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Chiefs: Economic Development and Elite Control of Civil Society in Sierra Leone

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We study the effect of constraints on chiefs' power on economic outcomes, citizens' attitudes, and social capital. A paramount chief in Sierra Leone must come from a ruling family originally recognized by British colonial authorities. In chiefdoms with fewer ruling families, chiefs face less political competition, and development outcomes are significantly worse today. Variation in the security of property rights over land is a potential mechanism. Paradoxically, with fewer ruling families, the institutions of chiefs' authority are more highly respected, and measured social capital is higher. We argue that these results reflect the capture of civil society organizations by chiefs.

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I. Introduction

The social science literature on African development has identified the weakness of institutional constraints that prohibit the abuse of state power as a potent cause of poor governance and low growth in Africa at the national level (e.g., Bates 1981; Sandbrook 1985; Bayart 1993; Young 1994; Herbst 2000; see also the essays in Ndulu et al. [2007]). In a predominantly rural continent, where the reach of the central state is often short, the lack of accountability at the local level may be just as important. The lowest layer of government in most sub-Saharan African (henceforth African) countries is occupied by traditional rulers, or "chiefs." Chiefs raise taxes, control the judicial system, and allocate land, the most important resource in rural areas.[1] Despite their central role in African society, relatively little is known about how chiefs exercise their political and economic power, how (and whether) they are accountable to their communities, and the effects of constraints on their power on economic development.

In this paper, we use the colonial organization of the chieftaincy in Sierra Leone to study the impact of constraints on chiefs' power on economic outcomes, citizens' attitudes, and social capital. In 1896 British colonial authorities empowered a set of paramount chiefs as the sole authority of local government in the newly created Sierra Leone Protectorate. The paramount chiefs and the subchiefs and headmen under them remained effectively the only institution of local government until the World Bank sponsored the creation of a system of elected local councils in 2004. These paramount chiefs are elected for life by a "Tribal Authority" made up of local notables. Only individuals from the designated "ruling families" of a chieftaincy—the elite created and given exclusive

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[1] Logan (2011) illustrates this power of chiefs using the AFRObarometer survey from Benin, Botswana, Burkina Faso, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. Despite many of these countries having introduced elected local governments, 50 percent of respondents report that traditional leaders have "some" or "a great deal" of influence in governing their local community. Traditional authorities are often the primary institution regulating matters of importance for local economic growth, raising taxes, mediating disputes, and allocating land. They also have influence over many categories of expenditures on local public goods such as schools and the maintenance of infrastructure. In Ghana, Malawi, Zimbabwe, Lesotho, Zambia, and Mali, more than 30 percent of respondents report that traditional leaders have the primary responsibility for allocating land. In Lesotho, Botswana, Ghana, Malawi, Kenya, Zimbabwe, Mali, Zambia, and Senegal, more than 30 percent of respondents report that traditional leaders have the primary responsibility for resolving local conflicts.

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right to rule by the British at the initiation of the system in 1896—are eligible to become paramount chiefs.

We hypothesize that the greater the number of ruling families in a chieftaincy, the greater the extent of political competition and the more constraints will be placed on the power of a ruling chief. As Murphy (1990) describes in his study of the Mende of southern Sierra Leone, in the years leading up to a chief's death, families form complex alliances with one another in order to secure votes from the Tribal Authority in the upcoming election. Gaining support at all levels of local politics, from the paramount chief to the village headman, "necessitates forming complex coalitions. Competitive agnates [descendants from the same male line] ally with members of rival lineages at the same political level or with lineages at higher or lower levels to gain support for their intralineage power struggles" (29). With more ruling families, a successful candidate will have to satisfy a greater plurality of interests to be elected. Even if one family is able to dominate the chieftaincy for many generations, with more ruling families there will be a greater potential for the incumbent to lose the paramount chieftaincy in an election. This creates a powerful threat that will discipline paramount chiefs, forcing them to govern better.

We further hypothesize, following Becker (1958), Stigler (1972), and Wittman (1989), that the greater competition brought about by more ruling families will promote efficiency (or restrict the distortions following from the unchecked power of chiefs).[2] For example, chiefs constrained by greater competition will be less able to manipulate access to land for their own benefit or will have to compete by offering and providing public goods, in the same way that political parties or lobbies constrained by competition are (as in the model of Lizzeri and Persico [2004]).

To measure the number of families, we conducted a survey in 2011 of "encyclopedias" (the name given in Sierra Leone to elders who preserve the oral history of the chieftaincy) and the elders in all of the ruling families of all 149 chieftaincies. While the government maintains no offi-

[2] There are only a few studies estimating the relationship between political competition and various economic outcomes. Most studies use the margin of victory in plurality elections as the measure of political competition, though in general the results are mixed. For example, Ansolabehere and Snyder (2006) do not find it to be significantly correlated with spending patterns across US states. An important paper by Besley, Persson, and Sturm (2010) exploits the abolition of poll taxes and literacy tests in US states as a potential source of exogenous variation in political competition. Their results suggest that political competition is positively correlated with economic growth and negatively correlated with tax rates (a finding also presented by Besley and Case [2003]). The only other paper that, to our knowledge, develops a potential source of exogenous variation in political competition is Besley and Preston (2007), which uses redistricting as a source of variation, though focusing on policy convergence as the outcome variable.

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cial list of families, there is broad agreement within chiefdoms about the identity and number of families. We used the survey to reconstruct the history of the chieftaincy for as far back as our respondents could recall. This history included the names of the paramount chiefs, which ruling family they were from, and, when available, the dates on which they were elected. We also collected information on the origins of the chieftaincy and of each of the ruling families. We used the archives of the Sierra Leone National Archive situated at Fourah Bay College, as well as Provincial Secretary archives in Kenema, the National Archives in London, and available secondary sources to cross-check the results of our survey whenever possible. To the best of our knowledge, we are the first to have constructed a comprehensive history of the chieftaincy in Sierra Leone.[3]

Clearly, the number of ruling families in a chieftaincy may be correlated with omitted variables that influence current development and social outcomes through other channels. We use three strategies to alleviate this concern. First, we study the history of the ruling families in a sample of six chieftaincies, documenting that their origins are highly heterogeneous and often the result of historical accident, such as the availability of a male heir or the number of leaders in an invading war party. Second, we show that the number of ruling families is uncorrelated with the level of development before the creation of paramount chiefs as measured by tax assessments per chieftaincy of the British colonial government in the late 1890s. Third, we show that all our results are robust to the inclusion of six detailed geographic controls that may be correlated with the economic development potential of a chieftaincy. Though two of these controls, distance to the 1907 railroad and minimum distance to the country's three major towns, are themselves correlated with the log number of ruling families, the magnitudes of these correlations are small and unlikely to be economically significant. Finally, all specifications include individual-level ethnicity fixed effects, allaying concerns that they are driven by unobserved cultural variation across Sierra Leone's many ethnic groups.

Our first set of empirical results focuses on educational, health, and economic outcomes. We find a significant positive relationship between the number of ruling families and human capital outcomes, such as literacy and educational attainment, and also with the proportion of people working outside agriculture, which is a useful proxy for economic development (there are no nationally representative microdata on incomes in Sierra Leone). Quantitatively, the effects are substantial. Moving

[3] A companion article, available online, Reed and Robinson (2013), details the history of each of the 149 chieftaincies as well as possibly using our survey data and available primary and secondary sources.

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from the bottom quartile to the top (from 1.8 ruling families to 7.7) corresponds to an increase in literacy and primary and secondary school attainment of about 7 percentage points and in nonagricultural employment of 2.3 percentage points (in all cases from relatively low bases; for instance, 37 percent and 11 percent for literacy and nonagricultural employment, respectively). We also find a substantial positive association between the number of ruling families and various measures of child health, asset wealth, and housing quality.

Given that chiefs control access to land, which is not held as private property in rural Sierra Leone, an important mechanism is the relationship between the power of chiefs and the security of property rights in land. Using information from a nationally representative survey of agricultural households, we find that chiefs in chiefdoms with fewer ruling families have more authority to influence whether or not people can farm or sell a piece of land and that this authority is particularly strong if the people concerned were not born in the chiefdom.

An influential line of argument in political economy maintains that autocratic power of politicians and elites both results from and leads to low social capital and civic participation.[4] Interestingly, we find exactly the opposite in our data: places with fewer ruling families exhibit greater social capital on dimensions such as attendance at community meetings, participation in social groups, and the undertaking of collective actions.

This somewhat puzzling finding, we suggest, arises because more dominant chiefs have been better able to mold civil society and institutions of civic participation in their villages for their own benefit and continued dominance, in a way that appears consistent with the case study literature on Sierra Leone (Fanthorpe 2001, 2005; Sawyer 2008). As a consequence, relatively high measures of civic participation in villages with less constrained paramount chiefs are not a sign of a vibrant civil society disciplining politicians, but of a dysfunctional civil society captured by elites.[5]

This interpretation can also help explain another puzzling feature of the data: places with fewer ruling families have more favorable attitudes toward institutions of the paramount chief's authority.[6] If civil society has

[4] Putnam, Leonardi, and Nanetti (1993), e.g., develop this argument for the south of Italy. See also Bowles and Gintis (2002), Guiso, Sapienza, and Zingales (2008), Tabellini (2010), and Nannicini et al. (2013).

[5] As one paramount chief from Kono District told us in reply to a question about whether he was able to influence the way people voted in national elections, "if I say left they go left; if I say right they go right."

[6] In other parts of Africa, it is common for people to have positive attitudes toward chiefs' authority. Logan (2009, 2011), for instance, shows that traditional authorities enjoy considerable support from their people. In the AFRObarometer surveys she studies, 58 percent of respondents agree that "the amount of influence traditional leaders have in governing your local community should increase." Only 8 percent felt that it should decrease.

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been captured, citizens will typically still find it valuable to interact with elites. But in places where paramount chiefs are less constrained, they are more dependent on chiefs' patronage and favors and thus may find it useful to make specific investments in the system.[7]

We believe that our findings are relevant for understanding the consequences of the power of chiefs in Africa more broadly. As we discuss in our concluding remarks, the indirect rule institutions that established the chieftaincy in Sierra Leone had many similarities to those in other parts of colonial Africa. In this light, it should not be a surprise that our findings are consistent with those of several studies of the political economy of Africa and support the widely held but untested belief that the creation of unaccountable chiefs during the colonial period has had negative consequences for development (e.g., Ashton 1947; Hill 1963; Crowder and Ikime 1970; Migdal 1988; Berry 1993; Mamdani 1996). In Sierra Leone, predatory behavior by the chiefs is deemed to have been so severe that it is argued to have been a major cause of the civil war that erupted in 1991 (e.g., Richards 1996).

Goldstein and Udry (2008) provide perhaps the sole empirical investigation of these issues, and they show that connections to chiefs in Akwapim, Ghana, are crucial in determining property rights to land and hence investment incentives in agriculture, though they themselves propose a relatively benign interpretation of the chiefs' actions.

Our results also complement a large literature critical of the purported positive correlation between social capital and development (e.g., Portes, 1998; Durlauf and Fafchamps 2005; on Africa, see Widner and Mundt [1998] and Jerven [2010]). Most related is the work of Anderson, François, and Kotwal (2011), who find that in parts of western India where landownership is dominated by Maratha elites, development outcomes are worse but measured social capital is higher. Their interpretation is similar to ours. Interestingly, it appears that just as in Sierra Leone, nonelites also have positive attitudes toward the elite when the scope of the elite's power is greater. Our paper is also related to a small literature on economic consequences of indirect rule, including Lange (2009) and Iyer (2010).

The paper proceeds as follows. In Section II, we briefly present the historical background of the chieftaincy in Sierra Leone, discussing how the institution was created, how it functioned, and how it has persisted

Sixty-one percent of respondents report considerable trust in traditional leaders, whereas only 51 percent report such trust in local government officials. Results are similar for perceived corruption. Across Africa, traditional leaders are broadly viewed as more trustworthy and less corrupt than other institutions at the local level.

[7] This was observed, for instance, by Putnam et al. (1993) in southern Italy, where despite relatively low levels of measured social capital, citizens are more likely to visit the offices of local government officials; when they go, however, they are also more likely to ask for favors, such as employment.

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almost unaltered since the turn of the twentieth century. This section also provides a detailed discussion of the origins of a sample of chieftaincies and their ruling families. Section III discusses the survey data we collected as well as the data on covariates and outcome variables and presents some basic descriptive statistics. Section IV examines the relationship between the number of ruling families and a measure of the concentration of their power. Section V shows that the number of ruling families is uncorrelated with various proxies for early economic development. Section VI presents our main results on the impact of the number of ruling families on development outcomes, attitudes, and measures of social capital. Section VII presents conclusions.

II. Historical Background

A. *Chiefs and Indirect Rule in Africa*

While chieftaincies in Africa have their roots in precolonial society, the institutions as they exist today were greatly shaped by colonial indirect rule. Indirect rule across Africa was viewed by colonial administrators as a way to maintain law and order and to decrease the cost of local government administration by keeping in place the existing rulers and ruling through them. Though the policy of indirect rule was articulated most clearly as a tenet of colonial rule in British Africa, French colonial administrations also shaped rural institutions in similar ways (Guyer 1978; Geschiere 1993).

