

Building Fiscal Capacity with Traditional Political Institutions: Experimental and Qualitative Evidence from Sierra Leone*

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Abstract

How can weak states build fiscal capacity? I argue that governments in weak states can build fiscal capacity by collaborating with non-state, traditional political institutions (TPIs). Using a mix of experimental and qualitative evidence, I show that this collaboration increases citizens' compliance because TPIs possess legitimacy and coercive capacity. Collaborating with the local government in Kono District, Sierra Leone, I embedded an experiment in their campaign to collect property taxes. Potential taxpayers were shown awareness videos that varied in their content, particularly in terms of whether and how their local paramount chief characterized his involvement in tax collection. I find that state collaboration with TPIs increases citizens' compliance with a newly introduced property tax and that TPIs' authority stems from both their legitimacy and coercive capacity. Qualitative evidence from 300 semi-structured interviews adds a richer description of legitimacy and coercive capacity in my context. I argue, based on qualitative evidence, that legitimacy and coercion are complementary mechanisms of TPIs' authority enabling them to effectively coordinate collective action to produce local public goods in the absence of the state.

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While it is widely acknowledged that fiscal capacity is crucial for economic development (Besley and Persson 2011), many poor countries are trapped in a low-capacity equilibrium: governments lack the capacity to collect taxes and, therefore, lack the tax revenues to invest in more capacity. Existing literature in economics and political science offers one pathway out of this trap: improving the effectiveness of state institutions. However, little attention has been given to the traditional political institutions (TPIs) that coexist alongside governments throughout the developing world (Holzinger et al. 2016), which govern important parts of day-to-day life (Baldwin 2016). This paper explores whether weak states can increase their fiscal capacity by collaborating with TPIs.

One way that state collaboration with TPIs might increase fiscal capacity is by increasing citizens' compliance. On the one hand, if TPIs possess coercive capacity or are seen by local populations as legitimate (Logan 2013), collaboration may boost compliance with the government's tax demands. On the other hand, if traditional leaders possess little independent authority, or they wield their authority despotically (Mamdani 1996), collaboration may be ineffective or even backfire.¹

This article examines the impact of collaboration between state officials and TPIs on citizens' compliance with a newly introduced property tax in rural Sierra Leone. Collaborating with the local government in Kono District, I embedded an experiment in their campaign to collect property taxes. Potential taxpayers were shown awareness videos that varied in content, particularly in terms of whether and how their local paramount chief characterized his involvement in tax collection. Using survey data from 1,752 property owners across 118 villages and 5 chiefdoms, I estimated the effects of notifying property owners about the state's collaboration with their TPI. I find that alerting property owners about the collaboration significantly increases a preregistered index of tax compliance, which comprised two survey-based measures and the outcome of a behavioral game. I also find that collaboration increases property owners' belief that they *should* pay taxes.²

To assess whether TPIs' authority stems from legitimacy or coercion, I created additional versions of the tax awareness video that manipulated the paramount chiefs' statements to emphasize their legitimacy (e.g., accountability to their constituents) or their coercive powers. I find experimental evidence that TPIs' authority stems from both their legitimacy and coercive capacity, though the evidence from primary experimental tests is stronger for the coercion mechanism. Priming property owners to TPIs' legitimacy increases my measure of tax compliance above and beyond the effect of collaboration; however, while the size of this effect is only 18% smaller than the size of the collaboration effect, this increase is not statistically significant (t -statistic = 1.33). In line with arguments that emphasize coercive capacity as a source of TPIs' authority, I find that priming re-

¹I use the term "traditional leaders" to refer generically to the political leaders of TPIs. In Sierra Leone, as in many other countries, these leaders are called "chiefs."

²In the tax compliance literature, this belief is often referred to as tax morale.

spondents to think about punishment for noncompliance increases the measure of tax compliance, above and beyond the effect of collaboration. The size of this effect is roughly the size of the collaboration effect and is statistically significant.

Secondary experimental outcomes and qualitative data from 300 semi-structured interviews (conducted in 29 villages) provide additional evidence for both legitimacy and coercion mechanisms. These data suggest that TPIs' legitimacy is rooted both in their governance *performance* and their *processes* of inclusive decision-making; they also suggest that TPIs' coercive capacity typically manifests in chiefs' use of fines to benignly enforce local laws, rather than chiefs' abuse of systems of local governance.

Based on qualitative data, I argue that TPIs' legitimacy and coercive capacity can be complementary sources of their authority. TPIs derive their legitimacy, in part, from their ability to organize collective action that produces local public goods. In the face of a free-rider problem, organizing collection action requires the ability to punish noncompliers. Therefore, TPIs' coercive capacity and their legitimacy are complementary because without coercive capacity, TPIs could not organize the public goods that give them legitimacy; and without legitimacy, TPIs are not strong enough to secure compliance through coercion alone. This argument implies that when TPIs use coercion in a way that detracts from the public good, they diminish their legitimacy and their ability to secure compliance. To illustrate the plausibility of this argument, I show that the state's collaboration with TPIs has less impact on citizens' compliance in chiefdoms where I document systematic complaints regarding TPIs' enforcement of local laws.

This research contributes to the literature on fiscal capacity. Influential accounts of the historical development of fiscal capacity can be split into two bins. First, war making, and the external threat it poses, creates incentives for leaders to invest in extractive capacity, winnows out weak states, and generates a common interest (i.e., military victory or defense) that society is willing to contribute to (Tilly 1990; Doner et al. 2005; Besley and Persson 2008). However, as Herbst (1990) notes, these forces have been largely absent in modern Africa due to the stability of its state system.³ Second, in elite bargaining theories, leaders trade political rights for tax revenues (e.g., North and Weingast 1989; Bates and Lien 1985). Yet, in contemporary democracies, where citizens already possess (*de jure*) property and political rights, it is unclear if political leaders have sufficient leverage to initiate these bargains. What strategies can state leaders in contemporary democracies employ to build capacity? To date, the literature has attempted to explain what makes bureaucracies, and the state agents they comprise, more effective. One set of scholars has focused on improving the

³Relative to the tumultuous state system of medieval Europe, which is the context for most studies in the bellicist tradition.

performance of state agents by solving principal-agent problems through recruitment, monitoring, and incentive strategies (for reviews, see [Finan et al. 2017](#); [Brierley et al. 2023](#)). Others have investigated how bureaucrats' relationship with society (i.e., their "embeddedness") impacts their effectiveness (e.g., [Evans 1989](#); [Bhavnani and Lee 2018](#)).⁴

I contribute to the literature on fiscal capacity by showing that governments can better achieve their goals—in this case tax collection—by collaborating with non-state, traditional political institutions. Most similar to this project is [Balán et al. \(2022\)](#), who employ neighborhood chiefs (*chefs d'avenue*) to collect taxes in urban DRC. They find that these local elites collect more revenues, because they know the people in their neighborhood and can better target households with a higher propensity to pay. This aligns with my findings that non-state actors can be effectively engaged in tax collection. Our work differs in that the neighborhood chiefs under study in [Balán et al. \(2022\)](#) are not leaders within non-state *political* institutions: for example, they cannot make laws, impose fines, or collect taxes independent of the state.⁵ [Gottlieb et al. \(2021\)](#) also study the role of non-state actors in tax collection, but again, the local intermediaries they study are not leaders of non-state political institutions.⁶ To my knowledge, this paper is the first experimental investigation of state collaboration with TPIs during tax collection.

More generally, this paper adds to research exploring the opportunities for collaboration between state actors (or funder agencies) and non-state actors ([Buur and Kyed 2007](#)). Scholars have explored these types of collaborative relationships for targeting beneficiaries for social assistance programs ([Basurto et al. 2020](#); [Alatas et al. 2019](#)), distributing development aid ([Carlson and Seim 2020](#)), and implementing and coordinating development projects ([Casey et al. 2018](#); [Voors et al. 2018](#)).

This research also contributes to the literature on traditional political institutions. Recent research has demonstrated the central role played by contemporary TPIs in many countries in sub-Saharan Africa, where they impact local development outcomes ([Acemoglu et al. 2014](#); [Baldwin 2019](#)), mobilize votes during elections ([De Kadt and Larreguy 2018](#); [Nathan 2019](#); [Brierley and Ofosu 2023](#)), and influence local governance ([Baldwin 2016](#)). Indeed, [Baldwin and Holzinger \(2019\)](#) estimate that 83% of the population of sub-Saharan Africa is governed, at least in part, by TPIs. Despite their importance, we have little understanding of the source of TPIs' authority—why do

⁴See [Pepinsky et al. \(2017\)](#) for a review focused on the social embeddedness of "street-level" state agents. [Besley et al. \(2022\)](#) reviews these literatures together.

⁵On the inability of *chefs d'avenue* to enforce tax compliance, the authors note that it is "unlikely that chiefs would have more credibly threatened official sanction [i.e., fines and legal consequences]" than state agents (section 7.3).

⁶These authors investigate the impact of business formalization appeals made by representatives from local market associations (whom they refer to as "local intermediaries") vis-à-vis state agents.

people consent to demands and rulings issued by their traditional leaders?⁷ As I elaborate below, the literature offers two diametrically opposed models of TPIs, painting them as either unaccountable despots that govern through coercion or legitimate institutions whose authority is rooted in constituents' consent. To my knowledge, this paper is the first to test and horse race these arguments experimentally.⁸

Theory: The Sources of TPIs' Authority and Impact of Collaboration

In this project, I explore whether the state can increase citizens' compliance with tax collection efforts by collaborating with TPIs. Important work in political science and adjacent fields discusses the authority and capacity of TPIs. This research generates divergent predictions about the impact of collaboration on tax compliance.

