On the Origins of Direct Rule: Armed Groups and Customary Chiefs in Eastern Congo

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Abstract

Armed groups routinely delegate domains of rule to pre-existing village chiefs—indirect rule. The larger a village chief’s power over the villagers relative to the group’s, the more there is indirect rule. Over time, enabled by the chief’s efforts to legitimize the group, the group expands the taxes they collect themselves in addition to those collected by the chief for them and substitutes the chief for justice administration—converging to direct rule. This suggests indirect rule is a temporary arrangement by uninformed or illegitimate rulers with an inherent agency problem, overcome when rulers acquire enough skill to replace local elites.

JEL Codes: D02, P00, O17
Keywords: Indirect Rule, Chiefs

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1 Introduction

Rulers with the power to coerce who aim to rule over foreign populations, be it kings, colonial rulers, or non-state armed groups, often delegate aspects of rule to pre-existing authorities that are indigenous to those places—indirect rule (Machiavelli, 1981). This choice has been found to be consequential for economic development (Acemoglu et al., 2014, Banerjee and Iyer, 2005).

When do rulers rely on indirect rule? On the one hand, authorities that are indigenous to a place have better information or legitimacy to induce compliance by the population when the threat of force alone is insufficient. On the other, they can collude with the population against the ruler. This question has been asked through historical and qualitative methods. A challenge to answer this question empirically is that dis-aggregated data on direct vs. indirect rule is scant.

In this paper, we use data collection methods to construct a dis-aggregated panel dataset on armed groups and chiefs in 106 villages of North Kivu, eastern Democratic Republic of the Congo (DRC), allowing us to answer the following sub-questions: How often and what do armed groups delegate to the indigenous customary chiefs? When do they choose to do so and when do they impose their own administration? How does that change as the armed group acquires experience?

North Kivu is a well-suited context to examine this question. Hundreds of armed groups have governed populations since the 1990s (Vogel et al., 2021). Customary authority remains an important form of authority (Hoffmann, Vlassenroot and Mudinga, 2020) and hinges on criteria that the population can verify and remember. Alongside the sources of chief power, the diverse ethnic make-up of the eastern DRC and the fact that the ethnic identity correlates with cultural, customary, and spiritual beliefs, provides a source of chiefs’ legitimacy. Rule by a chief not sharing the ethnicity is perceived to be weaker. In part due to war-related population movements, chiefs in some villages have the ethnicity of the majority of the population; in others, they do not.
The main input into our analysis is a yearly village panel containing 249 episodes of armed group control from 1990 to 2016, as well as information on the 306 chiefs that exercised authority in these villages since 1950. Our data contains measures of chief power combining insights from the recent literature on traditional authority in Africa (Henn, 2023, Logan, 2009, Lowes et al., 2023) and details of specific arrangements between armed groups and chiefs regarding taxation, recruitment, legitimation, administration, political power, public services, and regulations.

We first establish that armed group factions ruling in a village frequently delegate the following aspects of village rule to the chiefs: taxation, justice, legitimation activities for the group, administration of the village, recruitment of combatants and, in some cases, political power. While armed organizations vary in the ways in which they delegate their rule, there is significant variation across village governance episodes within armed group, suggesting that the choice of direct vs. indirect rule may reflect a response to local conditions rather than just ideology or style of rule.

Having established that they often delegate rule, we then provide an explanation for why they do so. Guided by a simple framework, we inquire whether delegation may be more likely when the chief has a lot of power over the population. We develop an index of power over land, customary power, administrative power, charisma, managerial skills, and spiritual/supernatural power. We find that, when the chief’s power over the population is large, armed groups are more likely to delegate various aspects of rule to the chief (notably justice, administration, legitimation, and political power)—controlling for armed group and year effects. Using predicted chief power based on triangulated “hard” information about the chiefs yields the same results. Furthermore, indirect rule is more likely when the chief and the villagers are co-ethnic, and when the chief and the group are not co-ethnic. Overall, this means that groups delegate rule when the chief has more power over the villages, and especially so when compared to the power of the group over the villagers.
We then examine what happens to the faction’s institutions as a faction governing a village gathers experience in the village since, presumably, the advantage of using the chief may vanish. We find that, regardless of the initial institution, armed group factions’ institutions in a village converge to direct rule—controlling for episode and year effects. This is consistent with the factions improving their skills, allowing to overcome the agency problem of governing through the chiefs.

These findings make three contributions. First, a growing literature concerned with fiscal capacity in weak states has shown that local elites (chiefs) can be leveraged to collect taxes (Balán et al., 2022). This begs the question of whether relying on local elites is a global optimum or even sustainable across stages of state development. After all, across history, rulers tended to replace local elites with a bureaucracy (Tilly, 1985) or co-opt them into the state (Newbury, 2000) and there are various reasons why local elites do not have the loyalty to the ruler, unlike a professionalized bureaucracy with political career concerns in the state (Greif, 2008, Myerson, 2015). Our study complements this growing literature by showing that indirect rule appears to be a temporary imperfect arrangement that rulers prefer to avoid. Second, the literature on the legacies of colonial rule has shown how indirect rule has shaped economic development (Acemoglu et al., 2014, Banerjee and Iyer, 2005, Boone, 2003, Kohli, 2004, Lowes and Montero, 2021, Mamdani, 1996, Müller-Crepon, 2020). Our study joins a growing literature outside of economics that uses data (Garfias and Sellars, 2020, Popescu, 2021), by providing empirical evidence based on disaggregated data consistent with the idea that direct and indirect rule emerge as a result of choice by coercion-wielding rulers and consistent with simple economic intuitions. Third, a literature outside of economics has studied governance during violent conflict (Arjona, 2016, Staniland, 2021). We leverage the nuance in that literature regarding armed actors’ behavior, and suggest that the persistence of conflict can contribute to direct rule, thus to the militarization of society.
2 Background: Rural Governance in Eastern DRC