Indirect rule created few institutions through which political elites could be held accountable to their citizens. Lord Lugard, who elaborated the model during the pacification and control of northern Nigeria, explained in his manual *The Dual Mandate in British Tropical Africa* (1922) how chiefs, despite their freedom to govern their people as they chose, would derive their legitimacy entirely from the colonial government: "The chief himself must understand that he has no right to place and power unless he renders his proper services to the state" (203). The chiefs, he wrote, "must work for the stipends and positions they enjoy." Chiefs were accountable to administrators but not to their people. Lugard argued that accountability would be ensured if chiefs were selected according to "native custom." But the colonial interpretation and institutionalization of "native custom" typically made chiefs much less accountable than precolonial leaders had been, something certainly true in Sierra Leone (see Abraham [2003] on Mendeland and Goody [1979] more generally).

B. *Chiefs in Sierra Leone*

The colony of Sierra Leone was established in 1788, primarily as a settlement for freed slaves from the Americas and the Caribbean. The

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boundaries of the colony initially extended little beyond the environs of the main settlement and now capital, Freetown. In 1896 Governor Cardew unilaterally declared a protectorate over the interior of the country, stating that signatories of previous treaties with the British colonial government, until then recognized as "native chiefs" with full political autonomy, were now subordinate to the government in Freetown.[8] The colonial government proceeded to establish a system of indirect rule, assessing a house, or "hut," tax in 1898. It imprisoned various chiefs who refused to pay (Chalmers 1899). Though Cardew's declaration of a protectorate sparked the violent hut tax rebellion led by Bai Bureh of Kasseh chiefdom and others, the government was largely successful in suppressing opposition. Over the next decade it established the chieftaincy, led by the paramount chief, as the administrative unit of indirect rule. The law of Sierra Leone now made the paramount chiefs responsible for the arbitration of land and legal disputes, the collection of tax revenue, and the general welfare of their people. The Protectorate Ordinance undermined many existing checks on the power of chiefs from within the chiefdom. For instance, Abraham (2003, 75) notes that previously, "in the case of a dispute between a king [chief] and his subject, the subject had the right to appeal to a neighboring king, which was not considered an indignity." Under the protectorate, the local paramount chief became the highest authority in the civil legal disputes, and such appeals would have carried less weight.

After the declaration of the protectorate, the colonial government established a formal system of succession in the chieftaincy in which paramount chiefs rule for life and are elected by vote of the Tribal Authority, a group comprising the members of the chiefdom elite. The authority also includes the "chiefdom speaker," an aide to the chief. Chiefdom speakers will often temporarily take on the role of "regent" or caretaker when a paramount chief dies. At the turn of the twentieth century, these authorities were small groups of approximately five to 15 headmen and subchiefs of the various towns and villages within the chiefdom. Their numbers have expanded over time. By the 1950s, voting rolls for elections of a paramount chief came to include approximately 40–60 members. The 2009 Chieftaincy Act provides that there must be one member of the Tribal Authority for every 20 taxpayers. Nevertheless, the Tribal Authority comprises mostly members of the rural elite. They are not elected by these taxpayers, and neither is the paramount chief.

The declaration of the protectorate also made the ruling family the unit of political competition within the chiefdom. Only members of ruling families are eligible to stand for election. The 2009 Chieftaincy Act stipulates that a person is qualified to stand as a candidate to be paramount chief if he or she was born in wedlock to a member of a ruling fam-

[8] See the appendix in Goddard (1925) for a list of the treaties and signatories.

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ily. "Where tradition so specifies," this requirement is expanded slightly to include anyone with "direct paternal or maternal lineage to a member of a ruling family, whether born outside of wedlock or not" (Sierra Leone Legal Code 2009, no. 10, sec. 8.1.a–b). A ruling family is recognized as one that was established before the time of independence in 1961.

Across chiefdoms there is broad consensus on the number of ruling families, though there is no official list even in the ministry in charge of the elections. Disputes over an individual's membership in a family are resolved in cooperation with the provincial secretary and often hinge on whether the aspirant can show that his or her relative was recognized by British officials as being legitimate to stand for election before independence. Before the 2009 act, elections were administered under a customary law that maintained the same basic principle: only members of established ruling families could stand.

Indirect rule created new opportunities for chiefs to seek rents and distort local economic activity. Perhaps the most egregious opportunity was provided by the land laws codified in the Provinces Land Act of 1927. These laws, still in place today, prohibit the transaction of land by "nonnatives"—those not born in the chiefdom—and place ultimate ownership of all land in the hands of the paramount chief, who, for this reason, is often called the "custodian of the land." In chiefdoms with mining activity, chiefs are also eligible for direct payments of "surface rent" from miners. These laws created opportunities for chiefs to capture rents from both private citizens and the central government. For instance, chiefs used their authority as custodian to impose elaborate tax structures on those who used the land for agriculture.[9] They also exploited this same authority to levy taxes on trade in and out of the chiefdoms. In addition, when public construction is undertaken for roads, schools, clinics, and markets by the central government, the law requires that land lease agreements be negotiated with the chiefs, who often use these leases to extract payments for themselves.

Another rent-seeking opportunity was created by the chief's role in providing local public goods from the tax revenue the government mandated them to collect. Lord Hailey examined Sierra Leone's local tax estimates for the year 1948, in which £134,302 (£3,810,000 in 2011, using a consumer price index deflator) was raised. Of this revenue, 58 percent was spent on administration; "the major part of this," he writes, "representing payments to the Chiefs and office holders and members of the courts." Of the remaining expenditure, agriculture is only 3.5 percent, education 4.6 percent, forestry 1.9 percent, and public works 4.3 percent. Hailey writes, "an examination of the detailed estimates shows that many of the Native Administrations provide no service at all under some of

[9] For instance, we observed that today in Lokomassama chiefdom, the chiefdom authority levies specific tax rates on a variety of crops and that nonnatives of the chiefdom still complain about arbitrary taxes levied on their agricultural output.

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these heads." Out of the 128 for which he had data, "only 51 made provision for expenditure on Agriculture, 56 for Education and 45 for Forestry" (Hailey 1950, pt. 4, 307–8). The public works, he wrote, were of terrible quality. Since the native administrations were also the primary conduit through which the central government administered public services, this also meant that in addition central government funds were available for capture.

Chiefs also preside over Sierra Leone's system of civil courts, which are responsible for the adjudication of land, ownership, and matrimonial disputes. Maru (2006) cites numerous examples of chiefs intervening on behalf of family members in disputes over the payment of rent for agricultural land, suggesting that in some cases chiefs have badly perverted the administration of justice.

A final opportunity for the chiefs to exploit their power was created by the government's recognition of their authority to compel their subjects to undertake "communal labor." This authority was often used to pull scarce labor toward a chief's land during harvest season, potentially distorting labor markets. This phenomenon has deep historical roots; domestic slavery was commonplace in Sierra Leone until the early twentieth century, a legacy of Sierra Leone's role as a major slave exporter. In 1923 it was estimated that 15 percent of the protectorate population was in servitude, and the chiefs themselves were frequently large slave owners. Domestic slavery was outlawed in the protectorate in 1928, but even then the law was only gradually enforced and in some places ignored (Arkley 1965). Compulsory labor was a constant cause of dissent in the chiefdoms, but complaints by citizens were frequently ignored, both by the colonial administration and later by the postindependence government.[10]

C. *Origins of Ruling Families*

Our empirical strategy rests on the argument that the number of ruling families within a district was shaped by factors that are not direct de-

[10] Records at the Fourah Bay College National Archives show that in 1966, chiefdom councillors from a section of Yawbeko chiefdom in Bonthe District lodged a formal complaint with the government. They alleged that Paramount Chief Joe Jangba had both appropriated land unfairly from their section and compelled residents to labor without pay on various road projects in the area that would benefit the chief's farms. They wrote, "it is no [*sic*] communal labour when force has been put to bear on us. We have been tortured, molested, illegally fined and sent to the Chiefdom lock-up in case of resistance to work the road." What is striking is the response of the provincial administration, then independent of Britain. In a subsequent letter, the district officer of Bonthe wrote to the provincial secretary in Bo that the matter had been summarily closed: "I confirm that I have severely warned the petitioners—and everyone present at that—to avoid the slightest repetition of such questionable conduct," a reference to their complaint. The petitioners were compelled subsequently to sign an apology letter, begging obsequiously for forgiveness.

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terminants of development and social capital outcomes today. To support this argument, we now provide case studies of six chiefdoms. In all cases, though there was some flux in the number of families in the late nineteenth century and at the turn of the twentieth century, the number of families was fixed by around 1920 and did not change thereafter. The histories of all 149 chiefdoms and their families are discussed in Reed and Robinson (2013).

Koya chiefdom, of eastern Kenema District, is near the median of the distribution with three ruling families, who have all contested the two most recent elections: Komai, Sellu, and Kanneh. Local historians trace the origin of the chiefdom as a political unit to a warrior named Menima Kpengba, an ethnic Gola, who migrated from present-day Liberia (see Kup 1962, 127). The Komai and Sellu families both trace their lineages to the Gola people that migrated with Kpengba and are affiliated with different towns in the chiefdom, Gbogbuabu and Bongor, respectively. The first paramount chief in Koya to be recognized by the colonial government was Joseh, of the Komai family, who signed a treaty at Gbogbuabu with Travelling Commissioner Thomas J. Alldridge on April 20, 1890.[11] The Alldridge treaty was identical to many of the others signed throughout the nineteenth century. Under the treaty, Joseh promised the rights of free passage, property, and construction to British subjects and reserved adjudication of any disputes between his people and British subjects for the governor in Freetown. "So long as the above conditions are carried out, and the roads are kept clean," the treaty reads, "Chief Joseh shall receive an annual present of ten pounds."

Joseh joined the rebellion in 1898 against the declaration of the protectorate, and in retaliation, Captain Carr burned Gbogbuabu to the ground. Joseh was deposed and imprisoned for a year. He returned to office in 1899, at the age of "35 to 40," and was ultimately succeeded by his younger brother Kormeh, by unanimous vote of 32 tribal authorities in 1907.[12] That Joseh, as with most chiefs imprisoned after the rebellion, was able to return to power and pass the chieftaincy to his brother shows the resilience of the ruling families' lineages.

After Kormeh's death in 1920, Sellu Ngombu, of the Sellu family, held the chieftaincy as "caretaker" or regent. A 1920 letter to Freetown from the district commissioner states that after Kormeh's death a regent chief was elected immediately.[13] A third ruling family, Kanneh, has dominated the chiefdom since Kormeh. It is likely that Kanneh was related to a section chief who had ruled an area of the chiefdom under Kormeh and Sellu.

[11] Fourah Bay College Archives, treaty, April 20, 1890: Borgbahboo.
[12] Provincial Secretary's Office, Kenema: Kenema District Decree Book.
[13] Provincial Secretary's Office, Kenema: Kenema District Decree Book.

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This example illustrates a common feature across chiefdoms, which is that a family may have obtained the right to stand for paramount chief through service as regent chief early in the history of the chiefdom. The existence of such families depends on whether an original paramount chief had a clear successor; in this case Kormeh had no son.

It is common across chiefdoms for the absence of a clear heir to the chiefdom's forebearer early on to lead to the legitimation of new families. Take, for instance, Bagbo chiefdom in Bo District. Bagbo traces its origins to Boima Jah, a warrior and hunter who settled the area and was chief from 1847 until his death in 1884.[14] The chiefdom today recognizes four families: Jah, Idriss, Coker, and Colia. The Colia family, which is descended from a family living in the chiefdom at the time of Boima Jah, has contested but never won a chieftaincy election. The Idriss and Coker families emerged because Boima Jah did not have any sons, and after his death, there was no immediate successor. Idriss, the chiefdom speaker, succeeded Jah as regent chief. Similarly to Sellu Ngombu, though Idriss had no blood relationship to Jah, his family has come to be considered a ruling family. After Idriss's death in 1897, Keneh Coker was elected chief. His mother was a daughter of Boima Jah, who had married into the Coker family. Keneh Coker had a long rule until 1942 and, at least in 1912, received a stipend from the government of £10 a year.[15]

Some new ruling families were also created through marriage. This occurrence was particularly common when the first chief had no sons old enough to become chief. In these cases, new families were created when his daughters were married into other families, and their husbands stood for election. Though these families eventually became prominent, it often took some time early on for these new families to be viewed as legitimate. As with the Sellus, files from the district commissioner in 1906 list Coker as "regent," not paramount chief, indicating that even 9 years after Idriss's death, he was still viewed as a placeholder for the family of Boima Jah.[16] This did not last forever, however, as his family held the chieftaincy twice after Keneh Coker's death.

There are of course situations in which the forebearer of a chiefdom had an abundance of heirs, who continue to dominate the chiefdom until the present day. Simbaru chiefdom, which like Koya is also in Kenema District, is just one of these chiefdoms. Though it is in the same region as Koya and had a similar ethnic makeup, it recognizes only one ruling family. Oral historians trace its origin back to a warrior and hunter named Gombulo Tama, who settled the area with his brother Jaiwu. Tama made

[14] Local historians memorialize his military prowess in their interpretation of the word "Bagbo," which they take to mean in Mende "don't be stupid while sleeping": one must be vigilant, even while resting, of the potential for enemy attack.

[15] Fourah Bay College Archives, "Information Regarding Protectorate Chiefs 1912."

[16] Fourah Bay College Archives, Railway District Decree Book 1900–1904.