There are at least two good reasons to believe that collaboration will increase citizens' tax compliance. First, individuals might voluntarily comply with TPIs' directives because these institutions are perceived as legitimate (Logan 2013). Scholars have long argued that legitimacy—the belief that political actors or institutions have the “right to rule”—influences compliance with rules, regulations, or directives put forward by political authorities (Rousseau 1762; Beetham 2013). Support for this argument is found in empirical work that links legitimacy (or related concepts such as political trust) to citizens' compliance with the police and courts (Tyler 2006), military service demands (Levi 1997), taxes (Levi 1988), and health regulations (Bargain and Aminjonov 2020).⁹

One reason why citizens may perceive TPIs as legitimate is because they allow citizens input in policy-making (sometimes called “process legitimacy”). TPIs often contain elements of direct democracy (Skalník 1996) and have inclusive and transparent decision-making processes (Baldwin and Holzinger 2019). Other scholars argue that TPIs' legitimacy stems from their performance.¹⁰ For example, TPIs maintain public order and political stability (Krämer 2016), preside over systems of customary law that many people perceive as fair (Sawyer 2008), help their communities

⁷A notable exception is Brierley and Ofosu (2023), who investigate the mechanisms behind paramount chiefs' influence over vote choice in Ghana. They argue this influence works through a signaling mechanism where voters exposed to chiefs' candidate endorsements update positively about candidate characteristics and expected performance. This aligns with my finding that legitimacy is a source of TPIs' authority. In contrast with my findings, they find no evidence that chiefs' endorsements influence vote choice through coercive channels. This difference is plausibly explained by differences in the nature of the outcomes we study: chiefs' do not observe vote choice, whereas in Sierra Leone chiefs have mechanisms in place to monitor compliance with tax demands.

⁸Note that the test of mechanisms in Brierley and Ofosu (2023) is not experimental.

⁹On political trust see Levi and Stoker (2000).

¹⁰See Keele (2007) on the link between governing performance and citizens' trust in government, which is often linked to citizens' willingness to comply with government directives. As Hetherington and Rudolph (2008) point out, *perceptions* of government performance also matter.

obtain important services from government (Williams 2010), and organize local input (e.g., labor and materials) to produce local public goods (e.g., road maintenance) (Baldwin 2019). Consistent with the idea that TPIs are perceived as legitimate, survey results from 31 African countries (Afrobarometer, round 8) show that traditional leaders are more trusted, seen as less corrupt, have higher approval ratings, and are perceived as better listeners than elected officials. Further, 51% of the respondents said they would like to see these institution have more influence in local governance, while only 13% of respondents said they would like to see them have less influence (Logan and Amakoh 2022).¹¹

Second, collaboration with TPIs may increase tax compliance because they possess the coercive capacity to deter evasion (Allingham and Sandmo 1972; Kleven et al. 2011). Indeed, coercive capacity is often included within the definition of TPIs, where the assumption is that they administer and enforce a system of customary law (Holzinger et al. 2016), typically through a network of sub-chiefs (Manning 2009).¹² While TPIs' use of their coercive capacity may often be benign, leaders' abuse of their coercive capacity is a dominant theme in the literature. In Mamdani's (1996) influential account, colonial governments undermined existing accountability mechanisms within indigenous political institutions and enabled traditional leaders to become "decentralized despots." For many scholars, TPIs' authority stems from their willingness to abuse their central position in systems of local governance (Acemoglu et al. 2014; Fanthorpe 2004). Most notably, scholars have documented traditional leaders' interference and bias in both local dispute resolution mechanisms (Mokuwa et al. 2011; Maru 2006) and decisions regarding land allocation (Ntsebeza 2005; Goldstein and Udry 2008; Koter 2013; Acemoglu et al. 2014). Following these accounts, state collaboration with TPIs may increase tax compliance because individuals fear that noncompliance will be punished with bias in future decisions regarding law or land. This discussion motivates the following hypotheses:

H1: Collaboration between state leaders and TPIs increases citizens' compliance with state tax demands.

H2: TPIs' legitimacy enables them to obtain citizens' compliance with state tax demands.

H3: TPIs use (the threat of) coercion to obtain citizens' compliance with state tax demands.

We have little evidence to evaluate whether state collaboration with TPIs increase citizens' compliance with state policy. If governments could increase tax compliance by collaborating with TPIs,

¹¹The trust gap is widening. While, trust in elected officials has declined since 2008/2009 survey rounds, trust in traditional leaders has held steady.

¹²Holzinger et al. (2016) note that their concept of traditional governance includes, following Fukuyama (2013), the "ability to make and enforce rules".

we might expect to see more instances of such collaboration across the continent. Indeed, there are reasons to doubt that government collaboration with TPIs increases tax compliance. First, if TPIs wield their coercive capacity illegitimately or abuse their centrality in local governance (e.g., [Mamdani 1996](#)), collaboration may decrease citizens' willingness to comply.¹³ Second, if citizens' compliance with TPIs' directives stems from direct involvement in policy making, citizens may be less willing to comply with government policies they took no part in crafting. Third, TPIs may possess limited independent authority relative to state agents. This paper offers a hard test: I investigate collaboration in a setting where the state's own agents (i.e., local government officials) are already making tax demands. In this case, collaboration only increases citizens' compliance if TPIs possess some mechanism of authority that state agents do not.

Context: TPIs and Property Taxation in Sierra Leone

Most of Sierra Leone (but for the peninsula that includes the capital city), is divided into 190 chiefdoms. Each chiefdom—while also under the jurisdiction of the state (both central and local governments) is governed by a chiefdom council and a group of hierarchically organized chiefs. The top traditional political authority in each chiefdom is the paramount chief, who is elected for life by the chiefdom's elite, with candidates drawn from a restricted set of ruling families (see [Reed and Robinson 2013](#)). Chiefdoms are further divided into sections that contain a number of villages. Sections and villages are headed by section chiefs and village chiefs, respectively.

TPIs in Sierra Leone are relevant for local governance, an important scope condition for my argument. In a recent Afrobarometer survey (Round 8, conducted 2020) most rural respondents in Sierra Leone reported that TPIs have “some” or “a lot” of influence over local governance (92%), dispute resolution (95%) and land allocation (78%). Sierra Leone is a good context to test my hypotheses because existing evidence is mixed about the source of TPIs' authority, which also generates an ambiguous prediction about the effect of collaboration. On the one hand, influential accounts about the causes of the 11-year internal war point to the coercive and authoritarian chief-taincy system and its control over local resources (e.g., land, labor, women) ([Richards 1996, 2005](#)). According to commentators, this narrative was a primary motivator for the World Bank/DFID/EU funded decentralization reform, where District Councils were reintroduced to counterbalance the authority of chiefs ([Jackson 2007](#); [Fanthorpe et al. 2011](#)). On the other hand, scholars have pointed to the legitimacy of TPIs and the public's trust in these institutions to explain citizens' compliance with disease control measures during the Ebola outbreak ([Wilkinson and Fairhead 2017](#); [Richards 2016](#)). Survey data is consistent with this ambiguity. Rural Sierra Leoneans' attitudes toward TPIs

¹³In this case, collaboration *decreases* compliance if this backlash effect outweighs the compliance benefits of bringing on board TPIs with coercive capacity.

(e.g., trust, job approval, and perceived corruption) lie near the middle of the distribution for the 31 countries surveyed in 2019-2021 Afrobarometer round. This also gives us confidence that the findings from this study can be generalized to other countries where TPIs are politically relevant. Appendix Table 8 presents summary statistics for the perceived influence of and attitudes towards TPIs in Sierra Leone, compared to other surveyed countries.

In 2018 the local government in Kono (called the District Council) began a tax reform with the goal of systematically collecting taxes in rural areas for the first time since their post-war reintroduction in 2004. At the center of this reform was a property tax, which levied a rate on all residential and commercial building structures. Building structures were divided into tax rate bands based on their size and material and all structures within a given band were taxed at the same rate.¹⁴ Tax collectors were assigned mutually exclusive areas of the district and were compensated with a share of the revenue they collected.

Revenues were very low ($\approx 2\%$ of potential revenue in 2019), in large part due to low compliance. Based on data from 2019, tax compliance rates were less than 10% in the villages visited by tax collectors.¹⁵ While the District's TPIs were involved in the tax effort—for example, recruiting tax collectors and supervising local bank accounts—their participation was not widely communicated to tax payers. Chiefs and local government officials were cognizant of this lack of communication: plans had been made for chiefdom meetings where chiefs could discuss the tax reform, but these plans fell through because neither the chiefs nor the district council could marshal the funding to hold them.¹⁶

Tax collectors offered in interviews that the lack of awareness about this collaboration was a cause of low compliance. One tax collector speculated that his collection efforts were successful in some villages “because the authorities passed the message [of TPI involvement] to the people, and the people have respect for the authorities” and less successful in other villages because “maybe the message [of collaboration] didn’t reach them soon enough.”¹⁷ Another collector suggested that compliance would increase the following year if “the paramount chief calls a meeting. When the chiefs are more strongly backing [the reform], that’s going to make people pay.”¹⁸

In an effort to remedy this lack of awareness before the 2021 tax collection season, and therefore

¹⁴In 2019, 95% of the building structures in the district had an assessed rate of \$1.50 or less.

¹⁵Note that in 2020, there was no attempt to collect the property tax, due to COVID-19.

¹⁶This failure caused one paramount chief to complain to government officials that they had not followed through on their promise to support chiefs to communicate with their people about the tax. I was in attendance at the July 2020 stakeholder meeting where this complaint was made.

¹⁷Interview with tax collector from Lei Chiefdom.