Hundreds of non-state armed groups operate in eastern DRC. Many have deep social roots, having emerged as political projects supported by elite networks or as “bottom up” social movements (Stearns and Botiveau, 2013), and exercise multifaceted influence over rural societies (Hoffmann and Verweijen, 2019, Stys et al., 2020). Some groups have been implanted for decades, yet control is often tenuous and limited to the population centers and main roads (Schouten, 2022), and subject to quick change as a result of military challenges. Because of the political salience of ethno-linguistic identities and their close relation to authority (Muchukiwa, 2006, Verweijen and Vlassenroot, 2015), armed groups can find themselves ruling over populations who consider their rule to be illegitimate. Moreover, traditional chiefs enjoy enduring authority and legitimacy, as a result of several factors from the power conferred to them by their status as custodians of the land in neo-customary land tenure regimes (Boone, 2014), to the enduring recognition of lineage based forms of power, to spiritual dimensions of their power and their leadership role in contexts of acute societal crises (Verweijen and Van Bockhaven, 2020). We henceforth refer to the subset of an armed group that governs in a village as an armed group village faction.

Armed group village factions have relied on both direct and indirect forms of rule. As an example of a foreign-led organization, the Rassemblement Congolais pour la Democratie (RCD), one of the largest rebel groups of the Second Congo War (1998–2003), “seized” the state apparatus in eastern DRC and used it to govern over the provincial capitals, without substantially altering it (Tull, 2003). In rural areas where it faced armed resistance, the RCD sought to assert its control

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1See the Usalama projects I and II and the Insecure Livelihoods Series for detailed analysis.
2As developed in Annex A, coercive rule by violent actors as well as indirect rule through local intermediaries are longstanding templates of rule in eastern DRC, dating back at least to the 19th century when the Rwandan Kingdom forced eastern Congolese entities into vassalage, and Tippo Tipp relied on local chiefs to raise labour and taxes (Northrup, 1988), a mode of rule that was then institutionalized by the colonial state and partially maintained in the post-independence era (Hoffmann, 2021).
through existing elites, by replacing them or intervening in longstanding customary succession conflicts, or by co-opting them through power-sharing agreements. The RCD relied on local chiefs for labor mobilization (Hoffmann, Vlassenroot and Marchais, 2016, Marchais, 2016). The RCD was largely perceived as a foreign and illegitimate movement and chiefs who collaborated with the RCD were often considered as traitors. As an example of a rather local group, the Mayi-Mayi movement was a popular armed resistance movement that emerged in 1997. One of the largest factions, the Mayi-Mayi Padiri, established the État-Major Politico-Militaire (Politico-Military headquarters) and an administration des Forets (Forest Administration) in the region of Bunyakiri, in South Kivu (Hoffmann, 2015, Morvan, 2005), combining direct and indirect forms of administration through appointed administrators, chiefs, and religious leaders who were subjected to ideological training (Morvan, 2005, p.57). The group set up a system of taxation to finance its war effort, with some sectors of the economy coming under direct control by the movement, while others left to more decentralized forms of taxation through intermediaries. For example, while the regulation and taxation of the mining sector was highly centralized, with the group deploying soldiers to each mine to collect taxes for the headquarters, the collection of household taxes—known as “war effort” or ration—was usually delegated to the chiefs. Since the end of second Congo War in 2003, several other groups had significant governance capacity (Congo Research Group, 2020, Stearns, 2023). This variation, which often varies across villages, provides the backdrop for our analysis.

3 Measuring Chiefs’ Power and Armed Group Institutions

The sample is from 106 villages in the five largest districts of North Kivu: Masisi, Rutshuru, Walikale, Beni and Lubero.³ Figure F.1 in the Appendix shows the map. The data collection, im-

³Villages were considered for random sampling if they had a mine or cash-crop production.
implemented in June-December 2015, gathered recall data, replicating the strategies used in Sánchez de la Sierra (2020) and Marchais (2016). In addition, we add the following two components.

**Hard measures of chiefs and subjective measures of chief power for all chiefs since 1950:**

Hard information about chiefs included start and end of reign, birth year, whether the chief was related to the regional chief of chiefs, whether he was related to the previous chief (hence following the custom). In addition, local customs consider chiefs to be the custodians of the land, entitled to levy contributions in exchange for usufruct over land granted to their subjects. Thus, we also measure the percentage of the land of a given village or entity over which a given chief exercises customary authority. Given the role of the supernatural in the authority of a chief, we also report the number of active witches in the reign of a chief.