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his settlement at Javoima while Jaiwa settled at Goma. Abraham (2003, 113) traces the origin of Simbaru to the expansion of Keni Karteh, a warrior of the early nineteenth century who, with his warriors, expanded to occupy areas surrounding his town of Dodo. Tama and his brother were probably warriors under the command of Karteh. The first chief from this house to be recognized by the British, Sangwewa, was a grandson of Gombulo Tama. His family has dominated the chiefdom as its sole ruling family ever since, as there has always been a male heir to take the chieftaincy.

The organizational structure of groups of invaders during the precolonial period also has affected the number of families. Sierra Leone's precolonial history was one of great turmoil, and the leadership of the areas that would later become chiefdoms changed frequently. Take, for instance, Mambolo chiefdom in northwestern Kambia District, which has five ruling families. Oral history speaks of a woman named Borkia who migrated from present-day Guinea. She is likely to have come as part of the Mane invasions of the mid-sixteenth century. Some time thereafter, her settlement was conquered by a group of Bullom warriors, to whom each one of the chiefdom's five families traces their lineage.

It is just as common for families to have successfully fought off invading tribes. Kassunko, in northern Koinadugu District, has five recognized ruling families. The chiefdom traces its roots to Limba warriors who conquered the Lokos in the area during the fifteenth century (Kup 1962, 124). The Limba later faced their own invasion by the Sofa, from present-day Guinea, in the 1880s. Lipschutz (1973) records an interview with Paramount Chief Baio Serry II of Kassunko in 1972 in which Serry recalls how his grandfather made peace with the Sofa and maintained the independence of the chiefdom. The story is that his grandfather Sara Baio's fingers were gnarled. The invaders said that whenever they met a person with such a deformity, they should not touch him, and so they did not fight. A government report from 1912 recalls that Sara Baio, then an old man, "has the confidence of his people."[17]

While the set of families with legitimacy to rule the chiefdoms was certainly variable in the precolonial period, ruling families have stayed incredibly resilient to change since the beginning of the twentieth century. This can be seen in Mandu, of Kailahun District. There President Siaka Stevens installed a loyalist of the then-ruling All People's Congress Party (APC) as chief in 1983 in order to gain political control over the area. There was only one ruling family in this chiefdom, the Coombers, and the installed chief was not a member. The Coombers trace their lineage to Kaba Sei, an important chief at the turn of the twentieth century and son of the original settler, Mandu Falley. The family appears to

[17] Fourah Bay College Archives, "Information Regarding Protectorate Chiefs 1912."

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have consolidated its legitimacy in the area at the end of the nineteenth century, after Kaba Sei fought against an invasion by Ndawa, a great warrior of the time (Abraham 2003, 85). Stevens appointed a chief, J. B. Bunduka, who reigned until 1991, when he was the first paramount chief to be murdered by the Revolutionary United Front, the first rebel group of Sierra Leone's civil war, which had sworn to free the country from APC oppression (Smith, Gambette, and Longley 2004). Today, relatives of Bunduka are not recognized as a ruling family.[18]

From this historical material, we conclude that there are many idiosyncratic sources of variation in the number of ruling families across chiefdoms that are unlikely to be correlated with factors that determine development and social capital outcomes today.

D. Ruling Families as Political Competitors

Indirect rule formalized the ruling family as the unit of political competition in Sierra Leone's chiefdoms. In his study of the Mende chiefdoms of Kenema District, Burrows (1976, 202–3) makes an analogy between the ruling families and political parties: "Ruling house rivalries provide the major source of conflict in Mende chiefdoms. In most cases . . . this cleavage fashions the broad outlines of political competition. Structurally, the semblance of a two- or multiparty system is built into chiefdom politics because (almost) every chiefdom has at least two ruling families. In fact, local people often use the terms 'ruling party' and 'opposition party.'"

Burrows goes on to suggest that the intensity of competition is increasing in the number of families:

> Of the sixteen chiefdoms in Kenema district . . . Simbaru is the only chiefdom . . . boasting only one ruling family; as might be expected, its politics are characterized by widespread consensus and little overt conflict. In Dodo and Nomo [each with two families], family rivalries are muted. At the other end of the spectrum, Nongwa [four families], Gaura [five families], Tunkia [three families] and Lower Bambara [two families] are examples of intense ruling house conflict; all other aspects of local political interaction are remaindered subordinate to the demands of this basic cleavage in these chiefdoms.

In many cases, these rivalries between families are a tacit competition for the rents of office. A salient example of this is Murphy's (1990, 30)

[18] A total of seven chiefdoms had new families installed by politicians after independence: Biriwa, Neya, Kaffu Bullom, Koya (Port Loko), Kalansogoia, Neini, and Mandu. Since the civil war, none of these families have been viewed as legitimate or permitted to stand in elections. We drop these families from the analysis below. Online App. table I2 shows that our core results are robust to the inclusion of these families.

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description of a number of chiefdoms with active diamond prospecting: "Despite election rhetoric of bringing 'development,' chieftaincy contests between ruling houses . . . centered on the more covert issue of which house would monopolize the diamond resources for its members and supporters. These benefits include privileged access to the most productive diamond areas, and fees and gifts from outside diamond diggers as well as any foreign concessions operating in the chiefdom."

When chiefs and their families have abused the office, however, other families are often able to build a stronger case that the family in power be deposed in a subsequent election. We witnessed this ourselves during our fieldwork in 2009. That year, in Lower Banta, the Margai family was thrown out of power and replaced by the Nyama family because of discontent with the previous chieftaincy of George Margai and the view that he had unfairly privileged members of his family in legal disputes. Similarly, in Sogbini chiefdom, during the election for a new paramount chief in December of the same year, the Bio family, which had ruled the chiefdom since the signing of the first treaty with the British, was displaced by the Bayo family, the only other ruling family. Local informants told us that the reason for the switch in support was that the previous paramount chief, Charlie Bio II, had seriously neglected his duties, spending more time on drink than on the administration of the chiefdom. In these cases, it was easier for opposition families to garner votes, given the public recognition of misrule by the family in power.

III. Data

A. Documenting Chieftaincy Institutions

To measure the power of the various paramount chiefs, we have created, to our knowledge, the first comprehensive list of ruling families across chiefdoms and the first comprehensive history of the chieftaincy in Sierra Leone.

Though detailed records of some chieftaincy elections exist, many were destroyed during the civil war when the provincial secretaries' offices in Bo and Makeni were razed, making the written record insufficient to construct such a data set. To complement archival records and secondary sources, we conducted a survey of all 149 chiefdoms.[19] To do this, local researchers with local language skills were trained in qualitative interview

[19] Of the secondary sources, Fyfe (1962), which gives a comprehensive history of nineteenth-century Sierra Leone and information on native rulers, is the most important. See also Alie (1990). Other sources cover different regions in the country. Abraham (1979, 2003) is authoritative on Mendeland in the south of the country (see also Little 1951). Wylie (1977) covers Temne country in the north, and Finnegan (1965) and Finnegan and Murray (1970) study the Limba country (see also Fyle 1979a, 1979b; Fanthorpe 1998). Howard (1972, 1976) studies the nineteenth-century Guinea border country in the northwest, and Lipschutz's (1973) study focuses on the northeast.

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methods and visited all 149 chiefdoms. Through extensive interviews with local oral historians, known as "encyclopedias," researchers constructed the lists of ruling families and lists of previous chiefs as far back as respondents could recall and recorded origin stories of each of the ruling families. Researchers were required to visit members of each ruling family in order to ensure that they obtained a balanced perspective on the family's history and the history of the chiefdom.

While there is strong consensus within chiefdoms about the number of ruling families, the subjective nature of the interview process raises some concern about measurement error, particularly if researchers systematically recorded more families in chiefdoms with better development outcomes. Given their training and the corroboration of their reports with those in secondary sources, we believe that this is highly unlikely. Moreover, although we cannot provide a formal test for a systematic and equal bias on the part of all researchers, we can test for bias at the level of the individual researcher. Researchers operated in teams of two, alternating partners, allowing us to include researcher-specific fixed effects as a robustness check. In online Appendix table I1, we present some of our core results with researcher fixed effects included. Adding these fixed effects will change our estimates if our results are driven by a strong bias on the part of some researchers. In practice, the coefficient estimates do not change in magnitude or significance.

There is variation across chiefdoms about how far back the oral historians could recall. Some chiefdoms are able to trace their histories back until the eighteenth century, while others can remember only back to the 1930s. In addition, for amalgamation chiefdoms, which were created in the late 1940s and 1950s by the colonial administration by amalgamating smaller chiefdoms for tax collection purposes, researchers were unable to trace lineages of all the component chiefdoms. Hence our record for these chiefdoms goes back only until the period of amalgamation. This means that recall is lower in amalgamation chiefdoms on average. Though it does not directly affect our key variable (the number of ruling families), we wish to control for recall, and we thus add to all specifications the number of paramount chiefs the historians could recall. We also control for whether the chiefdom is created by amalgamation. In our core results, we report the estimates for these controls; in most specifications they are insignificant at standard levels.

Online Appendix table A1 gives a list of all of the chieftaincies ordered by district with information on the number of ruling families, whether or not the chieftaincy was the result of an amalgamation between previously separate chieftaincies, and also the number of paramount chiefs that the oral historians could remember. Table 1 gives some basic descriptive statistics by quartiles of the number of ruling families. Panel A shows that the average number of ruling families is 4.0, ranging from one to a maximum of 12. The mean number of chiefs recalled by oral

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historians was 5.8. This was slightly larger for chieftaincies in the lowest quartile of the distribution of the number of families. This panel also shows that 30 percent of the chieftaincies were formed by amalgamation.

The upper left-hand panel of figure 1 shows visually how the numbers of families are distributed geographically in Sierra Leone. We plot here the quintiles of the number of families, with the darkest color corresponding to those chieftaincies in the top quintile of the distribution (the 30 chieftaincies with the highest number of families). This figure makes it clear that chieftaincies with many families are not clustered into any particular area of the country. Some are close to Freetown in the west of the country. Others are right down in the southwest on the coast or further north on the border with Guinea. Others are in the far northeast, and still others are clustered in the center of the country. The map also contains prominent 1895 trade routes (Mitchell 1962), paths of navigable rivers, and the 1907 rail lines. The chieftaincies with the highest number of families do not seem to cluster around navigable rivers, trade routes, or the railway lines. In Section IV, we will investigate these relationships more systematically.

B. Outcomes

We study the effect of the number of ruling families on a wide range of development and social outcomes. Our primary data sources are the 2004 Sierra Leone Census, the 2008 Demographic and Health Survey (DHS), the 2007 National Public Services Survey (NPS), and the 2010 Agricultural Household Tracking Survey (ATS). We use the census to study educational and employment outcomes and the DHS to study health outcomes of children under age 5. We use the NPS to study attitudinal and social capital outcomes, as well as housing quality and asset ownership, and the ATS to study property rights of landholders. Finally, we also use the 1963 census for a cohort analysis of human capital to investigate when the gap between chiefdoms with high and low development outcomes began to occur.

Panel B of table 1 shows the descriptive statistics of key development outcomes by data set. Unless otherwise specified, we match individuals to chiefdoms using chiefdom of birth, which provides a better sampling frame for the investigation of the link between chieftaincy institutions and long-run development.[20] The literacy rate among those born in Sierra Leone's chiefdoms is very low, 32 percent. It is somewhat lower,

[20] As shown in online App. table H1, the results are similar when we match individuals on the basis of chiefdom of current residence. The statistics in table 1 are not fully representative of Sierra Leone nationally as they include only the 84 percent of the population born in chiefdoms; excluded are those born in either Freetown and the Western Peninsula surrounding it or in any of the five urban town council administrations of Bo, Bonthe, Kenema, Koidu, and Makeni.

