.67)	30.44*** (5.77)	37.30*** (5.45)	34.19*** (5.42)
Country dummies	Yes	Yes	Yes	Yes
N	124	124	124	124
R-sq	0.165	0.278	0.129	0.155

Robust t statistics in parentheses. Significance levels: * p<0.10, ** p<0.05, *** p<0.01

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