In addition to these hard measures, we also gathered the following direct measures of chief power, some of which are inherently subjective, and thus were gathered through measuring perceptions of households in private: (i) given that customary recognition varies substantially in eastern DRC, that chiefs’ tenures are often contested, and that political conflicts over customary authority involving competing claims are numerous in eastern DRC (Hoffmann, Vlassenroot and Mudinga, 2020), the expert survey establishes whether or not chiefs’ tenures are sanctioned by customary traditions and rituals (including whether there was an appropriate enthronement ceremony and whether the outcome was confirmed by the ancestors of the community), whether the population was consulted, as well as the population’s perspective on whether a chief is regarded as

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4Higher levels of traditional authority, such as the groupement chiefs and Mwamis, also exist in some regions. We focus on village chiefs because they are present in every location and manage daily governance, and often belong to the lineages—and thus customary authority—of higher level chiefs. Not all chiefs are customary chiefs. The colonial state incorporated chiefs into the state administration in order to rule over rural populations, collect taxes, and mobilize labor. When no chiefs existed or when chiefs were reluctant to collaborate, they appointed new chiefs or replaced existing ones. As a result, some administrative chiefs in eastern DRC are not recognized by customary traditions, but have been appointed by the colonial state and have kept their administrative status in the post-colonial era. Moreover, even when chiefs are recognized by customary traditions, they might be unpopular for various reasons, including incompetence, corruption or collaboration with rulers considered to be illegitimate.
customarily legitimate; (ii) given that chiefs can have varying levels of administration competence, we measure households’ perception of chiefs’ skills in relation to capacity to mobilize resources, to persuade the population of ideas, and their management ability; (iii) given that chiefs’ sources of power also include traditional forms of power such as charisma and the use of the threat of force, our survey also provides a grade for the intensity of the chief’s charisma as well as severity of the threat of force, as reported by the households in private; (iv) given that in eastern Congo’s customary traditions, the role of the chief is to protect the population and guide their fortune and to protect them using supernatural forces, we gather chiefs’ spiritual power to protect the population. Notably, the chief can intercede with the spiritual world and deploy various forms of spiritual or “supernatural” protection (Bishikwabo, 1980, Burume, 1993). Given the subjective nature of these beliefs, the household data is assesses whether the population believes a chief to have various supernatural powers. The dimensions of supernatural power that we measure were decided as the outcome of preparatory qualitative research in 2015: power to protect from theft, help in hunting, help in mining activities, improve agriculture, control rain and thunder, control bridges, as well as their power to heal.5 (v) given the importance of face to face interactions in citizen intrinsic motivation in this type of personalized governance, we also ask respondents how many requests they made to the chief per month and how many conversations they had in private.

Measures of armed group village faction and chief institutional arrangements since 1990: for each armed group governance episode, we collected data on the administrations that armed groups set up in the study villages. We define an armed group episode as an episode of military control over an entity (village or neighborhood) by an armed actors that lasts for a period of at least one month. We observe 249 armed group episodes in 106 villages by 41 different armed groups, of varying

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5 There are many differences in the spiritual and religious traditions in which such “spiritual” power is vested and in the types of powers that exist, as well as in chiefs’ capacity to summon and deploy such powers.
duration. This included yearly data on the taxes that armed groups levied, including the types of
taxes, their amount, their modes of collection. It also included data on whether and how armed
groups enforced taxation, whether they intervened in the administration of justice, and whether
they set up economic monopolies (of alcohol and cigarettes in particular). We also collected data on
how the recruitment of soldiers, porters, and assistants was carried out. Notably, we gathered the
deliverables expected by the group (collection of taxes, labor mobilization, information gathering,
spiritual or religious support), the perceived performance of the chiefs on these dimensions.

4 Three Facts About Indirect Armed Group Rule

4.1 Armed Groups Routinely Delegate Rule Areas to Chiefs (Fact 1)

We first explore the frequency with which armed group factions governing in a village for a given
period of time delegate aspects of their rule to the village customary chiefs. Table 1, Panels A
and B, provide summary statistics for all armed groups episodes, grouped by type of group, of the
extent to which the armed group faction of the given episode delegated rule to the chief (Panel
A), and the extent to which they implemented domains of rule themselves directly (Panel B), for
each domain of indirect rule and of direct rule. Taxation, justice, and legitimation were collected
yearly, thus the table reports the initial year; the remaining variables were collected at the episode
level. For each domain, we computed a standardized index using the domain variables.\(^6\) There
are 249 armed group village episodes, on average lasting 4 years each.

\(^6\)In some cases, additional identical variables found in other places of the survey were added to the computation
of the standardized indices. Specifically, for indirect rule taxation, we use two additional variables providing the
same result, asked differently about whether a head tax was organized by the chief; for recruitment, we use two
other variables asking whether the chief recruited for the group and whether the chief encouraged recruitment
for the group. The inclusion or exclusion of these variables have no effect on the analysis. We also computed a
standardized index of indirect rule and of direct rule using the indices of each domain. Table F.1 shows it for all
armed groups in the sample, providing evidence that the variation is large across groups and that groups display
significant overlap in terms of episode years.
The panel provides two insights. First, despite the fact that armed group factions have the guns, they frequently delegate various aspects of rule to the chiefs, including taxation, justice administration, legitimation (chiefs conducting sensitization campaigns with the explicit goal to increase the group’s legitimacy), administration of the village, or even political power in the village. This delegation as indirect rule in a given domain can co-exist with direct rule in the same domain (more intense rule) as well as with direct rule in other domains (including, for taxation under direct rule, levying of toll taxes, mill taxes, market taxes, or forced debt directly; for direct legitimation, campaigns to hunt witches in order to prevent the rise of illegitimacy; for direct administration of the village, the use of administrative documents, of a constitution, of contracts, of written communication and the use of a seal). That is, direct and indirect rule is a complex decision involving multiple dimensions and both can co-exist in any dimension.