¹⁸Interview with tax collector from Tankoro Chiefdom.

boost compliance, I worked with the Kono District Council (KDC) and the district's paramount chiefs to design a tax awareness campaign. The tax awareness video at the center of this campaign is the intervention under investigation in this study.

Interventions

Working with the local government and the district's paramount chiefs, I designed and recorded a tax awareness video intended to provide property owners with information about the property tax (e.g. valuation and rates).¹⁹ We recorded four video segments:

1. District council chairman provides information about tax collection:

- First, he introduces himself: *"Greetings my people! Good morning, good afternoon and good evening. This is your son Solomon Sahr Gbondo who is heading the Kono District Council."*
- Second, he provides information about the tax rates: *"... Stick house, with local roof. That is, palm trees leaves. You pay 20,000 Leones ..."*
- He concludes with an appeal to pay: *"Please, let us pay our taxes in order for us to be able to carry out development projects in the district like roads rehabilitation, digging of boreholes, building of schools, and other things."*

2. Paramount chief mentions collaboration with local government:

- First, the paramount chief introduces himself: *"My Gbane people, I greet you all. This is your paramount chief Aiah Bindi Faefankongor the 2nd."*²⁰
- Second, he explains that the Chiefdom Council is working with the Kono District Council to collect property tax on all the houses in the chiefdom: *"Gbane Chiefdom Council and Kono District Council are working in unity to collect property taxes, which is a tax for houses, which we should pay."*

3. Paramount chief primes legitimacy:

- First, the paramount chief says that he will convene a meeting of subchiefs after taxes are collected to discuss how tax revenue will be spent: *"After we have finished collecting the tax payment, I will summon a meeting. In this meeting, I shall request the presence of other subordinate chiefs in the chiefdom for us to discuss and map out ways of how the collected money is going to be utilized."*
- Second, the paramount chief acknowledges that the people of the chiefdom will not be happy if the tax revenue is not used for development: *"I am of the belief that if we do not utilize the*

¹⁹In Appendix F, I describe the process through which the tax awareness video was developed. A translation of the full text for all Kono videos can be found in Appendix G.

²⁰Each paramount chief used slightly different words to deliver each message. Here I provide an example from Gbane Chiefdom.

funds collected in the best way for the development of the chiefdom, you the chiefdom people, will be annoyed.”

4. Paramount chief primes coercion:

- First, the paramount chiefs says that he will convene a meeting to discuss how noncompliance will be punished: *“After the collection of these taxes, I will hold a meeting with the chiefs to brainstorm what to do with those that have refused to pay taxes for their houses.”*
- Second, the paramount chief says that he and other chiefdom authorities will not be happy with those who do not pay taxes: *“Let me emphasize that I and the rest of the chiefs will not be merciful on anyone who has refused to pay the tax.”*

These segments were combined into different awareness videos. Working in conjunction with the KDC and the district’s paramount chiefs, I led a door-to-door tax awareness campaign in the summer of 2021, in which a team hired through a local civil society organization met with property owners to share different versions of the tax awareness video. I embedded an experiment in this campaign. Treatment conditions are different tax awareness videos that combine different video segments and are designed to test different hypotheses (see Table 1). Property owners assigned to the control condition see only the first video segment where the local government official provides information about tax collection. For property owners assigned to the first collaboration treatment condition (T1), the government information segment is followed by the second segment where the chief mentions their collaboration with local government. I expect T1 to increase property owners’ perception that TPIs are collaborating with the local government on the property tax, relative to control. I test my first hypothesis by comparing tax compliance outcomes between T1 and C.

In a second legitimacy treatment condition (T2) the paramount chief’s statement is expanded to include the third video segment where the chief primes legitimacy. The goal of T2 is to prime aspects of TPI’s legitimacy that are highlighted in the literature—namely that important decisions will have the input of additional actors beyond the paramount chief and his close inner circle, that revenue spending decisions must be justified in public, and that poor governance will anger constituents. I can address my second hypothesis—TPIs’ legitimacy enables them to obtain citizens’ compliance with state tax demands—by comparing tax compliance outcomes between T1 and T2. In a coercion third treatment condition (T3), the additional messaging from the paramount chief focuses on punishment for non-compliers, rather than legitimacy. The goal is to prime punitive actions that can be taken against non-compliers. I assess my third hypothesis by comparing tax compliance outcomes between T1 and T3. Table 1 summarizes the video components that make up each treatment condition and the comparisons that I will make to test each hypothesis.

Table 1: Summary of Treatment Conditions

Treatment Condition	Video Segment	Comparison	Hypothesis Tested
C: Tax information (n=428)	1		
T1: TPI collaboration (n=454)	1 + 2	T1 - C	H1
T2: Legitimacy (n=437)	1 + 2 + 3	T2 - T1	H2
T3: Coercion (n=433)	1 + 2 + 4	T3 - T1	H3

I randomly assigned property owners to treatment conditions with equal probability using simple randomization.²¹ Table 2 presents balance. Columns 6-8 present differences between each treatment group's mean and the control group mean, standardized by the control group standard deviation. For metrics to gauge the magnitude of these differences, I provide two test statistics from a model that regresses a given covariate on the three treatment indicators. First, where a treatment group mean for a given covariate is statistically different than the control mean ($\alpha < 0.1$), I star the corresponding standardized difference in columns 6-8. Second, Column 9 presents the F -statistic for the joint null hypotheses—a significant result here implies that the treatment indicators collectively have predictive power (i.e., treatment group means are different than the control group mean).

Observed differences between treatment groups for these immutable covariates are no more than we might expect. Given the 33 tests I run in Columns 6-8, under the null hypothesis of no differences between groups, we would expect 3.3 tests to appear significant at the 90% confidence level; I find only one significant difference on the *education* covariate. In Column 9, I run 11 tests and therefore expect 1.1 to appear significant at the 90% confidence level; I find one significant difference on the *gender* variable. The observed imbalance on gender and education would only be a concern if these covariates predicts our primary outcome of interest, the compliance index (described in Section). The bivariate the relationship between gender and the tax compliance index is small and statistically insignificant.²² Education, however, is positively associated with the primary compliance outcome. As the control group is more educated than any of the treatment groups, this imbalance could introduce downward bias into the estimates, though the magnitude of that bias

²¹Every property owner was assigned to a version with a probability of 0.25. As respondents watched the tax awareness video on the tablets or phones that enumerators used to conduct the survey, I programed the treatment randomization into the tablet-based survey.

²²The p -value on the regression coefficient of this estimated bivariate relationship is 0.81 (using only control group data).

is likely to be small.²³ I account for this when estimating treatment effects, as I preregistered the education variable as a control variable in my main specification.

Table 2: Balance Table

	Mean				SD	Std. difference			F-stat
	C (1)	T1 (2)	T2 (3)	T3 (4)	C (5)	T1-C (6)	T2-C (7)	T3-C (8)	(9)
Demographics									
Age	46.47	46.96	46.41	47.11	14.73	0.03	0.00	0.04	0.24
Educated (received any schooling)	0.39	0.36	0.32	0.34	0.49	-0.06	-0.14*	-0.10	1.58
Kono speaking	0.81	0.81	0.81	0.82	0.39	-0.01	-0.02	0.02	0.12
Gender (female = 1)	0.28	0.24	0.31	0.30	0.45	-0.08	0.07	0.05	2.17*
Married	0.78	0.80	0.80	0.78	0.41	0.05	0.04	-0.01	0.39
Community social / political position	0.27	0.25	0.26	0.24	0.44	-0.04	-0.02	-0.07	0.32
Value to animal stock (100's USD)	2.25	2.36	2.40	2.41	4.62	0.02	0.03	0.04	0.11
Owens multiple properties	0.23	0.18	0.18	0.19	0.42	-0.11	-0.10	-0.08	1.04
Employment									
Has farm & no outside employment	0.57	0.56	0.56	0.56	0.50	-0.02	-0.02	-0.02	0.04
Has farm % non-farming employment	0.33	0.32	0.35	0.32	0.47	-0.01	0.05	-0.03	0.47
Non-farming employment only	0.10	0.12	0.09	0.12	0.30	0.06	-0.04	0.08	1.31

Table 2 reports balance across immutable covariates. Columns 1-4 report treatment group means; Column 5 reports the control group standard deviation; Columns 6-8 report differences standardized relative to the control group standard deviation; Column 9 reports the *F*-statistic for the joint null hypothesis.

Significance: * $p < 0.10$

Table 2 also allows us to characterize the sample. Columns 1-4 display group means for each covariate and column 5 presents the control group standard deviation. The average respondent is about 46 years old, uneducated ($\approx 65\%$), kono speaking ($\approx 81\%$), male ($\approx 72\%$), and married ($\approx 79\%$). Property owners in my sample do not appear to be wealthy. In rural Kono District wealth is largely held in animal stocks, and the average respondent has animal stocks with a market value of \$225.²⁴ The sample also captures a mix of elite and non-elite respondents, with roughly a quarter of the sample holding a community position of social or political importance (e.g., chief, mammy queen, religious leader, youth leader). Finally, respondents are primarily engaged in small-scale agriculture. Roughly 56% of the sample works exclusively on their own farm, while an additional

²³According to a bivariate regression (using only control data), moving from no education to some education increases the tax compliance index by 0.18 standard deviations. Respondents in control are seven percentage points more likely to have received some form of education than respondents in T2. Therefore, if left unadjusted, we should expect bias in the order of 0.0125 standard deviations.