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TABLE 1
DESCRIPTIVE STATISTICS

	Mean	Observations	By Quartiles of Number of Ruling Families (1)	(2)	(3)	(4)
	A. Chieftaincy Variables and Controls					
Number of ruling families	4.0 (2.1)	149	1.8	3.5	5.0	7.7
Herfindahl office holding concentration index	.54 (.24)	149	.72	.52	.40	.42
Maximum seats for family with most seats	3.5 (1.7)	149	4.6	3.1	3.0	2.6
Number of chiefs recalled	5.8 (2.6)	149	6.3	5.7	5.8	5.2
Amalgamation	.3	149	.02	.30	.45	.72
	B. Development Outcomes, by Data Source					
Census:						
Literacy rate	.32	2,727,622	.31	.31	.32	.33
Primary school attainment	.35	2,717,412	.37	.35	.35	.36
Secondary school attainment	.16	2,193,151	.16	.16	.16	.17
Nonagricultural employment	.13	2,919,953	.11	.13	.13	.16
Demographic Health Survey (DHS):						
Weight for height Z-score (children under 5)	−.15 (1.60)	1,521	−.14	−.14	.05	−.27
Anemia (children under 5)	.50	1,423	.52	.50	.54	.47
Household wealth index ∈ [0, 5]	2.4 (1.2)	4,994	2.39	2.33	2.49	2.62
National Public Services Survey (NPS):						
Asset wealth index	.139	5,143	.126	.146	.132	.155
Housing quality index	.360	5,167	.303	.367	.335	.447
	C. Property Rights, by Rice Plot (ATS)					
Has asked chief to use land?	.12	8,450	.16	.13	.10	.09
Has right to sell land?	.42	8,393	.48	.43	.47	.31
	D. Attitudes (NPS)					
Agrees one should respect authority	.44	5,167	.46	.44	.40	.42
Agrees only older people can lead	.30	5,167	.30	.28	.33	.27
	E. Social Capital (NPS)					
Bridging capital index	.33	4,582	.37	.33	.35	.29
Attended community meeting in last year	.38	5,124	.42	.37	.39	.34

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TABLE 1 (*Continued*)

	Mean	Observations	By Quartiles of Number of Ruling Families (1)	(2)	(3)	(4)
Bonding capital index	.20	4,139	.24	.20	.19	.17
Credit/savings group member	.16	5,146	.17	.18	.17	.11
Labor gang member	.21	5,150	.24	.20	.25	.17
Secret society member	.33	5,140	.40	.32	.27	.32
Collective action index	.26	5,065	.31	.26	.26	.18
Participated in road brushing in last month	.36	5,139	.43	.37	.36	.28
	F. Historical and Geographic Correlates of Economic Development					
Hut tax assessment: £ per 100 km^2	85.3 (117.6)	87	94.5	88.9	54.1	86.9
£ per 1,000 people in 1963	27.6 (.019)	86	39.6	24.0	14.8	28.4
Distance to 1895 trade routes (km)	20 (19)	149	27	18	16	14
Distance to coast (km)	105 (66)	149	120	105	92	91
Distance to river (km)	9 (7)	149	12	8	8	9
Distance to 1907 railroad (km)	45 (30)	149	44	46	45	38
Minimum distance to Bo, Freetown, or Kenema (km)	79 (44)	149	81	79	79	78
Mining permissions in 1930s	.17	149	.15	.21	.23	.08

NOTE.—Standard deviations are presented in parentheses; no standard deviation is reported for binary variables. All individual outcomes are matched on chiefdom of birth except for outcomes from the ATS and DHS surveys, which are matched on chiefdom of residence.

31 percent, for chiefdoms in the lower quartile of the number of families and somewhat higher, 33 percent, for chiefdoms in the highest quartile of the number of families. The lower right-hand panel of figure 1 plots quintiles of literacy on a map.

The NPS, which is a survey of household heads, contains additional development outcomes. From the survey data we create an index of asset wealth, which is simply the unweighted mean of eight dummies for ownership of particular assets, such as a mobile phone or a radio, and of housing quality, which is the unweighted mean of indicators for

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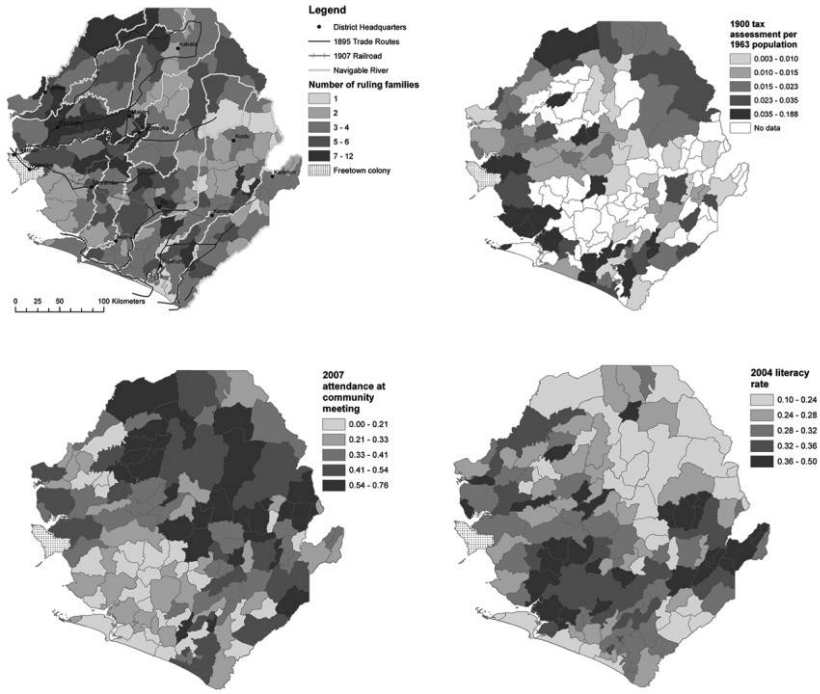

FIG. 1.—Map of Sierra Leone's chiefdoms, oriented north, with four variables plotted by quintiles. The variables are, clockwise from northwest, the number of ruling families, the 1900 average annual tax assessment per 1963 population (in nominal pounds sterling), the 2004 literacy rate, and the share of respondents in the NPS who have attended a community meeting in the last month. Literacy and community meeting attendance are matched on chiefdom of birth.

whether the household has a cement or tile floor, a cement or zinc wall, and a zinc roof (all relative to dirt or thatch).[21] Each index ranges from zero to one. These indices were created using all survey questions available to guard against selection of variables with significant relationships; in online Appendix table E1 we present results for each of the individual measures of asset wealth and housing quality separately.

The ATS survey provides us with information on property rights for plots of rice, the national staple.[22] This nationally representative survey covers 142 of 149 chiefdoms and asks households, for each plot, whether they have the right to sell the land and whether they have to ask permission to farm the land from a chief or traditional authority. We code

[21] Namely, the asset wealth index is an unweighted average of dummies for the ownership of a bicycle, generator, mobile phone, car, truck or motorcycle, fan, radio, umbrella, and television. The housing quality index is an unweighted average of three dummies indicating ownership of a cement or tile floor, a cement or tile wall, and a zinc or tile roof.

[22] We thank Tavneet Suri for sharing these data and for assistance in using them.

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two indicators for these outcomes. Summary statistics for the sample are presented in panel C of table 1.

We use the DHS to study health outcomes for children under 5. The DHS sample, which is smaller, covers only 117 of 149 chiefdoms, but these chiefdoms still span the full range of the numbers of families, from one to 12, with quartile averages of the number of families being very close to those in the full sample, at 2.3, 4, 5, and 7.5. In this data set, children are matched to chiefdoms using chiefdom of current residence, as chiefdom of birth is unavailable. The health outcomes reported in panel B of table 1 show the poor state of childhood health in rural Sierra Leone. The DHS also includes a wealth index constructed by DHS researchers using a principal components analysis.

Finally, panels D and E of table 1 present the data on the attitudinal and social capital variables from the NPS, which we discuss below.

C. Historical and Geographic Correlates of Development

To investigate whether the number of ruling families is systematically related to prior development outcomes or factors that might help to determine economic development, we also study the relationship between the number of ruling families and proxies for economic development in 1900. As proxies for prior development, we use average annual hut tax revenue assessed by the colonial government between 1898 and 1902. The official tax rate at the time was 10 shillings (£0.50) per house with more than four rooms and 5 shillings (£0.25) for every house with three or fewer rooms (Chalmers 1899). These tax assessments provide a useful proxy for the wealth of a chiefdom at the turn of the twentieth century.

The source for the tax assessments is the *Tax Book for Various Chiefdoms and Districts, 1898–1902*, which contains a comprehensive list of the tax assessments on all recognized chiefdoms at the time and which we accessed in June 2010 in the National Archives at Fourah Bay College in Freetown. Though many chiefdoms have maintained their boundaries since 1898, some have not, and the mapping to chiefdoms today is imperfect. Historical chiefdoms were manually matched to current ones using the names of the chiefdom. This work was aided by historical records, which we utilized to identify name changes.[23] Annual averages were then constructed for each chiefdom using the simple mean of total chiefdom tax assessment for all years observed between 1898 and 1902.[24]

[23] In three cases, an assessment was recorded for a chiefdom that is today split into two chiefdoms. In these cases, the assessment was split between today's chiefdoms using their relative surface areas as weights.

[24] Taxes were not assessed in some areas during some years, particularly in 1899 in the immediate aftermath of the hut tax rebellion.

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Across years, an average £33,254 was assessed annually. In total, 91 percent of this average tax assessment was mapped successfully to a chiefdom, leaving £3,172 unmapped. A total of 87 contemporary chiefdoms were linked to a tax assessment. Reliable population estimates by chiefdom are not available for this time period, so we normalize tax assessment alternatively by square kilometer and 1963 population in our specifications.[25] Tax assessments are plotted in the upper right-hand panel of figure 1. The data cover most of the country, though there are also missing data for several chiefdoms (particularly those in the northern and southern regions, where unrest following the 1898 hut tax rebellion was most pronounced).[26]

In addition to the tax data, we use distance from the chiefdom centroid to the coast, nearest navigable river, the 1907 railroad, and minimum distance to Sierra Leone's three major towns as proxies for development in 1900. We also use distance to 1895 trade routes reported by Mitchell (1962), who mapped them on the basis of the 1895 report of Governor Rowe after a trip around the country to explore its economic potential. Centroid distances to these variables were calculated using geographic information system maps of the chiefdoms provided by Statistics Sierra Leone. Finally, we also construct a dummy for the presence of mining permits in the 1930s, during the beginning of the country's mining boom. These permits were accessed and documented in June 2010 at the National Archives at Fourah Bay College. Panel F of table 1 reports information on these variables.

IV. The Number of Families and the Concentration of Power

Our argument rests on the claim that in chiefdoms with more ruling families, there will be greater political competition and fewer opportunities for the concentration (and abuse) of power. On the basis of this, we use the terms "greater political competition" and "less concentrated political power" interchangeably.

[25] One chiefdom, Dibia, is missing data in the 1963 census, reducing the number of observations in this normalization to 86.

[26] One can provide a very rough estimate of whether the total tax assessment observed in these data is reasonable given the population at the time. According to the 1921 Native Census, the native population of the protectorate in 1921 was 1,450,903, an increase from 1,323,151 in 1911. This implies a 9.6 percent growth rate over the decade. In 1921, there were 239,148 households, with an average of 5.9 people per house. If we assume a constant growth rate in the previous decade, this implies that in 1901 there was a population of 1,207,254 or, using the 5.9 people per house, 204,619 houses. If everyone had a house of three rooms or less, with £33,254 assessed each year, this means that about 65 percent of the houses were assessed. This number stacks up closely with the 58 percent of chiefdoms we could match to an assessment. Assuming a uniform distribution of houses across chiefdoms, this implies an almost complete assessment of the chiefdoms covered.

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Our first exercise is a simple reality check to show an empirical link between the number of families and some simple measures of the concentration of power within a chiefdom, though we cannot measure the concentration of de facto power, which is most relevant for our argument.

To measure the concentration of power, we construct a Herfindahl index of the extent to which the office of paramount chief has been dominated by a subset of ruling families over time (Stigler 1972).[27] In each chiefdom c, we observe F^c, the set of ruling families, and S^c, the set of chieftaincy seats, as far back as the oral historians could remember. We exclude seats held by regent chiefs unless they initiated a ruling family and seats held by those few chiefs who were viewed as illegitimate for other reasons. Let $N^c = |S^c|$, the number of seats observed. Let s_f^c be the number of seats held by family f. The Herfindahl index is then computed as

$$H_c = \sum_{f \in F^c} \left(\frac{s_f^c}{N^c} \right)^2.$$

As shown in panel A of table 1, the average Herfindahl across chiefdoms is 0.54 and tends to be much higher in chiefdoms with fewer families.

To describe the link between the number of families and the concentration of power, we run ordinary least squares (OLS) regressions of the following form:

$$H_c = \delta_d + \alpha_{\text{fam}} \cdot F_c + \gamma_c \cdot N_c + \gamma_a \cdot \text{Amalgamation}_c + \varepsilon_c. \qquad (1)$$

We abuse notation slightly and let F_c stand for either the number of ruling families in chiefdom c or its logarithm depending on the specification. The δ_d's denote a full set of 12 district fixed effects; N_c is the number of chiefs in the history of the chieftaincy that the oral historians could remember in c; and Amalgamation_c is a dummy variable equal to one if the chieftaincy was amalgamated and equal to zero otherwise. Finally, ε_c is the error term.

Table 2 shows estimates of equation (1), documenting the relationship between the number of ruling families and power concentration. Columns 1–2 present the most parsimonious version of (1), without including any controls. In column 1, the estimated coefficient on the number of ruling families is $\alpha_{\text{fam}} = -0.05$ with a standard error of 0.01 and is significant at less than 1 percent. The R^2 is relatively high, at .20, suggesting that variation in the number of families accounts for 20 percent of the variation in our measure of concentration of power. Column 2 presents a similar model with the natural log of the number of ruling families.

[27] See Acemoglu et al. (2008) for a similar index to measure the extent to which a small number of people controlled local political power in Colombia. In online App. table B1, we show similar results using an alternative measure of the concentration of power: the maximum number of seats held by a family.

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TABLE 2
NUMBER OF RULING FAMILIES AND THE CONCENTRATION OF POWER OVER TIME

	Dependent Variable: Herfindahl Office Holding Concentration Index				
	(1)	(2)	(3)	(4)	(5)
Number of ruling families	−.05				.07
	(.01)				(.01)
ln(number of ruling families)		−.25	−.31	−.30	−.56
		(.03)	(.03)	(.03)	(.05)
Amalgamation			.12	.09	.06
			(.06)	(.06)	(.06)
Number of chiefs recalled			−.02	−.02	−.02
			(.01)	(.01)	(.01)
F	28.12	81.24			
R^2	.20	.33	.47	.49	.53
Observations	149	149	149	149	149
District fixed effects	No	No	Yes	Yes	Yes
Geographic controls	No	No	No	Yes	Yes

NOTE.—Robust standard errors are in parentheses. The Herfindahl index has mean 0.54 (SD = 0.24). Geographic controls are a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown.