Second, while the extent to which rule is delegated as well as the specific domains of rule that are delegated varies significantly across group type suggesting armed groups’ styles (or ideology), there is substantial variation within group type (across episodes). In terms of style, foreign groups tend to disregard more the authority of the chief, while they are more dependent on the chief efforts to increase their legitimacy and to recruit fighters—both of which rely particularly on legitimacy, something foreign groups lack; most groups tend to delegate the taxation of the head tax to the chief (although in different degrees). In terms of variation within armed group, the fraction of episodes in which a given direct or indirect rule instrument is used is never 100% nor 0%.

This suggests that accounting for group average tendency to delegate rule is important to analyze the effect of material payoffs on the choice of indirect rule, there is significant variation within group across episodes. We exploit this variation in the analysis that follows.

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7In the case of armed groups, sensibilisation usually means in the DRC the public meetings carried out to convince populations of the objectives, ideologies, and legitimacy of armed groups.
Table 1: Armed Groups Routinely Delegate Rule Areas to Chiefs (Fact 1)

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Popular militia</th>
<th>Foreign forces</th>
<th>State forces</th>
<th>Others groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Episodes</td>
<td>249</td>
<td>73</td>
<td>118</td>
<td>47</td>
<td>11</td>
</tr>
<tr>
<td>Average Length</td>
<td>4.24</td>
<td>2.62</td>
<td>4.36</td>
<td>6.98</td>
<td>2.18</td>
</tr>
</tbody>
</table>

Panel A: Indirect Rule

Taxation (standardized index) 0.00 0.35 0.31 -1.18 -0.56
  Head tax collection organized by chief 0.68 0.81 0.82 0.19 0.41

Justice (standardized index) 0.00 -0.05 -0.26 0.55 0.78
  Justice administration by chief 0.23 0.21 0.13 0.45 0.55

Legitimation (standardized index) 0.00 -0.37 0.26 0.02 -0.41
  Legitimation campaign by chief 0.25 0.10 0.35 0.26 0.09

Administration (standardized index) 0.00 -0.24 -0.38 1.22 0.47
  Village administration by chief 0.26 0.16 0.10 0.77 0.45

Recruitment (standardized index) 0.00 -0.41 0.49 -0.52 -0.32
  Who recruited? Chief 0.16 0.03 0.30 0.02 0.09

Political (standardized index) 0.00 -0.14 -0.34 1.24 -0.49
  Did the chief hold political power? 0.20 0.14 0.06 0.69 0.00

Indirect rule standardized index 0.00 -0.34 0.05 0.54 -0.41

Panel B: Direct Rule

Taxation (standardized index) 0.00 0.04 0.47 -1.10 -0.58
  Group levies head tax 0.72 0.87 0.87 0.17 0.50
  Group levies toll tax 0.50 0.41 0.74 0.09 0.27
  Group levies mill tax 0.18 0.12 0.27 0.07 0.09
  Group levies market tax 0.61 0.59 0.80 0.21 0.45
  Group levies forced debt 0.11 0.20 0.10 0.01 0.00

Justice (standardized index) 0.00 0.05 0.26 -0.55 -0.78
  Group administers justice 0.77 0.79 0.87 0.55 0.45

Legitimation (standardized index) 0.00 0.87 -0.32 -0.67 0.49
  Legitimation campaign by group 0.41 0.47 0.47 0.16 0.50
  Witch hunts 0.17 0.32 0.14 0.01 0.18

Administration (standardized index) 0.00 -0.62 0.48 -0.21 -0.19
  Group administers village 0.74 0.84 0.90 0.23 0.55
  Group has written admin docs 0.74 0.51 0.90 0.72 0.64
  Group has written constitution 0.29 0.14 0.43 0.19 0.27
  Group has written contracts 0.35 0.15 0.53 0.19 0.45
  Group writes communication 0.56 0.22 0.75 0.64 0.45
  Group has seal 0.67 0.38 0.86 0.70 0.55

Recruitment (standardized index) 0.00 0.33 0.01 -0.66 0.51
  Who recruited? Group 0.56 0.73 0.57 0.23 0.82

Political (standardized index) 0.00 0.17 0.18 -0.95 0.87
  Group has political power 0.57 0.65 0.66 0.10 1.00

Direct rule standardized index 0.00 0.13 0.39 -1.27 0.13

Notes: Summary statistics of armed group episodes, aggregated into four types of armed groups found in our data. Popular militia includes regional militias such as different Mayi-Mayi groups or Raia Mutomboki; Foreign forces includes armed groups that are supported or coordinated by foreign groups (such as RCD, CNDP, and M23) or foreign rebel groups and their allies (FDLR, Nyatura); State forces includes the Congolese army and police; Other groups includes all other groups. For simplicity, we exclude the variables economic regulation and size of the group in the village, while they produce consistent results across the paper for compactness. We include them in the computation of the indices.
4.2 Greater Power of Chiefs Results in More Indirect Rule (Fact 2)

In this section, we attempt to provide an explanation for why village armed group factions choose indirect rule in some cases. To organize the analysis, consider, as benchmark, the canonical model of Tirole (1986). A principal (here, the ruler) wants an agent (here, the citizens) to exert effort that is privately costly to the agent but whose output benefits the principal. When the agent has private information, the agent will get an information rent, diminishing the payoff of the principal. Supervisors (here, a chief) may have hard information about the agent’s effort and the state of the world. The principal can offer contracts to the supervisor and the agent. A problem is that the agent could offer a bribe to the principal in exchange for her silence—collusion—hence, the supervisor needs to be given incentives too. Such “collusion-proof” contract can be costly for the principal since it must provide incentives to the supervisor not to accept a bribe from the agent.