²⁴Animal stock value calculated based on market value in the district headquarter town at the time of data collection. The mean household owns 0.86 goats, 0.30 sheep, 3.22 chickens, 0.17 ducks, 0.10 pigs, and 0.05 head of cattle

third of the sample mixes work on their personal farm with outside employment.²⁵

Data Collection

Survey Data

Five out of 14 chiefdoms were included in this study. Chiefdoms were excluded if (i) the paramount chief was unavailable to record a video; (ii) the recorded video deviated too much from the agreed script; or (iii) data collection costs were prohibitively high. I used geographic cluster sampling to select 123 villages for the study from a set of 434 eligible villages in the five eligible chiefdoms. As road infrastructure in Kono district is poor, making traveling between villages time and resource intensive, geographic cluster sampling helped minimize transportation costs. Figure 1 visualizes this sampling: blue triangles represent villages sampled for surveying.²⁶ More details on survey sampling can be found in Appendix D.

Working with a team of 33 enumerators between May and June 2021, we completed 1,752 surveys across 118 villages, selecting households to interview through a random walk procedure.²⁷ All survey respondents received three Maggi spice cubes upon completing the survey as a token of thanks. In addition, respondents kept their proceeds from a modified dictator game.²⁸

For the majority of questions in this survey, respondents were asked to gauge their expectations or perceptions on a 10-point scale. To make this scale more concrete to survey respondents, all enumerators were given 10 beans and a plastic plate, which served as a visual aid regarding the 10-point scale. Respondents were asked to allocate some, none, or all of the 10 beans to the plastic plate to represent their perceptions and expectations. Enumerators were trained on how to discuss the concept of probability with respondents in familiar terms and how probabilistic expectations could be expressed using the beans. Measurement validity is discussed in greater detail in Appendix B.

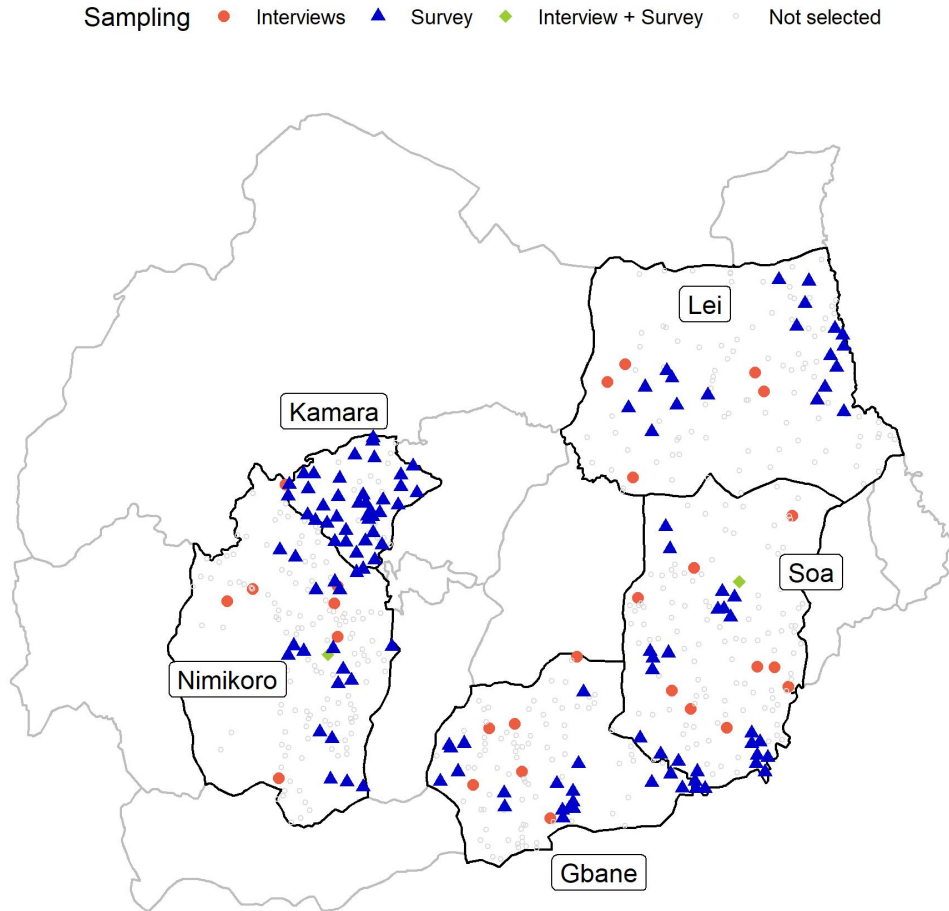
²⁵The most commonly named forms of non-farm employment are: trader, miner, and wage laborer.

²⁶In the five study chiefdoms, I excluded villages based on three criteria. The research design relies on the ability to manipulate respondents' beliefs about the involvement of TPIs in the new property tax collection. I reasoned that this belief would be more malleable in villages where property tax had not been previously collected. Therefore, I excluded all villages visited by tax collectors in 2019. Second, to increase enumeration efficiency, I excluded villages that are listed in the 2015 census as having fewer than three building structures. Third, I excluded chiefdom headquarters towns from the sample. This left me with a sample frame of 434 eligible villages.

²⁷We were unable to locate five villages. For a sampling frame I used a list of villages from Sierra Leone's 2015 national census. This list of villages may not perfectly describe the set of villages in Kono today—there may have been errors during the census, new villages may have been created since 2015, and others may have been abandoned.

²⁸For the control group, the mean amount kept by the respondent was 1,670 SLL (aprox. US\$0.15).

Figure 1: Sampling Map



Qualitative Interviews

In fall of 2022, I worked with a team of six research assistants to conduct interviews with 300 respondents across 29 villages in four of the five study chiefdoms (Gbane, Soa, Lei, and Nimikoro). Red circles in Figure 1 represent villages visited for qualitative interviews. In two of these villages, we had already conducted surveys (green diamonds). To select villages for interviews, I first randomly selected sub-chiefdom administrative units called sections in each chiefdom. Within each sampled section, I then selected section headquarter town and one other large town for interviews.

Before conducting data collection, interviewers were trained during a five-day workshop to follow an interview guide which was structured to cover the following topics:

- *Local tax*: An existing and widespread poll tax collected by chiefdom authorities. Questions

focused on (i) perceived motivations for paying this tax and (ii) monitoring and punishment mechanisms for noncompliance.

- *Local laws*: Interviewer asked respondents to describe common local laws, then focused on the process for creating local laws and respondents' judgment regarding these laws.
- *Perceptions of chief performance*: Interviewers asked respondents to describe things that chiefs did well, things that chiefs could improve and their overall approval of the performance of chiefs. Interviews also asked respondents how they would react if chiefs performed poorly. Interview protocols were designed to ask about specific chiefs individually (i.e., "your section chief"), rather than chiefs generally.
- *Communal labor*: It is common for chiefs call for labor to undertake various activities. Interviewers asked respondents to describe recent projects completed with communal labor and systems of monitoring and punishing noncompliance. Respondents were also asked about their attitudes towards communal labor and who they thought benefited from projects undertaken with communal labor.

Interviews were conducted in either Krio or Kono (or a combination), depending on the preference of the respondent. All interviews were recorded and lasted approximately 20 minutes. I developed a coding scheme to capture respondent's (i) perceptions of enforcement mechanisms for local tax and communal Labor, (ii) participation in byelaw creation and attitudes towards byelaws, (iii) judgments of leaders' performance, and (iv) descriptions of and attitudes towards projects undertaken with communal labor. A team of three research assistant conducted the coding.

Results

I estimated treatment effects using the centered covariate-treatment interaction specification proposed by [Lin \(2013\)](#):

$$Y_i = \alpha + \beta_1 T1_i + \beta_2 T2_i + \beta_3 T3_i + \theta \mathbf{X}_i + \gamma C_c + \delta N_k + \epsilon_i \quad (1)$$

where Y_i is the outcome of property owner i and $T1$, $T2$, and $T3$ are dummy variables for each treatment condition. Following [Lin \(2013\)](#), \mathbf{X}_i is a set of preregistered control variables, centered and interacted with with each treatment condition. Prespecified control variables include: (i) educational level (a dummy indicating whether the respondent received any schooling); (ii) a set of dummy variables for community positions of social or political importance; (iii) expected travel likelihood to the district and country capital; (iv) expected occurrence of an unlikely event; (v) the village level literacy rate; (vi) the percentage of households in the village that own a radio; and

(vii) percentage of village residents born in the chiefdom.²⁹ I also include chiefdom and enumerator fixed effects as C_c and N_k , respectively. ϵ_i is the idiosyncratic error term.³⁰

Does State Collaboration with TPIs Increase Compliance?

Before reporting the impact of the TPI collaboration treatment (T1) on compliance, I first present a set of manipulation and attention checks. T1 attempts to manipulate respondents' perceptions about the collaboration between state actors and TPIs. Panel A of Table 3 demonstrates that T1 increases property owners' perception that TPIs are collaboratively involved with local government in the new property tax. To measure perceptions of involvement, enumerators presented respondents with a laminated paper divided into four squares, where each square represented one of the four actors: (i) Kono District Council, (ii) TPIs, (iii) the central government, and (iv) NGOs and civil society organizations. Each respondent was then given 10 beans and asked to allocate the beans across the four squares, placing more beans on actors they thought were more involved in and responsible for the property tax.

Row 1 shows property owners' perceptions of the involvement of TPIs and Column 2 reports the effect of T1 on perceived involvement of TPIs. T1 increases the perceived involvement of TPIs by 0.27 standard deviation (p -value < 0.001), equivalent to 0.56 beans, or 24% of the baseline mean.³¹ Row 2 reports a video comprehension check administered at the end of the survey and provides additional evidence that T1 manipulates theoretically important beliefs: respondents in T1 are 17 percentage points more likely than control respondents to agree that the collaboration between chiefs and state was discussed in the video.