The results are similar but more precisely estimated and with a higher R^2 (= .33). The F-statistics also indicate that the fit is considerably better with the log specification. The patterns and estimated coefficient vary little in column 3, which includes the amalgamation dummy, the number of chiefs recalled, and district fixed effects, and in column 4, which includes six geographic characteristics potentially correlated with economic development, which will be discussed in the next section.

The better fit of the log specification is confirmed again in column 5, which includes both the number of ruling families and its log. The log variable continues to be negative and significant, while the number of families becomes positive, indicating that, if anything, a transformation more concave than the logarithm would be an even better fit to the data. This likely reflects the fact that many of the gains from greater political competition occur when the number of ruling families increases starting from a low base. These patterns motivate our focus on the log specification in subsequent regressions. Figure 2 presents the fit estimated in column 3 graphically.

V. Number of Ruling Families and Precolonial Development

As we discussed in the introduction, a major challenge for the interpretation of the results we present is the possibility that the number of ruling families might be determined by the extent of precolonial prosperity. Even though the historical sources and our survey and fieldwork suggest

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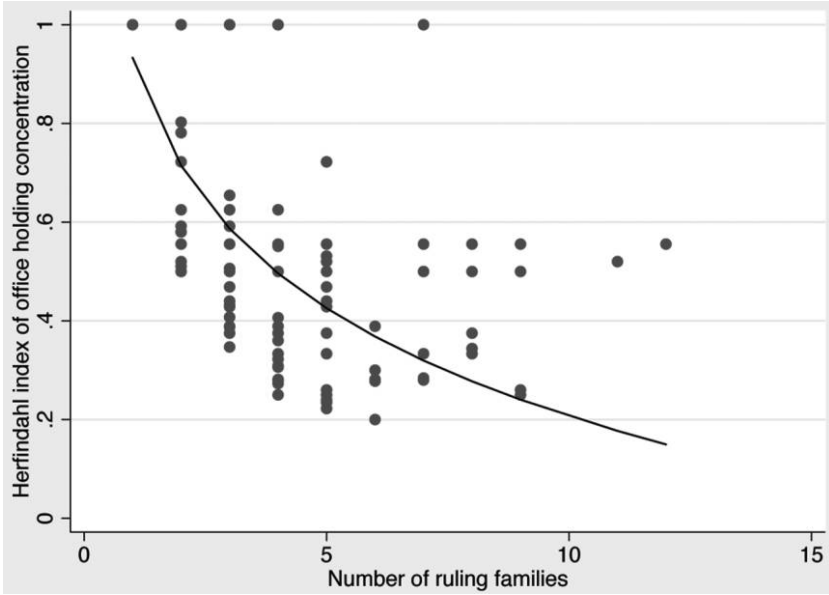

FIG. 2.—Number of ruling families and the Herfindahl index of the concentration of power. The fitted curve corresponds to the model in column 3 of table 2, which includes the log number of ruling families and controls for district effects, the number of seats observed, and an amalgamation dummy.

that the causes of differing numbers of families were largely idiosyncratic, we now investigate this possibility more systematically. Table 3 presents regressions of the form

$$y_c = \delta_d + \alpha_{\text{fam}} \cdot F_c + \gamma_n \cdot N_c + \gamma_a \cdot \text{Amalgamation}_c + \varepsilon_c, \qquad (2)$$

where y_c is the dependent variable of interest. Specifications include our baseline controls for amalgamation and the number of ruling families and district fixed effects δ_d; ε_c is again the error term. Our objective is to examine whether the (log) number of ruling families is meaningfully correlated with measures of precolonial economic development or potential determinants of subsequent development.

In columns 1–3, we examine the average annual house taxes assessed by the colonial government between 1898 and 1902. As discussed above, we use this variable as a proxy for economic prosperity at the turn of the twentieth century in the area. Since there are no chiefdom-level population estimates for this period, we normalize these taxes by chiefdom area (col. 1) and 1963 population (col. 2). Though the standard errors are large because of the small sample size, the estimated effects in

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TABLE 3

NUMBER OF RULING FAMILIES AND CORRELATES OF EARLY DEVELOPMENT

	Dependent Variable									
	1900 Tax per 100 km^2 (1)	1900 Tax per 1,000 1963 Population (2)	1900 Tax per 1,000 1963 Population (3)	1930s Mining Permits (4)	Distance to Coast (5)	Distance to River (6)	Distance to 1895 Trade Routes (7)	Distance to 1907 Railroad (8)	Minimum Distance to Major Towns (9)	Predicted Literacy (10)
ln(number of ruling families)	−26.07	−2.94	−3.19	.01	−2.73	−.98	−2.35	−6.78	−10.80	.010
	(29.64)	(6.07)	(6.13)	(.06)	(5.07)	(1.19)	(2.81)	(3.27)	(3.84)	(.006)
Amalgamation	62.42	.86	1.01	−.04	8.33	1.22	4.04	6.88	8.46	−.011
	(78.00)	(9.95)	(10.28)	(.10)	(6.74)	(2.04)	(3.23)	(4.70)	(5.67)	(.007)
Number of chiefs recalled	12.38	−.60	−.38	.01	.73	.82	.83	−.30	.17	−.000
	(10.99)	(1.47)	(1.44)	(.01)	(1.21)	(.35)	(.50)	(.76)	(.88)	(.001)
Thousands of strangers			−.71							
			(.58)							
R^2	.32	.41	.41	.22	.86	.18	.57	.72	.80	.74
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	87	86	86	149	149	149	149	149	149	149
Outcome mean	85.31	27.56	27.56	.17	105.33	9.18	20.19	44.19	79.21	.307
Outcome standard deviation	117.57	29.28	29.28	.38	65.61	7.22	19.94	30.34	44.27	.044

NOTE.—Robust standard errors are in parentheses. All distances are in kilometers and are calculated with reference to chiefdom centroids. In cols. 1–3, 1900 taxes are in pounds sterling and are equal to the average nominal annual hut tax assessment by the government between 1899 and 1902. One observation is dropped in cols. 2 and 3 because 1963 census data are not available for one chiefdom, Dibia. Thousands of strangers is the 1963 census count, in thousands, of the number of "indigenous" (e.g., Africans of non-Krio Sierra Leonean descent) residents of the chiefdom not born there. The outcome in col. 4 is an indicator for whether the government had given permission to mine in the chiefdom between 1935 and 1940. Trade routes in col. 7 are from Mitchell (1962), who maps the major trade routes identified by Governor Rowe during a countrywide expedition in 1895. The railroad in col. 8 began operation in 1897; the full route was completed in 1907 and ceased operation permanently in 1974. The major towns in col. 9 are Bo, Kenema, and Freetown, the three largest cities by population in 2004; these cities were also prominent in 1900. Predicted literacy in col. 10 is the 2004 literacy rate by chiefdom of birth, predicted in the census microdata by a linear regression including the variables in cols. 4–9 and 12 district fixed effects. Standard errors in this column have been block bootstrapped at the chiefdom level to account for sampling error in the prediction of literacy from the exogenous covariates; predicted literacy was estimated 500 times, drawing with replacement a sample of chiefdoms and all observations within them. The log difference between the mean of the top quartile of number of ruling families and the bottom is $\ln(7.7) - \ln(1.8) = 1.45$.

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columns 1 and 2 are small and far from significant, providing no prima facie evidence that the number of ruling families is correlated with prior development outcomes. Moreover, the negative point estimates suggest that, if anything, having more ruling families is related to lower tax assessments per capita.[28]

In column 3, we include the number of Sierra Leoneans not born in the chiefdom but resident in the chiefdom in 1963 (colloquially known as "strangers") to control for potential migration toward more prosperous chiefdoms in the specification of column 2. This has little impact on our estimates, and there is still no significant relationship between 1900 tax assessments per 1963 population and the number of ruling families.

As we have already indicated, case study evidence suggests that the number of families was largely fixed at the beginning of the twentieth century. If this is true, families should not emerge in response to shocks occurring later on in the colonial period. In column 4, we provide some evidence consistent with this idea by showing that the number of ruling families is uncorrelated with a dummy indicating whether mining permissions were given by the government during the country's first mining boom in the 1930s, when diamonds and other precious metals were discovered in many chiefdoms.

In columns 5, 6, 7, 8, and 9, we examine the correlation between the number of ruling families and several geographic (and historical) characteristics that might be correlated with the development potential of a chiefdom. In columns 5–7, we look at the correlation between the number of families and distance to the coast, distance to navigable rivers, and distance to the major trade routes mapped by Governor Rowe after an expedition across the country in 1895 (presented in fig. 1). In all three columns, the number of ruling families is insignificant statistically and economically negligible.

In column 8, we use distance to the 1907 railroad, which was important for agricultural exports during the colonial period. This was built not to follow precolonial trade routes, but rather to reach the areas assessed as having the greatest agricultural potential. Here the effect is significant and negative at $\alpha_{\text{fam}} = -6.78$ (standard error [SE] = 3.27), but the implied magnitude is unlikely to be economically important; moving from the top to bottom quartile of the number of quartiles of the number of ruling families has an implied increase in proximity of only 9.83 kilo-

[28] The standard deviation of tax assessment per 1963 population is large, at £29.28. At the point estimate in col. 2, this implies that moving from the mean of the bottom quartile to the mean of the top quartile of the number of ruling families should decrease per capita tax revenues by 0.15 of a standard deviation. Though the confidence intervals on this effect are sizable, their positive regions do not admit large effects. At the upper bound of a 95 percent confidence interval, the same increase in the number of ruling families should raise per capita tax revenues by only 0.44 of a standard deviation.

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meters (6.11 miles). In column 9, we use minimum distance to one of the three major towns of Sierra Leone, Freetown, Kenema, and Bo. This correlation is also negative and significant, but once again very small in magnitude.

Overall, the results in table 3 show that the number of ruling families is unrelated to proxies for colonial prosperity, but they do raise the possibility that it may be correlated with some geographical determinants of economic development.

In column 10, we provide a rough estimate of the magnitude of the bias that might be resulting from this correlation, focusing on one of our core outcome variables, literacy as measured in the 2004 census. The left-hand-side variable in this regression is the predicted value from the regression of literacy on six geographic variables from the earlier columns: distance to trade routes, the coast, rivers, the railroad, and the three major towns; a dummy for the presence of a 1930s mining permit; and district fixed effects.[29] This predicted value can be interpreted as the component of contemporary literacy that projects on the geographic factors that potentially influence contemporary development. Regressing this value on the number of ruling families and our controls provides an estimate of the magnitude of the potential bias. Column 10 shows that this potential bias is small at $\delta_{\text{fam}} = 0.01$. Though the coefficient is statistically significant at 9 percent, it is only one-fifth of the magnitude of our estimate of the effect of the number of ruling families on primary education reported in the next section.[30]

Even though the magnitude of the estimate in column 10 cannot explain the results we present below, for completeness we also report results including all these geographic controls.

VI. Main Results

In this section we present our main results. We first focus on a range of development outcomes, including education, various school enrollment measures, child health outcomes, nonagricultural employment, and measures of asset ownership and housing quality. We then turn to measures of property rights, social capital, and attitudes. We also look at the evolution of literacy over time. Our typical regressions are at the individual level and can be written as follows:

[29] We exclude the tax measure from this exercise because the missing data would cause us to drop 42 percent of chiefdoms in our sample.

[30] Standard errors in this column have been block bootstrapped at the chiefdom level to account for sampling error in the prediction of literacy from the geographic covariates; predicted literacy was estimated 500 times, drawing with replacement a sample of chiefdoms and all observations within them. In online App. C, we estimate the potential bias for a subset of our outcomes.

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$$y_{ic} = \delta_d + \alpha_{\text{fam}} \cdot F_c + \gamma_n \cdot N_c + \gamma_a \cdot \text{Amalgamation}_c + \mathbf{X}'_{ic} \cdot \beta_X + \mathbf{W}'_c \cdot \beta_W + \varepsilon_{ic}, \tag{3}$$

where i denotes the individual and c the chieftaincy, and y_{ic} is the dependent variable of interest, which in many of our specifications is a dummy variable, making this relationship equivalent to a linear probability model. In addition, δ_d denotes the set of 12 district fixed effects; F_c is the log number of ruling families in the chieftaincy; N_c denotes the number of chiefs in the history of the chieftaincy that the oral historians could remember in c; Amalgamation_c is a dummy for whether the chieftaincy was amalgamated, as in (1); and ε_{ic} is the error term. The vector $\mathbf{X}'_{ic}$, which we include in some specifications, contains the individual-level sociodemographic covariates: age, age squared, and dummies for gender and ethnicity. For each specification, we present one panel (A) that does not include $\mathbf{W}'_c$, the vector of six geographic characteristics potentially correlated with economic historical development discussed above, and one panel (B) that does.

The main coefficient of interest is α_{fam}, the marginal impact of an increase in the log number of ruling families on our outcomes. Throughout, the standard errors we report are robust to heteroskedasticity, and when the data are at the individual level, they are also clustered to allow for arbitrary correlation across individuals within a given chieftaincy. In online Appendix G, we show that our core results are also statistically significant under permutation-based p-values that do not rely on large sample asymptotics.