This suggests one simple intuition for the choice of direct or indirect rule (without or with supervisor): if the supervisor (here, the chief) is better informed, indirect rule should in principle be more profitable to the principal than simply offering a contract to the agent based on the imperfect information held by the principal; hence, when the supervisor is better informed, she is more likely to be offered a contract by the principal to reveal information about the agent’s effort. The tension arises because the supervisor (here, the chief) needs to be given a contract that is collusion-proof, and this is costly. Thus, when if the principal has enough information, even if it is not nearly as good as that of the supervisor, the principal may choose to circumvent the supervisor (direct rule). Guided by this simple intuition, we examine the relationship between the power of a chief over the village population and the choice of armed group faction’s rule.

We begin our analysis by characterizing chief power. Table 2, Panel A, presents summary statistics of hard measures of chief power for the average chief. Chiefs started their reign in 1989 on average, and the average reign lasted 15 years. The mean year of birth of a chief is 1953. 69%
were related to the previous chief (hence respecting customary succession rules and hence more likely to hold legitimacy), 4% were related to the chief of chiefs in the region (mwami), whereas 84% were considered to be customary owner of the land.

Panel B then shows the full set of measures of chief power. Overall, 85% of chiefs followed customary rules of determining their authority, 82% were from the ruling family, 88% followed the customary and appropriate enthronement ceremony, where 82% were confirmed by the dead ancestors of the community, and 85% were enthroned consulting the population. Chiefs had high grades for mobilizing and “sensibilisation” ability, charisma, and reasonable grades for management skills and threat of force. In terms of supernatural powers, chiefs tended to have reasonably high powers (and at least much higher than a non-believer would ascribe): the mean fraction of respondents who reported their chief to have the power to control the rain, protect form theft, help hunt, help mining, improve cultivation, control thunder, bridges or harvest, and have the power to heal was often close to 50%. Overall, 90% of chiefs were liked by the start of their reign. Chiefs received numerous requests per villager per month, and held frequent private meetings with the villagers. To construct a measure of chief power, we conduct factor analysis using the 23 variables of Panel B and use the predicted factor using all variables as our index of chief power.

Using this measure of chief power, we can now ask whether the armed group factions are more likely to choose indirect rule when the chief is powerful. We estimate the following equation:

\[
\text{IndirectRule}_i = \alpha + \beta_1 \text{Power}_{i}^{C,V} + \theta_{AG} + \eta_t + \epsilon_V,
\]

Appendix Section D discusses the correlations between individual characteristics and supernatural beliefs. Figure F.2 shows that the perceived supernatural power of chiefs declined steadily in the period, consistent with the secularization trend in eastern DRC and that it correlates positively with management skill.

![Supernatural Power Overall Assessment](image)

Appendix Section D discusses the correlations between individual characteristics and supernatural beliefs. Figure F.2 shows that the perceived supernatural power of chiefs declined steadily in the period, consistent with the secularization trend in eastern DRC and that it correlates positively with management skill.

Since the high factor loading of supernatural variables can be in part due to the fact that they are various, we also replicate in Table F.2 the factor analysis using supernatural power overall assessment instead of each dimension of supernatural power. The factor loading is naturally smaller but remains quite high, .651.
## Table 2: Quantifying Chief Power