Panel B presents the effect of the TPI Collaboration treatment (T1) on compliance outcomes, where the preregistered primary outcome is an additive index (compliance index) that comprises two survey questions that attempt to measure willingness to pay and a behavioral game that attempts to capture voluntary compliance.³² These indicators were measured using a survey administered to

²⁹Community position dummies include: Chief or deputy chief (village or section), women's leader (village or section), youth leader (village or section), religious leader, and other, which comprises societal heads, tribal chiefs (i.e., leaders of non-Kono ethnic groups), and chiefdom councilors. I include the respondent's perceived likelihood of an unlikely event—the president visiting the respondent's village on the following day—because it tells us how the respondent is using the 10-point scale and is therefore prognostic. I selected prognostic variables for covariate adjustment using a LASSO model that predicted my outcomes of interest. Details of this procedure can be found in Section 8 of the PAP.

³⁰As randomization occurs at the level of the observation (respondent), I do not cluster standard errors.

³¹At baseline, respondents allocated 68% more beans to local government than to TPIs. The increase in perceived involvement of chiefs due to T1 led to a corresponding perceived decrease in involvement from the central government and NGOs but not from local government. Note that the measurement strategy forces respondents to allocate a finite number of beans. Therefore, an increase for one actor must lead to a decrease for one or more of the other actors. Manipulation and attention checks are presented and discussed in greater detail in Appendix E.

³²To construct the summary index of the three compliance measures, I follow Kling et al. (2007) and standardize

respondents directly following the tax awareness video.³³ The first survey question (*self-reported propensity to pay*) directly asked the respondents to state the likelihood of them paying the full tax rate if a tax collector came to their house the next day. The second survey question (*perceived neighbors' propensity to pay*) asked respondents what proportion of other property owners in the village they thought would pay the new property tax, thereby attempting to measure willingness to pay indirectly.

After answering the above tax compliance survey questions, the respondents played a behavioral game (dictator game), where they were asked to distribute a small sum of money between themselves and the local government's property tax fund (*coins given to KDC's house fund*). Respondents were told that the money collected from property taxes went into a government bank account, which we referred to as the "house money fund." The enumerator then handed the respondents five 500 Leone coins (each valued about \$0.10) and told the respondents that they should distribute these coins between themselves and the house fund. It was made clear that the respondents could keep any coins they allocated to themselves and that they could split the coins anyway they like between themselves and the house fund. Enumerators then recorded the number of coins the respondents allocated to the house fund.³⁴ This indicator attempts to capture voluntary aspects of property tax compliance, as these voluntary contributions go to the same bank account as property tax revenue, and political authorities have no way of knowing how much a given respondent contributed.

Treatment effects are reported in standard deviation units. The TPI Collaboration treatment (T1) increases the compliance index by 0.068 standard deviations, relative to the control, a difference which is statistically significant. Looking at the effect of the T1 on the sub-indicators, we can see that this effect is driven by the measures of self-reported propensity to pay and perceptions that neighbors' will pay. To obtain a concrete understanding of the effect size, consider the point estimate for the effect on the indicator *self-reported propensity to pay*. The effect size is 0.09 standard deviations, which corresponds to 0.27 beans on the 10-bean scale. Given that each bean represents 10 percentage points, we can interpret this effect as a 3 percentage point increase of the self-reported likelihood to pay property tax.

each sub-indicator relative to the control group and combine them in an equally weighted index that averages across standardized sub-indicators. I impute missing sub-indicators using the group mean.

³³The three outcome measures were placed at the beginning of the survey, preceded only by two treatment comprehension questions.

³⁴As stated, coins allocated to the house fund were handed over to the KDC to be deposited in their property tax revenue bank account.

Table 3: Effect of Collaboration (T1) on Compliance

Outcome	Mean (Control)	Estimate (T1-C)	N
Panel A: Manipulation / Attention Checks			
Perceived Involvement in Tax: TPIs	2.350 (2.052)	0.273*** (0.064)	1,752
Attention check: Collaboration discussed in video	0.682 (0.466)	0.170*** (0.025)	1,751
Panel B: Compliance Outcomes			
Compliance Index	0.000 (0.668)	0.068* (0.040)	1,752
Self-reported propensity to pay tax	6.729 (3.000)	0.090 (0.058)	1,751
Perceived neighbors' propensity to pay tax	5.965 (2.322)	0.113 (0.070)	1,657
Coins given to KDC's house fund	1.664 (1.438)	0.001 (0.056)	1,752
Tax morale (secondary outcome)	7.357 (2.817)	0.155** (0.063)	1,751

Table 3 reports the effect of the collaboration treatment (T1) on manipulation check outcomes (Panel A), the compliance index (in bold), and its sub-components (Panel B). Column 1 reports the control group mean for each indicator, with the standard deviation in parentheses; Column 2 presents treatment effects estimates, with standard errors in parentheses. Reported effects are standardized effects. Models are estimated using OLS with preregistered specifications. Column 3 reports the number of non-missing observations. The *Tax morale* measure was not included in the compliance index (as per the PAP).

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

I prespecified a lone secondary compliance outcome: a survey-based measure of the respondents' belief that they *ought* to pay property tax, often refereed to as “tax morale” in the tax compliance literature. Respondents were asked to imagine a situation in which they would not be fined or penalized if they did not pay their property tax and were then asked if they thought it was (morally) right to pay their tax. In the last row of Table 3, a large and statistically significant impact of the tax morale measure can be seen.³⁵ Considered together, these findings can be interpreted as strong evidence that individuals are more willing to comply with the newly introduced property tax when

³⁵Survey-based tax morale measures are often used in the tax compliance literature as proxies for tax compliance (e.g., Besley 2020). Given the analytical distinction between a belief about paying taxes and behavior related to paying taxes, I decided to not to include this outcome in the compliance index. Doing so would increase the t -statistic on the compliance index to 2.45.

they know that their local government is collaborating with leaders of TPIs.

Sources of TPIs' Authority: Primary Mechanism Results

Why does government collaboration with TPIs increase citizens' compliance with property tax? This section examines two arguments for why TPIs are able to generate citizen compliance: *legitimacy* and *coercion*.

Table 4 reports the effect of the Legitimacy treatment (T2) (Columns 2-3) and Coercion treatment (T3) (Columns 4-5) on the compliance index. Column 2 shows that the Legitimacy treatment (T2) increases the compliance index over and above the effect of the TPI collaboration treatment (T1), but this difference is not statistically significant (p -value = 0.18). While statistically insignificant, it is worth noting that (i) all three sub-indicators move in the expected direction and (ii) the estimated effect of 0.056 standard deviations is only 18% smaller than the effect of the collaboration treatment (T1). Further, the positive T2 point estimate is driven by increased *coins given to KDC's development fund*, in accordance with theoretical expectations that legitimacy should lead to consent-based compliance. Column 3 reports the effect of the Legitimacy treatment relative to the control, which we can interpret as the joint effect of the TPI collaboration treatment (T1) and the Legitimacy treatment (T2). While this comparison bundles theoretical mechanisms, it has important policy relevance. Legitimacy-based appeals made by traditional leaders work: They are more effective at generating tax compliance (p -value = 0.004) and increasing tax morale (p -value = 0.011) relative to generic appeals to pay made by government officials.

Column 4 shows that the Coercion treatment (T3) increases the compliance index above and beyond the effect of T1, and this effect is statistically significant at the 90% confidence level (p -value = 0.09). The point estimate on this increase is 0.066 standard deviations, almost exactly the size of the T1 effect. This positive effect on the compliance index is primarily driven by an increase in the direct measure of tax compliance, *self-reported propensity to pay tax*. In contrast to the Legitimacy treatment, the Coercion treatment has no impact on the voluntary compliance measure (*coins give to KDC's house fund*) suggesting that T3 impacts compliance through non-voluntary channels. Column 5 shows that the joint effect of the TPI collaboration treatment (T1) and the Coercion treatment (T3) and provides evidence that coercion-based appeals to pay are also effective. Relative to generic appeal made by government officials, coercion-based appeals from traditional leaders increase tax compliance (p -value < 0.001) and tax morale (p -value < 0.001).

Table 4: Effects of Mechanism Treatments (T2/T3) on Compliance Outcomes

Outcome	Mean	Legitimacy		Coercion		N
	(T1) (1)	(T2-T1) (2)	(T2-C) (3)	(T3-T1) (4)	(T3-C) (5)	(6)
Compliance Index	0.063 (0.649)	0.056 (0.042)	0.124*** (0.043)	0.066* (0.039)	0.134*** (0.040)	1,752
Self-reported propensity to pay tax	6.874 (2.920)	0.034 (0.061)	0.124** (0.060)	0.133** (0.058)	0.223*** (0.058)	1,751
Perceived neighbors' propensity to pay tax	6.226 (2.381)	0.058 (0.071)	0.170** (0.071)	0.038 (0.070)	0.150** (0.069)	1,657
Coins given to KDC's development fund	1.703 (1.446)	0.076 (0.056)	0.077 (0.058)	0.019 (0.057)	0.021 (0.058)	1,752
Tax morale (secondary outcome)	7.720 (2.598)	0.010 (0.060)	0.165** (0.065)	0.064 (0.059)	0.219*** (0.064)	1,751

Table 4 reports the effect of the Legitimacy treatment (T2) and the Coercion treatment (T3) on the compliance outcomes. Column 1 reports the control group mean for each indicator, with the standard deviation in parentheses. Columns 2-3 present treatment effects for T2, relative to T1 and Control, respectively. Columns 4-5 present treatment effects for T3 relative to T1 and Control, respectively. Reported effects are standardized effects. Models are estimated using OLS with preregistered specifications. Column 6 reports the number of non-missing observations. The *Tax morale* measure was not included in the compliance index (as per the PAP).