A. *Effects on Development Outcomes*

1. Educational Outcomes

Table 4 presents results using individual-level data from the 2004 census and the NPS on three educational outcomes: literacy, primary school attainment, and secondary school attainment. In this table, each left-hand-side variable is binary. All columns include district fixed effects and controls for the number of chiefs recalled and the amalgamation dummy.

In panel A, all columns show a substantial and statistically significant relationship between the log number of families and educational outcomes. Column 1, which does not include demographic controls, shows a significant positive relationship between the number of ruling families and the likelihood that a person over 12 is literate (in the census). The coefficient estimate is $\alpha_{\text{fam}} = 0.051$ (SE = 0.013). The coefficient on the control for amalgamation is negative, as expected. The number of chiefs

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TABLE 4
Educational Outcomes, Results

	Dependent Variable						
	Literacy			Primary School Attainment		Secondary School Attainment	
	Census (1)	Census (2)	Census (3)	Census (4)	NPS (5)	Census (6)	NPS (7)
	A. Baseline Specification						
ln(number of ruling families)	.051	.046	.047	.048	.054	.036	.044
	(.013)	(.011)	(.024)	(.012)	(.024)	(.009)	(.020)
Number of ruling families			−.000				
			(.006)				
Amalgamation	−.038	−.033	−.032	−.033	.030	−.023	.003
	(.021)	(.018)	(.018)	(.019)	(.045)	(.015)	(.040)
Number of chiefs recalled	.000	.000	.000	.000	.006	.000	.005
	(.003)	(.002)	(.002)	(.003)	(.007)	(.002)	(.006)
R^2	.008	.131	.131	.160	.122	.072	.096
	B. Baseline Specification with Additional Geographic Controls						
ln(number of ruling families)	.038	.034	.026	.036	.038	.028	.032
	(.011)	(.010)	(.022)	(.010)	(.023)	(.008)	(.018)
Number of ruling families			.002				
			(.005)				
Amalgamation	−.028	−.024	−.025	−.023	.033	−.017	.005
	(.017)	(.015)	(.015)	(.015)	(.038)	(.012)	(.035)
Number of chiefs recalled	.001	−.000	−.000	−.000	.004	.000	.003
	(.002)	(.002)	(.002)	(.002)	(.005)	(.002)	(.005)
R^2	.010	.133	.133	.163	.126	.073	.100
Observations	2,623,140	2,622,861	2,622,861	2,612,970	5,041	2,082,366	5,041
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	Yes	Yes	Yes	Yes	Yes

Note.—Standard errors (in parentheses) are robust to heteroskedasticity and are clustered at the chiefdom level. Dependent variables are dummy variables $\in \{0, 1\}$ indicating an individual's literacy, primary school attainment, or secondary school attainment. Individuals are matched to chiefdom of birth. For literacy and primary school attainment, all individuals above the age of 12 are included; for secondary school attainment, all individuals above the age of 18 are included. Demographic controls are age, age squared, and gender and ethnicity dummies. The specifications in panel B, in addition, include six geographic controls: a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown.

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recalled has a tightly estimated effect of zero, giving us reassurance that recall bias on the part of the oral historians is not driving our results.

Column 2, which additionally includes controls for an individual's age, age squared, gender, and ethnicity, yields an estimate of $\alpha_{\text{fam}} = 0.046$ (SE = 0.011). Column 3 returns to the issue of functional form already discussed in table 2 and adds to the specification in column 2 the number of ruling families (in addition to its log). The log coefficient remains significant and largely unchanged, while the effect of the number of families is estimated as a relatively precise zero. This supports the notion that it is increases in the number of ruling families starting from a low base that matter for economic outcomes and reinforces our choice of functional form.

The estimates for primary and secondary school attainment using census data in columns 4 and 6 are also very similar. They are statistically significant at less than 1 percent and economically large. They imply that moving from the bottom to the top quartile of the number of ruling families (from 1.8 to 7.7) would increase the likelihood of literacy, primary school attainment, and secondary school attainment by about 7 percentage points. Reassuringly, the estimates from a separate data set—the NPS sample of household heads, with significantly lower overall educational attainment than the census average—are very similar. This can be seen in columns 5 and 7, where the estimates are statistically indistinguishable from those from the census.

Figure 3 compares the magnitude of these estimates to the potential omitted variable bias estimated in the last section. The top panel plots the relationship between literacy and the number of families, controlling for demographic factors and district fixed effects, estimated in panel A, column 2, of table 4. An observation here corresponds to the average literacy for a given chiefdom. The log specification is shown to fit well, as was confirmed in column 3 of table 4. The bottom panel shows graphically the potential bias estimated in column 10 of table 3 with literacy predicted using the six geographic variables. Though the relationship is upward sloping, it is much shallower and cannot explain much of what we see in panel A. Even at the upper bound of a 95 percent confidence interval, the potential bias shown in panel B can explain less than half of the relationship.

An alternative way to see this is in panel B of table 4, which replicates the specifications in panel A, including the geographic correlates of development discussed above. Here, our preferred specifications with district fixed effects and demographic controls (and without including both the log and the level of the number of ruling families) in columns 2, 4, and 6 continue to be precisely estimated and statistically significant and fall by only approximately 1 percentage point, which is comparable to the magnitude of the potential bias shown in figure 3.

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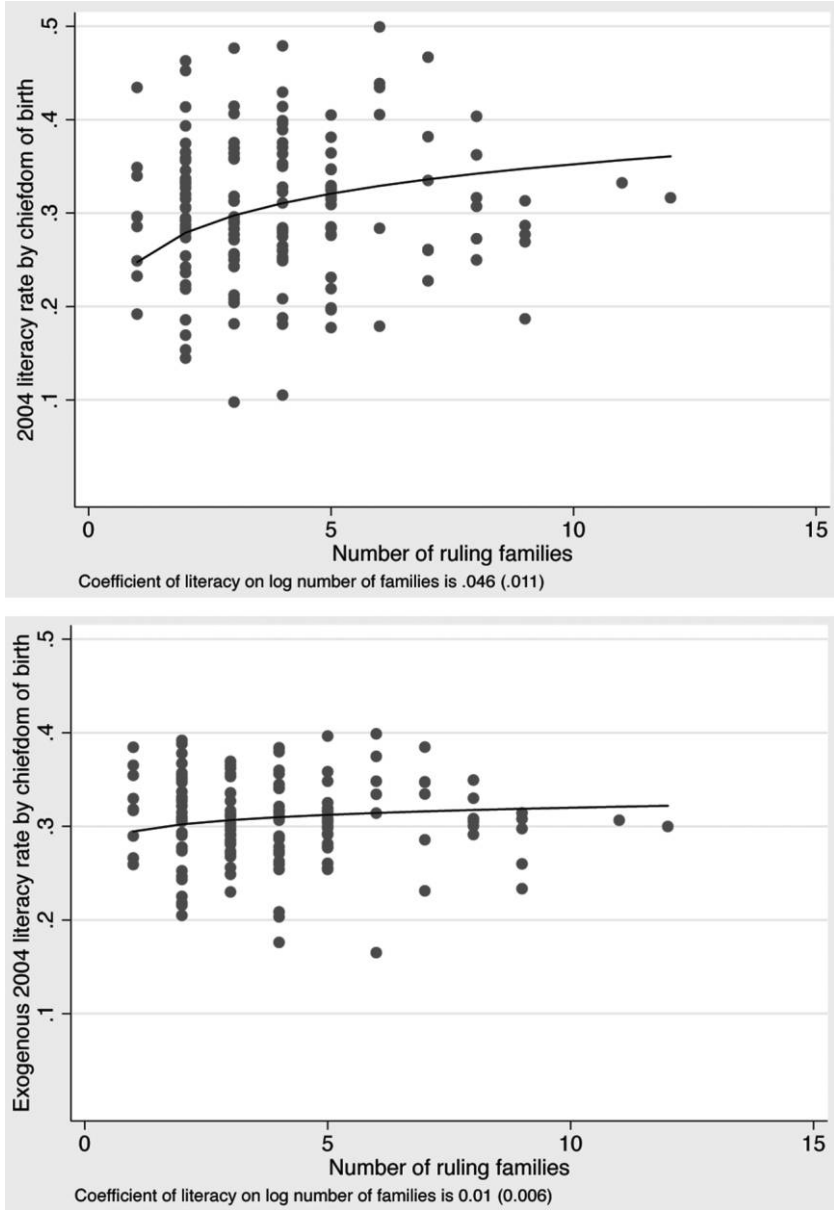

FIG. 3.—The top panel presents the empirical means of 2004 literacy in chiefdom of birth plotted by the number of ruling families. The fitted curve corresponds to the model in column 2 of table 4, which uses the log number of ruling families and controls for district effects, the number of seats observed, an amalgamation dummy, age, age squared, gender, and ethnicity fixed effects. The bottom panel shows the means of literacy predicted using six geographic correlates of development: the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown. The fitted curve corresponds to the model in column 10 of table 3.

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2. Child Health Outcomes

In table 5, we study the impact of the number of ruling families on health using the DHS sample, which contains information on the weight for height and anemia levels of children under 5 years of age. These are all outcomes that both are direct measures of poverty and have been linked to socioeconomic outcomes later in life (see Strauss and Thomas [2007] for a review). We begin with panel A. Column 1, which focuses on the weight for height Z-score and is again without demographics controls, leads to an estimate of $\alpha_{\text{fam}} = 0.212$ (SE = 0.117), significant at 7 percent. Weight for height Z-scores are the preferred measure of current nutritional status for children under 5 (Statistics Sierra Leone and Inner City Fund Macro 2009). In column 2, which additionally controls for the age, primary school attainment, and ethnicity of the mother, the estimate is very similar. These estimates imply that moving from the bottom to the top quartile of the number of ruling families increases a child's height for weight Z-score by 0.31, nearly a third of a standard deviation.

In columns 3 and 4 the left-hand-side variable is a dummy for whether the child tested positive for severe or moderate anemia in a hemoglobin test. We again find significant results with economically meaningful implications. For example, moving from the lowest to the highest quartile of the number of ruling families decreases the likelihood of a child having severe or moderate anemia by 13 percentage points. In panel B, where we include the six geographical correlates of economic development from table 3, the magnitude and significance of the results for body mass and weight for height diminish modestly, but for anemia, they increase. As above, this pattern suggests that our main results are unlikely to be driven entirely by omitted variables.

3. Economic Outcomes

Table 6 presents results for a variety of contemporary economic outcomes from the census, the DHS, and the NPS. In column 1, we use the fraction of the population working outside agriculture. Though Sierra Leone's chiefdoms are predominantly agrarian, nonagricultural employment for those currently residing in the chiefdom is a useful proxy for contemporary economic development. Here, we see a statistically significant (at 5 percent) and economically meaningful association between the number of ruling families and nonagricultural employment within the chiefdom. Moving from the bottom to the top quartile of the number of ruling families increases nonagricultural employment in the chiefdom by 2.3 percentage points off a base of 11 percent.

In column 2, we examine an index of wealth comprising asset ownership and housing quality constructed by DHS researchers (recall that

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TABLE 5
HEALTH OUTCOMES FOR CHILDREN UNDER 5, RESULTS

	Dependent Variable			
	Weight for Height Z-Score		Moderate to Severe Anemia	
	(1)	(2)	(3)	(4)
	A. Baseline Specification			
ln(number of ruling families)	.212	.211	−.099	−.091
	(.117)	(.117)	(.041)	(.040)
R^2	.045	.052	.055	.066
	B. Baseline Specification with Additional Geographic Controls			
ln(number of ruling families)	.189	.167	−.136	−.129
	(.127)	(.132)	(.039)	(.039)
R^2	.052	.059	.067	.077
Observations	1,521	1,519	1,423	1,421
Number of chiefdoms	116	116	114	114
District fixed effects	Yes	Yes	Yes	Yes
Mother controls	No	Yes	No	Yes

NOTE.—Standard errors (in parentheses) are robust to heteroskedasticity and are clustered at the chiefdom level. All specifications include number of chiefs recalled and an amalgamation dummy. Children are matched to chiefdoms on chiefdom of current residence. The Z-scores are calculated using the World Health Organization Child Growth Standards (2006). Moderate to severe anemia is a dummy variable $\in \{0, 1\}$ indicating that moderate to severe anemia was detected in a hemoglobin test. Mother controls are ethnicity dummies, age, and age squared. The specifications in panel B, in addition, include six geographic controls: a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown.

this variable is matched to chiefdom of residence as we do not have chiefdom of birth in the DHS). Here we find a positive and significant effect, of approximately one-fifth of a standard deviation. In columns 3 and 4, we examine indices of asset wealth and housing quality we constructed from the NPS as described above. Regressions using these unweighted indices are equivalent to Kling, Liebman, and Katz's (2007) "mean effects approach." We find positive and statistically significant effects on both asset wealth and housing quality indices. The next row of the table reports the p-value from a χ^2 test of the hypothesis that the coefficient on the log number of families is zero in each one of the (seemingly unrelated) regressions of each component of the index on this variable and controls. These regressions are presented in online Appendix table E1. These tests provide fairly strong support for the hypothesis that at least one of the asset and housing quality measures is significantly related to the log number of families.