<table>
<thead>
<tr>
<th>Panel A: Chief Characteristics</th>
<th>Mean</th>
<th>Factor</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start of reign</td>
<td>1989</td>
<td>-0.83</td>
<td>0.32</td>
</tr>
<tr>
<td>Length of reign</td>
<td>15.21</td>
<td>0.76</td>
<td>0.42</td>
</tr>
<tr>
<td>Birth Year (Mean)</td>
<td>1953</td>
<td>-0.66</td>
<td>0.57</td>
</tr>
<tr>
<td>Related to previous chief (Mode)</td>
<td>0.69</td>
<td>0.59</td>
<td>0.65</td>
</tr>
<tr>
<td>Related to mwami (Mode)</td>
<td>0.04</td>
<td>0.06</td>
<td>1.00</td>
</tr>
<tr>
<td>Traditional owner of land? (Mode)</td>
<td>0.84</td>
<td>0.58</td>
<td>0.67</td>
</tr>
<tr>
<td>How many witches (Mean)</td>
<td>5.31</td>
<td>0.57</td>
<td>0.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B: Chief Power</th>
<th>Mean</th>
<th>Factor</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customary authority {0,1}</td>
<td>0.85</td>
<td>0.72</td>
<td>0.48</td>
</tr>
<tr>
<td>From the ruling family {0,1}</td>
<td>0.82</td>
<td>0.72</td>
<td>0.48</td>
</tr>
<tr>
<td>Enthronement ceremony {0,1}</td>
<td>0.88</td>
<td>0.66</td>
<td>0.56</td>
</tr>
<tr>
<td>Confirmed by spirits {0,1}</td>
<td>0.82</td>
<td>0.72</td>
<td>0.49</td>
</tr>
<tr>
<td>Was the population consulted {0,1}</td>
<td>0.85</td>
<td>0.49</td>
<td>0.76</td>
</tr>
<tr>
<td>Mobilizing ability {0,1,2}</td>
<td>1.79</td>
<td>0.64</td>
<td>0.59</td>
</tr>
<tr>
<td>Sensibilizing ability {0–2}</td>
<td>1.77</td>
<td>0.65</td>
<td>0.58</td>
</tr>
<tr>
<td>Management skills {0,1,\ldots,10}</td>
<td>6.82</td>
<td>0.49</td>
<td>0.77</td>
</tr>
<tr>
<td>Threat of force {0,1,\ldots,10}</td>
<td>6.29</td>
<td>0.68</td>
<td>0.53</td>
</tr>
<tr>
<td>Charisma {0,1}</td>
<td>0.85</td>
<td>0.60</td>
<td>0.64</td>
</tr>
<tr>
<td>Power to control rain {0,1}</td>
<td>0.56</td>
<td>0.87</td>
<td>0.24</td>
</tr>
<tr>
<td>Power to protect from theft {0,1}</td>
<td>0.57</td>
<td>0.87</td>
<td>0.24</td>
</tr>
<tr>
<td>Power to help hunt {0,1}</td>
<td>0.51</td>
<td>0.87</td>
<td>0.25</td>
</tr>
<tr>
<td>Power to help mining {0,1}</td>
<td>0.41</td>
<td>0.81</td>
<td>0.35</td>
</tr>
<tr>
<td>Power to improve cultivation {0,1}</td>
<td>0.39</td>
<td>0.85</td>
<td>0.27</td>
</tr>
<tr>
<td>Power to control thunder {0,1}</td>
<td>0.38</td>
<td>0.80</td>
<td>0.36</td>
</tr>
<tr>
<td>Power to control bridges {0,1}</td>
<td>0.25</td>
<td>0.65</td>
<td>0.58</td>
</tr>
<tr>
<td>Power to control harvest {0,1}</td>
<td>0.36</td>
<td>0.83</td>
<td>0.30</td>
</tr>
<tr>
<td>Power to heal {0,1}</td>
<td>0.41</td>
<td>0.84</td>
<td>0.29</td>
</tr>
<tr>
<td>Liked at start of reign {0,1}</td>
<td>0.90</td>
<td>0.37</td>
<td>0.87</td>
</tr>
<tr>
<td>Requests per month at start of reign (#)</td>
<td>2.19</td>
<td>-0.28</td>
<td>0.92</td>
</tr>
<tr>
<td>Private conversations per month (#)</td>
<td>7.08</td>
<td>0.07</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Notes:** This table shows the mean, factor loading, and uniqueness for chief hard characteristics (Panel A) and subjective measures of chief power (Panel B).
where \( AG, V, C, i \) index armed group, village, chief, and armed group faction village governance episode respectively, and the sample is restricted to the first year of the episode. We include armed organization fixed effects (there are 41), \( \theta_{AG} \), to account for the fact that certain organizations have different strategies and objectives for their rule. We also include year fixed effects, \( \eta_t \), and cluster standard errors at the village level.

Table 3, Panel A, reports the estimates. In Columns (1)-(3), the dependent variables are the indices of indirect rule, of direct rule, and the gradient of indirect rule calculated as the difference between the indirect rule and the direct rule indices. Across armed group faction village episodes, within village, within episode start year, more powerful chiefs are associated to more indirect rule through the chief. Columns (4)-(9) decompose this effect by showing the gradient of indirect rule for each domain of rule: Columns (4)-(6) do so for the measures that are time-invariant within episode (and hence the gradient is computed for the average of the episode), and Columns (7)-(9) for those that vary by year. Powerful chiefs are associated to more indirect rule as they are more likely to administer justice during an armed group rule episode, to conduct sensitization campaigns to legitimize the group for the population, and to administer the village, than less powerful chiefs. This is consistent with the simple economic intuition that chiefs who wield more legitimacy and thus power constitute better suited intermediaries to run domains of rule that require legitimacy—precisely those for which the threat of force is insufficient or illegitimate.

A concern is that these measures of chief power are subjective. To address this issue, Panel B uses instead the predicted chief power factor from a regression of chief power factor on the hard variables of chiefs.\(^{10}\) The results in Panel B confirm that chief power leads to more indirect rule in justice, legitimation, administration, and even political power.\(^{11}\)

\(^{10}\)Table F.3 presents the estimates. The regression also allows to validate our measure of chief power: chiefs who respect the succession rule and who are traditional owner of the land have a higher chief power factor.

\(^{11}\)Table F.4 shows that the effect is driven by chiefs who follow succession rules and are owners of the land.
Table 3: Greater Power of Chiefs Results in More Indirect Rule (Fact 2)

### Panel A: Chief Power

<table>
<thead>
<tr>
<th></th>
<th>Indirect Rule</th>
<th>Direct Rule</th>
<th>Indirect Gradient</th>
<th>Dependent Variables:</th>
<th>Intensity Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>Taxation†</td>
<td>(10)</td>
</tr>
<tr>
<td>Chief Power</td>
<td>0.266*</td>
<td>-0.178</td>
<td>0.444*</td>
<td>0.102</td>
<td>0.0875</td>
</tr>
<tr>
<td></td>
<td>(0.149)</td>
<td>(0.115)</td>
<td>(0.240)</td>
<td>(0.103)</td>
<td>(0.117)</td>
</tr>
<tr>
<td>Observations</td>
<td>108</td>
<td>108</td>
<td>108</td>
<td>112</td>
<td>108</td>
</tr>
<tr>
<td>R²</td>
<td>0.428</td>
<td>0.399</td>
<td>0.394</td>
<td>0.484</td>
<td>0.478</td>
</tr>
</tbody>
</table>