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

In summary, the main set of experimental results provide strong evidence that the TPI Collaboration treatment (T1) increases the measures of tax compliance used in this study. There is also evidence that the effect of collaboration is driven by both legitimacy and coercion, though the evidence for the coercion mechanism is stronger.

Additional Legitimacy Results: Performance or Process?

To further investigate the legitimacy hypothesis—and in an attempt to pin down if TPIs' legitimacy stems from *performance* (e.g., maintaining social stability) or *process* (e.g., inclusive and transparent decision-making)—I collected both additional intermediate experimental outcomes and qualitative data. Table 5 presents the impact of the Legitimacy treatment (T2) on four intermediate experimental outcomes. The first two outcomes measure expected benefits of taxation, aimed at capturing performance-based aspects of legitimacy. The first indicator captures respondents' perception that their own village will benefit from taxation; the second, that other villages in their chiefdom will benefit. The third and fourth indicators capture perceptions that tax revenue will be spent transparently and efficiently, respectively; These outcomes are indicators of process-based

legitimacy. Absent priors regarding whether TPIs' legitimacy stems from performance or process, the preregistered outcome for hypothesis testing is an index comprising all four indicators (legitimacy index). For these outcomes, the appropriate comparison group is the pure control (C; Tax information). Using T1 (TPI collaboration treatment) as the comparison group for these outcomes is problematic because questions about legitimacy may prime respondents to TPIs' legitimacy. For example, having just seen their paramount chief in a video, T1 respondents may think of their chief's governance performance (a performance legitimacy prime) when asked if they expect to benefit from taxation, which would undermine the impact of the Legitimacy treatment (T2). Column 2 shows that the Legitimacy treatment (T2) increases the legitimacy index, relative to the control group, but this effect is not statistically significant (p -value = 0.15). The point estimate on all four sub-indicators is positive and of similar magnitudes across performance and process measures. These results, when considered together with the effect of borderline significance on the main compliance index, provide suggestive evidence for the legitimacy hypothesis; these results do not privilege the importance of performance over process, or vice versa.

Table 5: Effects of Legitimacy Treatment (T2) on Intermediate Outcomes

Secondary Outcome	Mean (1)	T2-C (2)	N (3)
Legitimacy Index	0.000 (0.698)	0.060 (0.042)	1,752
Own village will benefit from tax	7.114 (2.853)	0.088 (0.061)	1,722
Other villages will benefit from tax	6.710 (2.838)	0.023 (0.068)	1,646
Ease of discovering how tax revenue was spent	4.460 (3.094)	0.103 (0.064)	1,742
Proportion of revenue towards development	6.180 (2.614)	0.021 (0.066)	1,709

Table 5 reports the effect of Legitimacy treatment (T2) on the secondary legitimacy outcomes. Column 1 reports the control group mean for each indicator, with the standard deviation in parentheses. Column 2 present standardized treatment effects for T2, relative to control. Models are estimated using OLS with preregistered specifications. Column 3 reports the number of non-missing observations. Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

For additional evidence of TPIs' legitimacy, I turn to qualitative data and demonstrate the plausibility that TPIs in Kono possess both performance and process legitimacy. Regarding performance legitimacy, I document Traditional Leaders' role in coordinating two local public goods: public

works (e.g., road maintenance) and public order (i.e., peace and social stability). Regarding process legitimacy, I show that citizens directly and indirectly participate in creating local laws (called byelaws).

The Local Provision of Public Works

While the Sierra Leonean government does provide certain public works in rural areas, their capacity to do so is limited. For example, while government may build schools and hospitals, or occasionally undertake large-scale rehabilitation for primary rural roads, they are unlikely to repair school roofs that have been blown in by heavy wind or maintain rural roads that rainy season has left overgrown with brush and cratered with potholes. Instead, many public works in rural areas are organized locally, undertaken with communal labor—mandatory labor contribution that can be demanded by chiefs.

I find qualitative evidence that the public works undertaken with communal labor increase community welfare, plausibly generating performance legitimacy for TPIs. First, communal labor is most often directed at projects that likely have broad social benefits (Table 6), such as clearing vegetation from roadways (“road brushing,” 68%) and road maintenance (39%).³⁶ Indeed, many respondents pointed to the maintenance of roads when asked what their traditional leaders were doing well. One respondent lauded their section chief for “greatly improving our roads by organizing communal labor”³⁷ and other respondents praised section leaders for “the maintenance of roads to connect our communities”³⁸ and maintaining “a good road network.”³⁹ Respondents stated that chiefdom authorities, “make sure that our roads are good for safe movement”⁴⁰ and praised how chiefdom authorities “mobilized the youth for road maintenance.”⁴¹ While respondents do report instances of chiefs calling communal labor for personal projects—most notably to work on private farms—these occurrences are rare: only 1% of respondents mention that town communal labor has been used for work on a private farm and only 4% of respondents mention that chiefdom communal labor has been used this way.

Interviewers also asked respondents about their perceptions of who benefited from communal labor.⁴² At the village, section, and chiefdom level respondents describe communal labor as being

³⁶As traditional leaders at each administrative level (i.e., village, section, chiefdom) can demand communal labor, interviewers separately asked respondents about communal labor at each level.

³⁷Interview: 75

³⁸Interview: 18

³⁹Interview: 123

⁴⁰Interview: 21

⁴¹Interview: 110

⁴²The interview prompt asked respondents if communal labor was used “in a fair way that benefits the community or is it used in an abusive way that benefits only a few people?”

directed towards projects that benefit the public. At the town level, over 80% of respondents describe communal labor as devoted exclusively towards public project and only 7% say communal labor is sometimes or often devoted to projects that do not benefit the public.⁴³ The majority of respondents also say that section authorities (75%) and chiefdom authorities (66%) always use communal labor for public benefits. A minority of respondents say that section authorities (11%) and chiefdom authorities (18%) sometimes or often divert communal labor towards private projects.⁴⁴ These statistics are presented in greater detail in Appendix Table 17 (Panel B).

Table 6: Common Communal Labor Projects

Projects	Village (%)	Section (%)	Chiefdom (%)
Any Project	98	82	69
Road brushing	68	27	12
Road maintenance (e.g., fix potholes)	39	46	31
Cleaning (Town / building)	28	14	16
Construction of building	12	19	20
Labor on private/personal farm	1	3	4

Table 6 reports projects to which communal labor is devoted, according to respondents in semi-structured interviews. Respondents were asked to name up to three recent projects carried out with communal labor. This table report the percent of respondents that name a given type of project. This table presents a non-exhaustive list. Percentages are rounded to the nearest integer.

The Local Provision of Peace and Order

The Weberian state monopolizes violence to provide peace and maintain public order. However, in rural Sierra Leone the government struggles to communicate laws and has little capacity to enforce them; government law enforcement officers are absent in rural areas. Instead, TPIs have the legal mandate to establish and enforce local laws (byelaws), which can be enacted at the village level by the village chief or more broadly throughout the chiefdom by chiefdom level authorities. According to interviews, the most common byelaws are those that prohibit theft (mentioned by 65% of respondents), abusive language (51%), and fighting (39%). It was also commonly mentioned that local laws mandate labor contributions to community projects (27%) or regulate livestock (9%) and the harvesting of crops (10%).⁴⁵

Informants describe social stability as stemming from laws that chiefs enact, plausibly generating

⁴³Communal labor is most frequently called by town chiefs, where 98% of respondents named a recent project undertaken with communal labor.

⁴⁴Note that these percentages do not add up to 100% because some responses were ambiguous.

⁴⁵Appendix Table 14 provides a more comprehensive list of byelaws mentioned during interviews.

performance legitimacy for TPIs: “If laws are not made, the town would not [be in] control. Everybody will just be doing things the way they want.”⁴⁶ Many informants shared the perspective that, “it is the law that binds us together,”⁴⁷ brings “peace and protection,”⁴⁸ and “made the town function well.”⁴⁹

Moreover, these laws are created with direct and indirect citizen participation, which plausibly generates *input legitimacy* for TPIs. Specifically, I find that (1) byelaws are developed and enacted at meetings, rather than behind closed doors; (2) local representatives are invited to attend meetings for chiefdom byelaws; and (3) participants in these policy-making meetings have space to actively engage.⁵⁰

Informants highlighted that authorities “made laws in consultation with the people”⁵¹ and that the law making process was open to all community members: “whether you have a [leadership] position in the town or not...it is us all that sit and make [the laws].”⁵² While chiefs may be the “chief coordinators of the law” they “do not make [laws] alone.”⁵³ Byelaws are developed during open meetings, rather than behind closed doors. To discuss village byelaws authorities “invite the entire community”⁵⁴ or “the whole town”⁵⁵ to meetings. Similarly, chiefdom authorities call a “general meeting”⁵⁶ to formulate chiefdom byelaws. To elicit these responses, interviewers asked informants how byelaws were created without mentioning or making reference to meetings. Nearly all respondents (97%) explicitly mentioned that meetings are called when byelaws are created, either within the village or more broadly within the chiefdom.⁵⁷ Moreover, these meetings are themselves often the product of citizens’ participation, called to discuss a proposed law put forward by an individual or community groups.⁵⁸

When meetings are called to discuss chiefdom byelaws, all villages are represented by local chiefs and community leaders. Chiefdom authorities invite “town chiefs, section chiefs, youth chairmen,

⁴⁶Interview: 70

⁴⁷Interview: 100

⁴⁸Interview: 112. Another respondent noted laws were put in place so that communities “could have peace” (Interview: 18).