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TABLE 6
ECONOMIC OUTCOMES, RESULTS

	Dependent Variable			
	Nonagricultural Employment Census (1)	Asset Wealth Index DHS (2)	Asset Wealth Index NPS (3)	Housing Quality Index NPS (4)
	A. Baseline Specification			
ln(number of ruling families)	.016	.260	.028	.058
	(.008)	(.136)	(.010)	(.023)
χ^2 test p-value			[.068]	[.011]
R^2	.051	.057	.063	.094
	B. Baseline Specification with Additional Geographic Controls			
ln(number of ruling families)	.012	.199	.025	.038
	(.006)	(.131)	(.010)	(.020)
χ^2 test p-value			[.067]	[.026]
R^2	.052	.080	.066	.105
Observations	2,790,000	4,994	5,054	5,077
Chiefdoms	149	117	149	149
District fixed effects	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes

NOTE.—Standard errors (in parentheses) are robust to heteroskedasticity and are clustered at the chiefdom level. All specifications include number of chiefs recalled and an amalgamation dummy. Demographic controls are age, age squared, and gender and ethnicity dummies. The specifications in panel B, in addition, include six geographic controls: a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown. Individuals are matched on chiefdom of birth except in col. 2, where they are matched on chiefdom of residence. The dependent variable in col. 1 is $\in \{0, 1\}$, in cols. 2 and 4 $\in [0, 1]$, and in col. 3 $\in [0, 5]$. Column 1 includes all individuals above the age of 10 and is a dummy for employment in teaching, medical work, security, utilities, manufacturing, construction, trade, hospitality, transportation, or financial industry rather than fishing, farming, or forestry. The DHS asset wealth index is derived from a principal components analysis and included with the DHS data. The NPS asset wealth index is an unweighted average of dummies for the ownership of a bicycle, generator, mobile phone, car, truck or motorcycle, fan, radio, umbrella, and television. The NPS housing quality index is an unweighted average of three dummies indicating ownership of a cement or tile floor, a cement or tile wall, and a zinc or tile roof. Brackets show the p-value from a χ^2 test of the hypothesis that the coefficients on log number of families are all zero in a set of (seemingly unrelated) regressions using each component of the index. These regressions are presented in online App. table E1.

B. *Literacy over Time*

We next investigate the timing of literacy effects already documented in table 4, providing some insights into when economic differences across chiefdoms began to emerge. To do this, we run separate regressions of literacy among different birth cohorts on the log number of families

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using data from the 1963 and 2004 censuses. Figure 4 plots these coefficients, and online Appendix table D1 reports them.

The pattern shown in figure 4 is in line with the history of the chieftaincy institution. The paramount chiefs were the arm of government through which schools in Sierra Leone were first established in the early twentieth century. One of the first government schools, the Bo Government Secondary School, was established in 1906 and funded explicitly from chiefs' contributions. Tax records at Fourah Bay College show agreements between district commissioners and chiefs across the country indicating the amount of tax revenue that would be donated to local schools. Though this authority over schools was established in 1896, it took time for the ruling families and paramount chiefs to consolidate and exercise their new powers. Cartwright (1970) documents that paramount chiefs started dominating appointments to the Legislative Council during the 1950s and early 1960s, when it was in charge of the allocation of educational spending. In this light, it is plausible for divergence across chieftaincies to also have emerged during this period.

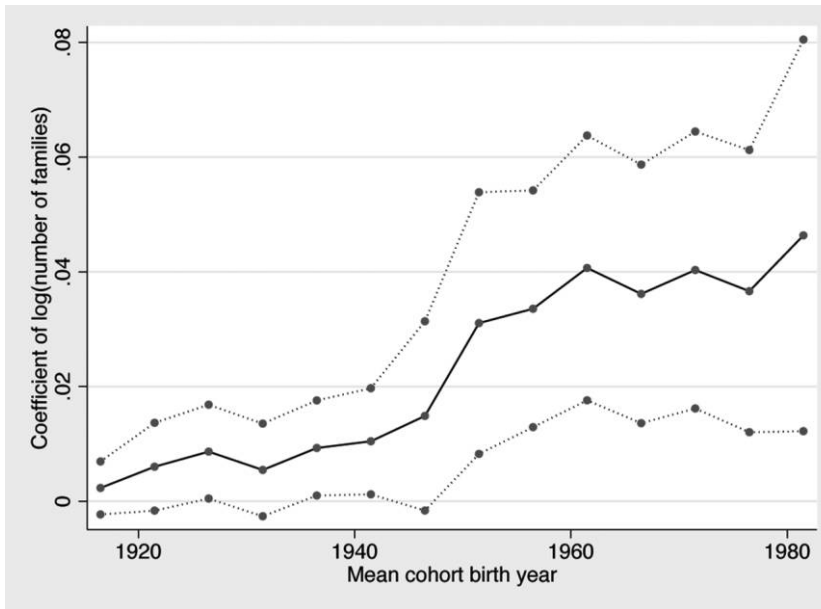

FIG. 4.—Effect of log number of ruling families on literacy by 5-year birth cohorts. The dotted lines give a 95 percent confidence interval. Specification is OLS using chiefdom aggregates with controls for amalgamation, number of seats observed, and district fixed effects. Cohorts born before 1953 are observed in the 1963 census, in which one chiefdom, Dibia, has missing data. The first cohort, plotted at the year 1914, includes anyone born before 1918.

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C. *Property Rights*

The ATS allows us to examine the relationship between the number of ruling families and property rights over agricultural land. Because property rights arrangements may vary across crops, we restrict our analysis to farms on which rice is grown. In Sierra Leone, 87 percent of agricultural households farm rice, and the crop has cultural importance as the national staple (Statistics Sierra Leone and Innovations for Poverty Action 2011). We also control for rice ecology, a key determinant of productivity.[31]

We present our results in table 7. In columns 1 and 2, we investigate whether households in chiefdoms with more ruling families are more or less likely to have had to ask the chief for permission to use their land. The outcome here equals one if the household had to ask permission from a traditional authority member to use the plot. It equals zero if the household has a traditional right of sale or if the plot has been leased from someone other than a member of the traditional authority. In both columns, we find a statistically and economically significant effect of $\alpha_{\text{fam}} = -0.058$ (SE = 0.026) and $\alpha_{\text{fam}} = -0.053$ (SE = 0.027), respectively. These indicate that the potential for competition among ruling families tends to reduce the influence of chiefs over land use.

The basic tenets of land law in Sierra Leone were established by the Provinces Land Act of 1927, which gives the chiefdom administration the authority to regulate leases of land to "strangers" (those not born in the chiefdom) or to those without customary land rights in the chiefdom.[32] In column 2, we find that the effect is stronger for strangers, as the law suggests should be the case, though the result is not significant.

In columns 3 and 4 we examine rights of resale. In column 3 we find a positive but statistically insignificant relationship between the log number of ruling families and the likelihood that a household can sell its land. Strangers, as expected, are 20 percent less likely to have the right to sell, and this coefficient is highly significant statistically. In column 4 we include an interaction between the stranger dummy and the log number of ruling families. More importantly, there is a statistically (at 5 percent) and economically significant effect of the log number of ruling families on the ability of strangers to resell, with $\alpha_{\text{fam}} = 0.072$ (SE = 0.036). Moving from the bottom to the top quartile of the number of ruling families increases this likelihood by 10 percent.

D. *Social Attitudes, Bridging, and Bonding Social Capital and Collective Action*

Two questions in the NPS allow us to study the attitudes of citizens toward institutions of the chief's authority. The questions were carefully

[31] In online App. table F1, we show that ecology itself is unrelated to the number of ruling families.

[32] For a detailed discussion of land law in Sierra Leone, see Unruh and Turray (2006).

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TABLE 7
PROPERTY RIGHTS, RESULTS

	Dependent Variable			
	Permission from Chief		Right to Sell	
	(1)	(2)	(3)	(4)
	A. Baseline Specification			
ln(number of ruling families)	−.058	−.053	.021	.010
	(.026)	(.027)	(.034)	(.035)
Stranger	.160	.202	−.196	−.290
	(.023)	(.047)	(.025)	(.050)
ln(number of ruling families) × stranger		−.032		.072
		(.032)		(.036)
R^2	.135	.135	.200	.200
	B. Baseline Specification with Additional Geographic Controls			
ln(number of ruling families)	−.044	−.039	.038	.027
	(.017)	(.017)	(.035)	(.036)
Stranger	.156	.192	−.200	−.292
	(.024)	(.052)	(.025)	(.051)
ln(number of ruling families) × stranger		−.028		.071
		(.034)		(.037)
R^2	.153	.153	.205	.206
Observations	8,417	8,417	8,360	8,360
District fixed effects	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes
Ecology fixed effects	Yes	Yes	Yes	Yes

NOTE.—Standard errors (in parentheses) are robust to heteroskedasticity and are clustered at the chiefdom level. An observation is a plot on which rice is grown. All specifications include number of chiefs recalled and an amalgamation dummy. Demographic controls are age, age squared, and gender and ethnicity dummies. The specifications in panel B, in addition, include six geographic controls: a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown. Stranger is a dummy variable indicating that the individual was not born in the chiefdom. Ecology fixed effects are dummies for upland, inland valley swamp, mangrove swamp, boli land, and riverine area. Regressions are restricted to plots managed by the household head (87 percent of the sample), as ethnicity and stranger status are available only for these plots; 11 percent of plots are managed by a stranger. The sample covers 142 of 149 chiefdoms.

designed so as not to lead respondents toward one answer or another. Respondents were given two statements in the local lingua franca, Krio, and asked to say which was closest to their view. They could agree with either one, both, or none. In the first question they were given the following statements: (1) As citizens, we should be more active in questioning the actions of leaders. (2) In our country these days, we should have more respect for authority.

Our first attitude variable is a dummy for whether they agree with statement 2. This question was designed explicitly to measure citizens' atti-

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tudes toward questioning chiefs and other elites in rural areas. A second question had the following statements: (1) Responsible young people can be good leaders. (2) Only older people are mature enough to be leaders.

This question is particularly relevant because, as discussed in Richards (1996), the elder/youth divide in Sierra Leone is often one of the most salient ways to distinguish those associated with the power structure of the chieftaincy (the elders) and those outside of the power structure (the youth).[33] We create a second dummy indicating whether the respondent agrees with item 2 in this question.

Table 8 reports the results. The first two columns refer to "respect for authority," and the next two are about "only older people can lead." Columns 1 and 2 show that, with or without demographic controls, chieftaincies with more ruling families report lower respect for authority. These effects are all significant at 5 percent. Columns 3 and 4 show similar effects for the second variable, indicating greater willingness to accept young leaders in chieftaincies with more ruling families.

These results are rather surprising at first blush. If more powerful paramount chiefs are responsible for poorer development outcomes, one would expect attitudes toward the institutions of their power to be unfavorable.[34] But this is the opposite of the pattern here.

We next examine the impact of the number of ruling families on measures of social capital from the NPS. The survey contains a variety of measures of social capital, from which three groups of activities can be distinguished. The first, consisting of attendance at a community meeting, attendance at a local council meeting, and attendance at meetings with the chief, proxies for—using the terminology of Putnam (2000)—"bridging" social capital that concerns links between citizens and the elites. These activities partly represent investments by citizens in building relationships with elites in the chiefdom.

The second group of activities proxy for "bonding" activities used to build social capital between people of similar social status. Here we use all 10 groups in which an individual could have claimed membership in the NPS.[35] A few of these groups are particularly salient. Rotating credit and savings associations have been widely studied in other contexts and have broader economic interest. Labor gangs, or groups of young men

[33] In fact, any person under the age of 50 is often called a "youth," with significant consequences for power and politics (and the civil war is often portrayed as a rebellion of youths against elders; see in particular Richards [1996], Humphreys and Weinstein [2008], Mokuwa et al. [2011], and Peters [2011]).

[34] In online App. table H2, we show that these results hold for the subset of individuals residing in the chiefdom in which they are born, suggesting that these effects are not due to selective migration.

[35] Individuals were asked if they were members of a school management group, a labor gang, a secret society, a women's group, a youth group, a farmer's group, a religious group, a savings or credit group (*osusu*), a trade union, or a political group.

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TABLE 8
ATTITUDES, RESULTS

	Dependent Variable			
	Agree One Should Respect Authority		Agree Only Older People Can Lead	
	(1)	(2)	(3)	(4)
	A. Baseline Specification			
ln(number of ruling families)	−.085	−.084	−.054	−.059
	(.028)	(.028)	(.022)	(.022)
R^2	.047	.052	.031	.048
	B. Baseline Specification with Additional Geographic Controls			
ln(number of ruling families)	−.089	−.088	−.057	−.059
	(.029)	(.028)	(.021)	(.022)
R^2	.049	.053	.032	.049
Observations	5,167	5,077	5,167	5,077
District fixed effects	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	No	Yes

NOTE.—Standard errors (in parentheses) are robust to heteroskedasticity and are clustered at the chiefdom level. All specifications include number of chiefs recalled and an amalgamation dummy. Demographic controls are age, age squared, and gender and ethnicity dummies. The specifications in panel B, in addition, include six geographic controls: a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown. Individuals are matched on chiefdom of birth.

who get together and collectively sell their labor on farms or on construction projects, are an important institution in Sierra Leone. Secret societies are heavily involved in the spiritual and cultural life of the communities but also play important roles in dispute resolution and the allocation of land and other resources. It has been argued, for example, by Little (1965, 1966), that they can act as a check on the political power of chiefs, though he presents little more than circumstantial evidence for this. Little's work points out that while these variables proxy for "bonding" capital, they may also contain an element of "bridging" capital as well. Particularly in school committees and secret societies, citizens may form relationships with the elite and the paramount chief, as well as with one another.