### Panel B: Predicted Chief Power

<table>
<thead>
<tr>
<th></th>
<th>Indirect Rule</th>
<th>Direct Rule</th>
<th>Indirect Gradient</th>
<th>Dependent Variables:</th>
<th>Intensity Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>Taxation†</td>
<td>(10)</td>
</tr>
<tr>
<td>Predicted Chief Power</td>
<td>0.524**</td>
<td>-0.476***</td>
<td>1.000***</td>
<td>0.0365</td>
<td>0.0483</td>
</tr>
<tr>
<td></td>
<td>(0.214)</td>
<td>(0.142)</td>
<td>(0.308)</td>
<td>(0.194)</td>
<td>(0.191)</td>
</tr>
<tr>
<td>Observations</td>
<td>102</td>
<td>102</td>
<td>102</td>
<td>104</td>
<td>102</td>
</tr>
<tr>
<td>R²</td>
<td>0.483</td>
<td>0.445</td>
<td>0.464</td>
<td>0.470</td>
<td>0.478</td>
</tr>
</tbody>
</table>

### Panel C: Coethnicity

<table>
<thead>
<tr>
<th></th>
<th>Indirect Rule</th>
<th>Direct Rule</th>
<th>Indirect Gradient</th>
<th>Dependent Variables:</th>
<th>Intensity Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>Taxation†</td>
<td>(10)</td>
</tr>
<tr>
<td>Coethnic Village-Chief</td>
<td>0.319</td>
<td>-0.474***</td>
<td>0.793***</td>
<td>0.271</td>
<td>-0.155</td>
</tr>
<tr>
<td></td>
<td>(0.243)</td>
<td>(0.164)</td>
<td>(0.321)</td>
<td>(0.210)</td>
<td>(0.262)</td>
</tr>
<tr>
<td>Observations</td>
<td>128</td>
<td>128</td>
<td>128</td>
<td>135</td>
<td>128</td>
</tr>
<tr>
<td>R²</td>
<td>0.326</td>
<td>0.433</td>
<td>0.400</td>
<td>0.467</td>
<td>0.305</td>
</tr>
</tbody>
</table>

**Notes:** Panels A–C show the effects of chief power on the decision of armed groups to implement direct or indirect rule. The analysis is at the armed group episode level, and the dependent variable are indices for the governance arrangements from the first year of a group’s occupation of a village. For the dependent variables listed in Columns (4)-(6), those are based on variables collected yearly; hence we use the first year of the episode; for those in Columns (7)-(9), those were collected at the level of an episode, we thus use the episode measure. Panels A and B present estimates of Specification 1 and has the (predicted) chief power estimated in Table 2 as the explanatory variable. The Indirect Rule (Column 1) and Direct Rule (Column 2) indicators, as well as their difference (Column 3), the difference by governance domain (Columns 4–9), and their sum (Column 10) are the outcome variables. Panel C presents estimates of Specification 1 where the explanatory variables are indicators for whether the chief and armed group, and chief and majority of village share the same ethnicity. All specifications include armed group and year fixed effects. Standard errors, clustered at the village level, are shown in parentheses. *, **, *** indicate that the corresponding coefficient is statistically significant at the 10%, 5%, and 1% levels, respectively.
If the power of chiefs matters through their legitimacy, then chiefs who have, comparatively, more legitimacy than the armed group over the villagers would be those who run indirect rule. In Panel C, we present the estimates from Equation 1, replacing the explanatory variable predicted chief power variables with indicators of coethnicity, $Coethnic_{C,V}^i$, $Coethnic_{C,AG}^i$, and $Coethnic_{AG,V}^i$. The variables $Coethnic_{C,V}^i$, $Coethnic_{C,AG}^i$, $Coethnic_{AG,V}^i$ are indicators taking value one if chief $C$ is from the same ethnic background as the majority of the population in village, if chief $C$ is from the same ethnic background as the majority of the members of armed group $AG$, and if the majority of the members of armed group $AG$ are from the same ethnic background as the majority of the population in village $V$, respectively. When chiefs who are co-ethnic with the villagers (and thus less likely to be illegitimate) there is more relative indirect rule for the administration of justice, of the village, and of of political power. Conversely, when the chief and the armed group are co-ethnic (and thus, for whom the chief has no legitimacy advantage), there is less relative indirect rule in the domains of justice administration, but also of taxation.

In sum, chiefs that have an advantage to govern compared to the armed group aiming to govern result in less direct and more indirect rule. This would be predicted if the type of rule is chosen by the group to maximize the rent extracted from the village: armed groups overcome the agency problem with the chief by replacing the chief when the armed group has a sufficiently good technology that its bureaucracy can substitute the chief and achieve sufficiently large extraction.