⁴⁹Interview: 37

⁵⁰These findings (summarized in Appendix Table 15) are in line with recent research that documents inclusive decision-making processes in TPIs (Baldwin and Holzinger 2019).

⁵¹Interview: 52

⁵²Interview: 404

⁵³Interview: 61

⁵⁴Interview: 400

⁵⁵Interview: 404

⁵⁶Interview: 401

⁵⁷These statistics, as well as the other statistics in this sub-section, are presented in Appendix Table 15.

⁵⁸Interview: 403; 406; 405

and the mammy queen [i.e. women leaders]” from each village.⁵⁹ These invitations are extended “in a form of a letter”⁶⁰ or by “sending young men to every community.”⁶¹ Informants offered these responses after interviewers prompted: “*when chieftdom byelaws are created, is anyone from your village usually involved?*” Ninety-four percent of respondents said that representative from their village or section would be invited to attend these meetings and only 1.8% say that they would not.⁶²

These policy-making meetings are spaces where attendees are “given a chance to talk”⁶³ about “burning issues.”⁶⁴ Participants can “ask questions and make suggestions”⁶⁵ about byelaws that chieftdom authorities or other participants are putting forward. Research assistants coded interviews for evidence of active participation based on respondents’ description of policy-making meetings. At the village level, 84% of respondents describe meetings as forums for discussion between village authorities and villagers, compared to 8.6% who report that these meetings are only a space for village authorities to *inform* the village’s residents about a byelaw. For chieftdom meetings, 78% of respondents describe these meetings as containing active participation from attendees; only 3.7% of respondents report that these meetings are not open for active participation.

In this section, I provided additional experimental and qualitative evidence to evaluate the legitimacy hypothesis. Turning first to secondary experimental outcomes, I presented suggestive evidence in Table 5 that the Legitimacy treatment (T2) increased an index of intermediate legitimacy outcomes (p -value = 0.15); Using qualitative data, I then established the plausibility of the legitimacy hypothesis by illustrating avenues through which TPIs might generate performance legitimacy (organizing local public goods) and process legitimacy (citizen participation in creating local laws). These additional pieces of evidence complement the suggestive findings from my primary mechanism analysis (Table 4), where I found that the Legitimacy treatment (T2) increased the main compliance index above and beyond the effect of the Collaboration treatment (T1), but that this difference was not statistically significant (p -value = 0.18). Taken together, I interpret this collection of results as evidence in favor of the hypothesis that legitimacy is a source of TPIs’ authority.

⁵⁹Interview 404; Says another respondent, describing the universal representation from villages in their area: “all the nineteen villages are invited. No one is left out” (Interview: 10).

⁶⁰Interview: 128

⁶¹Interview: 238

⁶²Percentages are conditional on the respondent saying that a meeting would be called.

⁶³Interview: 120

⁶⁴Interview: 404

⁶⁵Interview: 32

Additional Coercion Results: Biased Governance or Benign Enforcement?

In Table 4, I found evidence in favor of the coercion hypothesis: general statements made by the paramount chief about punishing noncompliance (T3) increased the tax compliance index, relative to T1. But what type of potential punishment are respondents reacting to? If TPIs' coercive capacity stems from chiefs willingness to abuse their control of local governance institutions, citizens may fear that noncompliance will be punished with biased future treatment; alternatively, if chiefs benignly enforce local laws, noncompliance is likely to be met with fines.⁶⁶

In Table 7, I attempt to tease out the specific tools of TPIs' coercive power by examining the impact of the Coercion treatment (T3) on six intermediate experimental outcomes. A first measure captures the perceived likelihood that respondents will be fined if they don't comply; a second measure captures the percent of villages in the chiefdom where noncompliant owners will be fined by chiefs; the third and fourth indicators measure perceptions that noncompliers will be fined by the *local government*. The fifth and sixth indicators measure governance bias, capturing respondents' perceptions that chiefs will favor compliant property owners in decisions of land allocation and dispute resolution, respectively. The comparison group is the pure control (C; Tax information).⁶⁷

Point estimates are positive, though not individually statistically significant, for the indicators that capture perceptions that noncompliant property owners will be fined (outcomes 1-4); point estimates are negative (though not statistically significant) for the indicators that capture beliefs that noncompliant property owners will face future bias in decisions regarding land or disputes (outcomes 5-6).⁶⁸ Note that Table 7 includes two indicators that were not preregistered, both measuring the probability that noncompliers will be fined by the local government. I have included these outcomes to provide additional evidence that the Coercion treatment primes fine-based punishment for noncompliance.⁶⁹ While the results in Table 7 are murky, there is more evidence that the Coercion treatment (T3) is priming beliefs about fine-based punishment, rather than governance bias-based punishment.

⁶⁶Of course, chiefs can levy fines abusively. I address this possibility in the analysis of qualitative data at the end of this section.

⁶⁷Using the Collaboration treatment (T1) as the comparison group is problematic because questions about punishment are likely to prime respondents to TPIs' coercive capacity, undercutting the treatment effect of T3. For example, asking respondents about the probability that chiefs will fine noncompliance after the respondent has watched a video containing the paramount chief, is likely to prime respondents to TPIs' propensity for issuing fines.

⁶⁸I preregistered an index as the main outcome for hypothesis testing these intermediate coercion outcomes. The point estimate on the index is near zero and not statistically significant. However, I drop the index from Table 7 because my exposition and analysis of intermediate coercion outcomes focuses on variation in effects between sub-indicators, rather than their average effect.

⁶⁹These two outcomes are the only two punishment related outcomes that I measured but did not preregister for analysis.

Table 7: Effects of Coercion Treatment (T3) on Intermediate Outcomes

Secondary Outcome	Mean (1)	T3-C (2)	N (3)
Punishment through Fines			
Respondent fined by chiefs if non-compliant	7.506 (2.660)	0.079 (0.062)	1,748
Proportion of villages where chiefs fine noncompliers	6.393 (3.474)	0.026 (0.057)	1,621
+Respondent fined by local govt if non-compliant	7.154 (2.711)	0.086 (0.060)	1,737
+Proportion of villages where local govt fines noncompliers	6.300 (3.451)	0.019 (0.057)	1,585
Punishment through Biased Governance			
Chief will favor compliant in land allocation	7.628 (2.460)	-0.031 (0.054)	1,744
Chief will favor compliant in dispute resolution	6.526 (2.793)	-0.034 (0.056)	1,742

Table 7 reports the effect of the Coercion treatment (T3) on the secondary coercion outcomes. Column 1 reports the control group mean for each indicator, with the standard deviation in parentheses. Column 2 present standardized treatment effects for T3, relative to control. Models are estimated using OLS with preregistered specifications. Column 3 reports the number of non-missing observations.

+ Outcome not preregistered.

Enforcing Local Tax

I build on the suggestive results in Table 7 with evidence from qualitative data by first exploring the enforcement an existing, widespread poll tax (called the local tax), which is collected by chiefdom authorities.⁷⁰ I find that TPIs have monitoring mechanisms in place to detect noncompliance, and that fines are the typical punishment for noncompliance.

Traditional leaders commonly used roadblocks (mentioned by 32% of respondents) to monitor compliance with the local tax, erected either inside the village or at key junctions on the road network.⁷¹ Another common monitoring strategy, noted by one village chief, is for authorities to “go

⁷⁰Chiefdom authorities are entitled to keep most of the local tax revenue; a small percent is transferred to the local government.

⁷¹One respondent explained that chiefdom authorities “erect check points in collaboration with the chiefdom police, especially when the compliance rate is low” (Interview: 405). A Village Chief noted, “we erect checkpoints on the roads” to monitor compliance (Interview: 404).

house-to-house to check for tax payers” (24%).⁷² Informants also reported that authorities keep records of who has paid (24%). While village chiefs can monitor compliance directly by, for example, making lists of compliant community members,⁷³ chiefdom authorities can monitor *villages* by tracking the number tax receipts and associated revenue turned in by a given village.⁷⁴ In total, 68% of respondents described at least one strategy that authorities used to monitor compliance with the local tax, at either the village or chiefdom level.⁷⁵

The majority of respondents (55%) report that individuals found to have not paid their local tax will be issued a fine by authorities: “either you buy the tax, or you pay a fine.”⁷⁶ Other respondents note that non-compliers can be taken to higher authorities (45%), a situation also likely to end with a fine.⁷⁷ The most commonly mentioned non-fine form of punishment is for village authorities to prevent noncompliant community members from accessing their farms (9%), thus cutting off a major source of income. Taken together, 78% of respondents believe non-compliant individuals will face some consequences at the hand of either village or chiefdom level authorities.⁷⁸ Appendix Table 18 breaks out these statistics at the village and chiefdom level.

Enforcing Contributions to Local Public Goods

In the *Additional Legitimacy Results* section, I documented Traditional Leaders’ role in coordinating two local public goods: public works and public order. These public goods are produced locally when traditional leaders issue directives that citizens follow. To maintain roads, traditional leader demand labor contributions and citizens supply this labor; to produce peace and social stability, traditional leaders enact laws that citizens adhere to. In this section, I document how TPIs enforce these directives and describe their strategies for monitoring and punishing noncompliance.

Enforcing Communal Labor for the Provision of Public Works: Participation in communal la-

⁷²Interview: 404

⁷³Interview: 406

⁷⁴Chiefdom authorities distribute receipt books to village chiefs based on the village’s population. Village chiefs then return completed receipt books along with the associated tax revenue. Therefore, chiefdom authorities can easily identify low compliance villages as the villages to which they have given receipt books that have not been completed and returned. To give this monitoring teeth, Chiefdom authorities may also levy fines on the village chief of low compliance villages or force these village chiefs to “buy” additional tax receipts, which the chief must then “sell” to his people (Interviews: 4; 27; 53; 207).