The final category of activity, collective action, includes two variables, participation in the last month in "road brushing," or the cutting of bush along the road to make it navigable, and in "communal labor," or work given for free to a community project. Both can be seen as the voluntary provision of a public good and are indicative of a community's ability to engage in collective action. Road brushing is of particular interest as it is

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the same indicator used to proxy for collective action by Glennerster, Miguel, and Rothenberg (2013) in their investigation of the connection between ethnic fractionalization and collective action in Sierra Leone.

We construct ("mean effects") indices for each category of activities from all available variables. Panel A of online Appendix table E3 reports the correlations between our three indices and a few of the underlined variables and confirms that the three indices are only weakly correlated and so capture different aspects of social capital.

Table 9 shows a negative impact of the number of ruling families on all these measures of social capital. The effects on all our indices are negative and highly significant, as are the effects on the individual outcomes of interest. For example, for attendance at community meetings, the coefficient estimate is $\alpha_{\text{fam}} = -0.086$ (SE = 0.024), while for the bonding activities such as membership in labor gangs or secret societies, the coefficients are $\alpha_{\text{fam}} = -0.069$ (SE = 0.022) and $\alpha_{\text{fam}} = -0.051$ (SE = 0.026), respectively. There is a similar negative impact on participation in road brushing with a coefficient estimate of $\alpha_{\text{fam}} = -0.085$ (SE = 0.028). All of these are economically and quantitatively significant effects.

Just as in the results for the social attitudes, the pattern here is clear but is at odds with expectations based on the literature on social capital, which would suggest less social capital when there is less political competition. The results indicate the opposite: when the power of a chief is less constrained by competition with other ruling families, measured social capital tends to be greater. This is true for both bonding and bridging type social capital.[36] Though seemingly contradictory to our evidence on development outcomes, we believe that these results are quite plausible in light of the institutional structure of Africa in general and Sierra Leone in particular.

The idea is simple: a bridge can be crossed in either direction, meaning that bridging social capital can be used as a vehicle to assert social control. In this view, powerful chiefs may not just distort the allocation of resources to education or discourage the nonagricultural sector. In order to enhance their control over society, they may also need to monitor it and bring people together so as to tell them what to do. While it is possible that some of these activities are in the collective good, many of them may simply be in the private interest of the chiefs and their families. This point is made explicitly in the anthropological literature on Sierra Leone, in particular by Murphy (1990) and also by Ferme (2001). Murphy emphasizes that in Sierra Leone, community meetings—the outcome in

[36] Panel B of online App. table E3 shows a generally negative correlation between social capital and development outcomes at the level of chiefdom aggregates, again contrary to expectations.

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TABLE 9
Social Capital Activities, Results

	Dependent Variable							
	Bridging Capital Index (1)	Attended Community Meeting (2)	Bonding Capital Index (3)	Savings and Credit Group Member (4)	Labor Gang Member (5)	Secret Society Member (6)	Collective Action Index (7)	Participated in Road Brushing (8)
	A. Baseline Specification							
ln(number of ruling families)	−.063	−.086	−.038	−.033	−.069	−.051	−.072	−.085
	(.018)	(.024)	(.008)	(.015)	(.022)	(.026)	(.019)	(.028)
χ^2 test p-value	[<.001]		[<.001]				[.001]	
R^2	.126	.083	.102	.041	.083	.072	.122	.118
	B. Baseline Specification with Additional Geographic Controls							
ln(number of ruling families)	−.061	−.093	−.041	−.038	−.062	−.067	−.079	−.092
	(.019)	(.024)	(.008)	(.015)	(.021)	(.025)	(.019)	(.027)
χ^2 test p-value	[<.001]		[<.001]				[<.001]	
R^2	.128	.085	.105	.044	.092	.075	.123	.119
Observations	4,499	5,035	4,070	5,056	5,060	5,050	4,976	5,049
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note.—Standard errors (in parentheses) are robust to heteroskedasticity and are clustered at the chiefdom level. All specifications include number of chiefs recalled and an amalgamation dummy. Demographic controls are age, age squared, and gender and ethnicity dummies. The specifications in panel B, in addition, include six geographic controls: a dummy for the presence of mining permissions in the 1930s, distance to coast, distance to nearest river, distance to 1895 trade routes, distance to 1907 railroad, and minimum distance to Bo, Kenema, or Freetown. Individuals are matched on chiefdom of birth. All outcome variables are $\in [0, 1]$. The bridging index is the unweighted mean of dummies for whether respondent has recently attended a community meeting, a meeting organized by the local council, and a meeting organized by the paramount chief. The bonding index is the unweighted mean of dummies for whether the respondent is a member of a school management group, a labor gang, a secret society, a women's group, a youth group, a farmer's group, a religious group, a savings or credit group (*osusu*), a trade union, or a political group. The collective action index is the unweighted mean of dummies for whether the respondent has participated in road brushing or contributed labor to a community project in the past month. Brackets show the p-value from a χ^2 test of the hypothesis that the coefficients on log number of ruling families are all zero in a set of seemingly unrelated regressions using each component of the index. These regressions are presented in online App. table E2.

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column 2 of table 9—are often used as a form of social control and are used by elites to construct the appearance of governance based on community consensus, when in fact consensus has little to do with their decisions. Murphy writes that "public forms [of discourse] are often recognized as an illusion masking alternative commitments arranged in secret. . . . A key attribute of the mature person or a successful group is the ability to strategically construct . . . public appearances" (28).

This interpretation may also have relevance for why less constrained chiefs, who apparently inhibit development, command greater authority and respect. The apparent contradiction arises simply because in the process of building bridges between chiefs and their citizens, citizens themselves make specific investments in their relationships with the chiefs, giving citizens an interest in the perpetuation of the institution. Once people have invested in the social network of the chief and entered into a patron-client relationship, they have no interest in seeing his power diluted by, for example, the youth. In fact, they might prefer having it strengthened. Our interpretation is similar to that of Ntsebeza (2005), who examined the role of chiefs in rural South Africa and argued that "traditional authorities derive their authority from their control of the land allocation process, rather than their popularity amongst their subjects. . . . The need for land . . . compelled rural residents willy-nilly to cooperate with the traditional authorities" (22). Ribot (2001) articulates a similar view that could best be summed up as "legitimacy follows power."

An alternative possible explanation of our results is that social capital may be higher defensively in chiefdoms with fewer ruling families, as a way of attempting to control and constrain chiefs who are unconstrained by political competition. However, this explanation is not consistent with our result that attitudes toward institutions of the chiefs' authority are also more favorable when there are fewer ruling families. It is also contradicted by the anthropological evidence discussed previously, for example, Murphy (1990) and Ferme (2001).

E. Robustness to Connections to Chieftaincy Elite

An alternative explanation for our results could be that the number of ruling families is associated with a broader distribution of patronage within the chiefdom that raises the observed means of our outcomes. Under this hypothesis, it would not be better governance driving the results, but rather a different structure of the patron-client network. The NPS allows us to test this hypothesis directly, as it includes measures of connections to the chieftaincy elite, such as whether a respondent is a member of a ruling family and whether the respondent has a village headman in the household. In online Appendix J, we show that our main results are robust to the inclusion of these variables as controls. In addi-

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tion, we show that the number of families is not associated with a greater likelihood of having connections to the chieftaincy elite or with variance in the level of inequality between elites and nonelites. In sum, these results suggest that variation in the social structure induced by the number of ruling families is not driving our results.

VII. Concluding Remarks and Implications

In this paper we investigated the consequences of constraints on the power of chiefs for development in Sierra Leone. In Africa more broadly, where a majority of the population lives in rural areas and where the national state often lacks the capacity and the power to "penetrate" society, institutions of local governance may be pivotal in shaping development outcomes. Yet they have received little systematic empirical investigation. Further, though the institution of the chieftaincy in its modern form was often a creation of the colonial state and there have been attempts to demolish it, chiefs still exercise considerable power across the continent.

On the basis of a unique survey, complemented by field and archival research on the histories of the chieftaincies, paramount chiefs, and ruling families of Sierra Leone, we argue that the fixed number of ruling families that could put forward candidates for the chieftaincy is a useful measure of political competition and the institutional constraints on the power of paramount chiefs. Using this measure, we show that for those born in places where there are fewer ruling families, a variety of development outcomes are significantly worse.

We argue that less constrained chiefs—who face greater political competition from other ruling families—lead to worse development outcomes because they are freer to distort incentives to engage in economically undesirable activities through their control of land, taxation, regulation, and the judicial system. An obvious interpretation of our results is that they are a confirmation and extension of the intuition of Becker (1958), Stigler (1972), and Wittman (1989) that political competition functions, like market competition, to promote efficiency. Even under the chieftaincy institutions in Sierra Leone that deviate quite radically from those that these authors were concerned with, it turns out that their intuition applies.

Low levels of competition in some chiefdoms may also have contributed to poor governance in Sierra Leone nationally. Tangri (1978) documents how decision making in postindependence local councils became quickly dominated by chiefs. The chiefs and the Tribal Authority formed the basis of the electorate for Sierra Leone's Legislative Council before independence and played an important role in Parliament afterward (Cartwright 1970). In chiefdoms with fewer families, the officials

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elected to constrain the power of the state were chosen by those who faced few political constraints themselves.

In contrast to expectations that would naturally follow from these findings, we also found that chieftancies with fewer ruling families have greater levels of both bonding and bridging social capital, generally believed to be associated with better accountability, good governance, and superior development outcomes. Though this finding is in stark contrast to the seminal work of Putnam et al. (1993), it does resonate with certain patterns observed in other contexts. The role of social capital to act as a basis of repressive uses of political power has long been noted (e.g., Portes 1998; Satyanath, Voigtlaender, and Voth 2013). Moreover, a similar pattern has been observed in India by Anderson et al. (2011). It is also in line with the interpretation of the social foundations of personal rule in Africa offered by Jackson and Rosberg (1982). Finally, we also found that those associated with the elite in chieftaincies with fewer ruling families command greater respect.

Our interpretation of these last two sets of findings is that chiefs who face fewer constraints build social capital as a way to control and monitor society. This mechanism may also induce people to invest in patron-client relations with powerful chiefs, thus giving them a vested interest in the institution. Hence, if in surveys people say that they respect the authority of elders and those in power, this is not a reflection of the fact that chiefs are effective at delivering public goods and services or represent the interests of their villagers. Rather, rural people appear to be locked into relationships of dependence with traditional elites.

It is useful to note that although our evidence comes from a specific country, Sierra Leone, with necessarily unique institutions, there are many commonalities between Sierra Leone and other African countries, particularly former British colonies, suggesting that our conclusions may have broader applicability. The places most similar to Sierra Leone are those in which the precolonial societies had "segmentary states" (Southhall 1956), where precolonial states were generally small groupings of villages headed by a chief advised by a committee of headmen.[37] Segmentary states were very common, including the Gisu, the Kiga, and the

[37] The places most dissimilar to our context are those either with strong centralized states that were well established before the colonial period or those completely lacking political centralization, even chiefs. In the former category, such as Asante in Ghana, Benin, Hausaland in Nigeria, and Buganda in Uganda, the British have had a more limited role in shaping traditional authorities' power. In places with no political centralization, the absence of clear leaders forced the British to appoint leaders with no primary legitimacy at all (see Jones [1970] and Afigbo [1972] on the Nigerian cases). The French chose similar action in southeastern Cameroon, where they recognized arbitrarily chosen outsiders to be chiefs of the Maka, a group not accustomed to central authority (Geschiere 1993). In these cases, in contrast to Sierra Leone, the colonial chiefs could not maintain their legitimacy after independence.

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Alur in East Africa.[38] Another system analogous to ours is the Tanganyika Federation of chiefdoms around Lake Tanganyika (Richards 1960). These chiefdoms, similar in size to those in Sierra Leone, were led by a single chief who had a "royal family"—the *banang'oma*—that provided services to his administration and also administered justice. In these chiefdoms there was not more than one royal family, but as colonialism progressed, officials did establish systems of election of chiefs, which forced aspirants to appeal to bases of political support outside the *banang'oma*.

Our findings have various implications for understanding the process of economic and institutional development in Africa. Most significantly, our findings raise the possibility that ideas on the relationship between the nature of politics and social capital developed with reference to societies with advanced economies and relatively strong institutions may have limited applicability to politics in Africa, or at the very least in Sierra Leone. They also suggest caution in the implementation of certain popular policies. For instance, many international aid agencies are now heavily involved in attempts to "strengthen" civil society and build social capital in the hope that these will increase local accountability and public good provision. The World Bank pours millions of dollars into Community Driven Development schemes, for example, in Sierra Leone (Casey, Glennester, and Miguel 2012), Liberia (Fearon, Humphreys, and Weinstein 2009), and the Democratic Republic of the Congo (Humphreys, Sanchez de la Sierra, and van der Windt 2012). However, if traditional civil society is captured by chiefs, efforts to strengthen it without freeing it from the control of traditional elites might just strengthen the power of chiefs. We believe that future research investigating these questions in greater detail would be particularly interesting. A major question is whether interventions that strengthen civil society organizations within a given institutional structure improve governance or further bolster existing institutional arrangements, even if they are dysfunctional.

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[38] Ferguson and Wilks (1970) describe similar societies in northern Ghana. Precolonial societies in many parts of Nyasaland (now Malawi) and Rhodesia (now Zambia and Zimbabwe) were also similar.

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