4.3 Ultimately, Groups’ Institutions Converge to Direct Rule (Fact 3)

If armed groups learn over time how to govern or acquire legitimacy and if governing through the chiefs is hampered by the cost of a collusion-proof contract to prevent chief-villager collusion, Table F.5 shows that villages with powerful chiefs are equally likely to be controlled by armed groups, assuaging concerns of endogeneity. Table F.6 shows that including state forces preserves the results.
indirect rule could give way to direct rule. To see this, we estimate the following equation in OLS using all years and the sub-indices of direct and indirect rule that vary across years:

$$IndirectRule_{i,t} = \alpha + \sum_{j=1}^{k} \beta_{j} 1_{i,j} + \psi_{i,t} + \eta_{t} + \epsilon_{V}$$ (2)

where $1_{i,j}$ is an indicator taking value 1 if the armed group has been in the village for $j$ years.

We include armed group episode fixed effects, $\psi_{i,t}$, to account for any unobserved constant heterogeneity at the group level that may correlate with institutional choice, and year fixed effects, $\eta_{t}$, to account for regional trends that may correlate with armed groups tenure. Panels A-D present the year coefficients along with their 90 and 95% confidence intervals for the overall indirect rule, direct rule, gradient and rule intensity indices, for: taxation, justice, legitimation, and the standardized index of all these domains, respectively.

Panel A shows that, over time, the delegation of taxation to the chief mildly increases but, alongside taxation by the chief, armed groups increase direct rule in the domain of taxation. This effect is driven by progressively introducing the taxation instruments levied directly by the groups: toll fees, mill taxes, market taxes, and forced debt. This expansion of direct rule amounts to a mild decrease in the indirect rule gradient, driven by this expansion of armed group taxes. Overall, these changes result to an increase in rule intensity, as both direct and indirect rule increases in the domain of taxation, corresponding to an increase in fiscal capacity and in taxes collected driven by those levied directly by the group. This increase is consistent with an increase in legitimacy and learning by the group, allowing them to expand their taxation vector while not implying that the optimal tax collected by the chief is lower. It also suggest that, despite there being taxation by the chief in the initial years, taxation is constrained by limited fiscal capacity which in turn is determined by the armed group’s own legitimacy and information.
Figure 1: Ultimately, Armed Groups’ Institutions Converge to Direct Rule (Fact 3)

Panel A: Domain Taxation

Panel B: Domain Justice

Panel C: Domain Legitimation

Panel D: All Time-Varying Domains of Rule

Notes: This figure shows the yearly coefficients from Equation 2. The analysis is at the village-year level and all years when a village is occupied by an armed group are included. In Panels A-D, the dependent variables are the corresponding indices of taxation, justice administration, legitimation, and all these three domains pooled together, respectively.
Panel B shows a nuanced distinct increase in direct rule in the domain of justice. In that case, the administration of justice is simply taken over by the armed group from the chief. Since in each year, it is either the chief or the armed group who administers justice, the decrease in indirect rule is mirrored by an increase in direct rule (and we thus do not report the index of rule intensity, constant by construction). Overall, this implies a decrease in the indirect rule index reflecting, rather than an expansion in the extent of justice administration, simply a centralization of legal capacity in the hands of the group as the group gains experience in the village. While legal capacity may stay constant, increase or decrease depending on the information held by the group and its enforcement, the ruler has more power over justice administration.

Panel C shows a drastic and continuous decrease in the extent to which the chief conducts sensitization campaigns designed to help the group increase its legitimacy. The direct rule index remains constant, indicating that the group does not begin to do campaigns themselves. This suggests that, lacking legitimacy in the village at the beginning of a governance episode, armed groups tend to rely on campaigns held by the chief, who does have legitimacy, to validate the armed group and provide them with legitimacy. As the returns to legitimation efforts flatten, those campaigns decrease, coinciding with the armed group expanding the set of taxes they collect directly as well as the taking of justice in their own hands.

These patterns are summarized in Panel D. Overall, direct rule increases, and indirect rule decreases, leading to a decrease in the indirect rule index while rule intensity remains constant. However, we note that the permanence of rule intensity is an artifact of including chief legitimation campaigns in the index of indirect rule. If, instead of a domain of rule, legitimation is analyzed as an input into rule, this implies that rule intensity increases, driven by an expansion of fiscal capacity by the armed group, alongside a take-over of administration of justice by the group.\textsuperscript{12}

\textsuperscript{12}Table F.7 shows that the result is preserved estimating a linear relationship between the indices and group
In sum, this section has shown that, over time, armed groups converge to direct rule, through expanding taxation in the hands of the armed group without substitution taxation by the chief, and taking the administration of justice in their own hands. This transition appears to be in part enabled by the initial efforts of the chiefs to legitimize the armed group—and potentially through learning. These results are consistent with indirect rule being an inefficient arrangement due to the agency problem of having to motivate chiefs, whose loyalty to the armed group is limited. However, by using their power to coerce the chiefs to induce campaigns to legitimize the group (and potentially by acquiring information about the village through learning) armed groups choose to bypass the chief for the collection of taxes and to circumvent the chief for the administration of justice once their own skill improves over time.

5 Conclusion

These results suggest that coercion-wielding organizations who aim to govern populations, even though they have the guns, do not rule in a vacuum: there are indigenous political institutions. Enlisting indigenous elites into “indirect rule” is a temporary solution when they have power. Over time, however, armed groups develop fiscal capacity expanding the taxes they directly collect and legal capacity by substituting the chiefs’ administration of justice. Our results potentially provide exportable insights to the change induced during colonial institutions as a result of direct rule contexts of rulers aiming to design imperial institutions (Boone, 2003).

tenure in years, as well as whether state forces are included in the analysis.
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