⁷⁵Interviews prompted respondents with the following question: “Did village (Section/Chiefdom) leaders do anything to check if people had paid Local Tax this year (2022)? Or do they not do anything like that?”. Fifty-two percent of respondents described village level monitoring mechanisms and 49% of respondents described monitoring mechanisms outside the village.

⁷⁶Interview: 402

⁷⁷After being taken to authorities respondents may be held for several hours (“they will detain you for one hour or two hours”(Interview: 404)

⁷⁸Interviewers asked respondents “When village (section/chiefdom) leaders found out that someone had not paid, did they anything about it, or did they not do anything?”

bor is mandatory and I find qualitative evidence that TPIs have enforcement mechanisms in place to detect and punish noncompliance. According to respondents, the Youth Leader is commonly responsible for monitoring attendance and participation (mentioned by 67%) and reporting to the authorities: “we have the youth leader, he reports to the chief.”⁷⁹ Authorities also monitor attendance themselves, either relying on their knowledge of community members to identify who has failed to show up (46%) or keeping an attendance list (33%). Says one respondent, “if you failed to go, your town chief will know because the town chief knows everyone.”⁸⁰ Taken together, 90% of respondents described at least one monitoring mechanisms at either the town or chiefdom level.⁸¹

Nearly all respondents agreed that individuals will be punished if they are caught missing community labor, with 90% of respondents explicitly describing the punishment as a fine.⁸² Only two respondents mentioned non-fine punishments—both involved punishing the offender by impeding their livelihood (e.g., preventing them from farming) until they had undertake community labor. No respondent mentioned that noncompliance would be punished with bias in future dealings with chiefs. Appendix Table 16 breaks out statistics on monitoring and punishing noncompliance with communal labor demands at the village and chiefdom level.

Law Enforcement for the Provision of Public Order: That chiefs primarily issue fines to punish noncompliance with local tax and communal labor does not rule out that chiefs are biased in their use of coercion—they could simply levy fines in a biased manner. However, I find that citizens are generally satisfied with TPIs’ law enforcement performance. Interviewers asked respondents what they thought chiefdom leaders were doing well and what they could improve on. Over a quarter of respondents (26%) stated that chiefdom leaders were doing a good job enforcing or implementing byelaws; only 4% said that law enforcement needed to be improved or that laws were being unfairly or incorrectly enforced or implemented.⁸³ If chiefs were generally biased when levying fines, we would expect to see more dissatisfaction with chiefs’ law enforcement performance.

In this section, I provided additional experimental and qualitative evidence to evaluate the coercion hypothesis. I draw two conclusions from the analysis of these data. First, I find strong support for the hypothesis that coercion is a source of TPIs’ authority. Qualitative data reveals a comprehensive enforcement infrastructure that allows TPIs to detect and punish noncompliance with their

⁷⁹Interview: 32

⁸⁰Interview: 401

⁸¹Interviewers asked respondents, “What happens if someone who was supposed to participate in Community Labor does not? Would the Section (chiefdom) Leaders find out?”

⁸²Respondents noted that sickness or unavoidable travel were legitimate excuses for missing communal labor.

⁸³It is not that case that respondents avoid making critical comments about chiefdom authorities, in general: over 60% of respondents stated their chiefdom authorities should do more to bring development. These statistics are presented in greater detail in Appendix Table 17.

directives; these findings lend plausibility and texture to my primary experimental finding that the Coercion treatment (T3) increases the compliance index. Second, TPIs coercive capacity is rooted in their use of fines to benignly enforce local laws. The evidence from the analysis of intermediate coercion outcomes (Table 7), while murky, leans towards the interpretation that TPIs are more likely to punish noncompliance with fines than with future governance bias. This interpretation is buttressed by qualitative evidence. Interview informants report that TPIs punish noncompliance with the local tax and communal labor demands by levying fines. Of course, that chiefs punish noncompliance with fines does not rule out that they are biased when doing so. However, qualitative evidence does not support this—respondents are much more likely to report law enforcement as something chiefs do well, rather than something they need to improve on.

The Complementarities of TPIs' Legitimacy and Coercive Capacity

In the *Results* section, I found evidence that TPIs' authority is rooted both in coercion and legitimacy. How can we square these findings with the literature, which tends to emphasize the mechanisms of legitimacy and coercion in isolation or views them as substitutes.⁸⁴ I argue that TPIs' legitimacy and coercive capacity can be complementary sources of their authority.

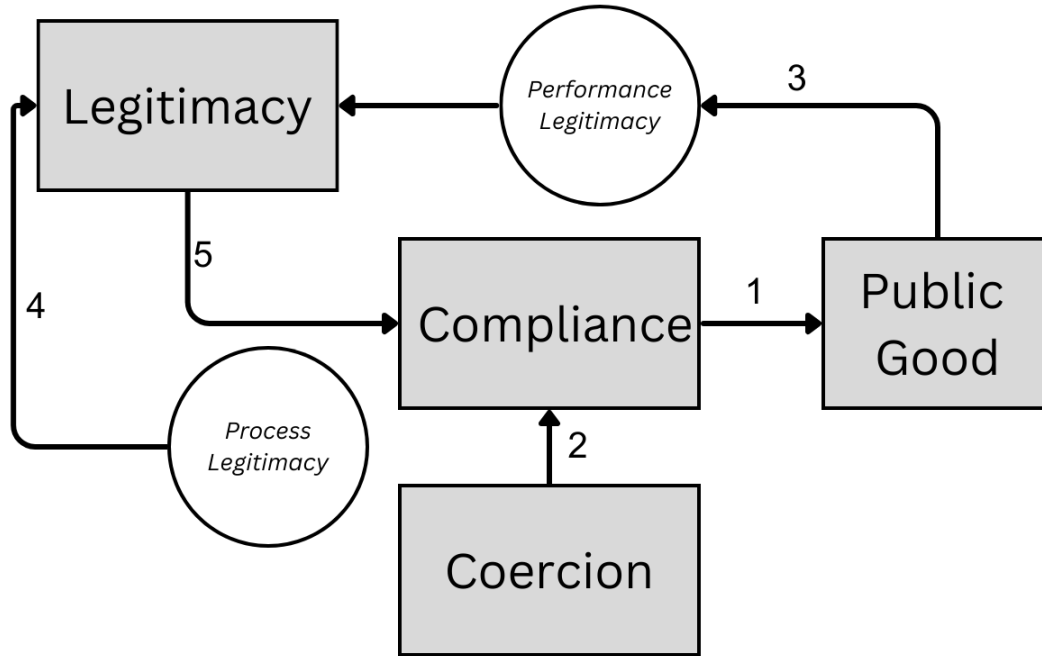
First, it is important to recognize that producing public goods requires collective action. For example, rural roads are maintained only when citizens successfully coordinate their labor; public order is achieved when citizens follow local laws and forsake certain anti-social behaviors.⁸⁵ That is, in order to generate a group benefit (i.e., a public good), citizens must comply to taking up a costly action. Figure 2 visualizes this logic by running an arrow from *compliance* to *public good* (Arrow 1). But organizing collective action for public goods can be difficult because these benefits can be enjoyed by the whole group, even by individuals who did not contribute to producing them (i.e., the benefits are nonexcludable). This gives rise to a free rider problem: because individuals prefer to reap the benefits of public goods without making costly contributions, and because they do not want to contribute while others do not, collective action fails and the public good is not produced.⁸⁶ One way that organizations solve this free rider problem is to provide selective incentives, rewarding individuals who contribute to producing the public good and punishing individuals who do not (Olson 1971).

⁸⁴Substitution logic: Some chiefs rule through legitimacy and consent, while others wield the stick to bullying local populations into line. One example of this substitution logic in the literature is the argument that with colonization many traditional leaders, now backed by the coercive capacity of the colonial government, swapped legitimacy-based rule for coercion-based rule (Mamdani 1996). See Dorjahn (1960) and Little (1947) for this argument in Sierra Leone.

⁸⁵As illustrated in the *Results* Section.

⁸⁶As Levi put it, "No one prefers to be a sucker" (Levi 1988, pg. 53).

Figure 2: Legitimacy and Coercion as Complements



In many parts of the world, the state’s coercive capacity is a tool to solve this free-rider problem because it raises the cost of noncompliance, and because it “persuades [individuals] that others are compelled to pay their share” (Levi 1988, pg. 54).⁸⁷ In rural Sierra Leone, TPIs possess this coercive capacity, while government (central and local) does not.⁸⁸ To obtain the compliance necessary to produce public goods, TPIs use the stick, punishing noncompliers (Arrow 2). By enforcing the compliance necessary to produce a public good, TPIs generate *performance legitimacy*, as citizens recognize the crucial role played by TPIs in producing the public good (Arrow 3). In that sense, TPIs’ coercive capacity and their legitimacy are complementary: without coercive capacity, TPIs could not organize the public goods that give them legitimacy. By allowing citizens to participate in creating the laws that they enforce (Arrow 4), TPIs also generate *process legitimacy*. TPIs’ legitimacy further facilitates citizens’ compliance (Arrow 5).⁸⁹

⁸⁷ As Levi (1988) explains, “the importance of deterrence [for *quasi-voluntary* compliance] is that it persuades taxpayers that others are compelled to pay their share” (pg. 54).

⁸⁸ In the *Additional Coercion Results* Section, I show TPI have the capacity for monitoring and punishing noncompliance with their directives.

⁸⁹ As social contract theorist such as Rousseau (1762) point out, it is also likely that Legitimacy and coercion are complementary in the sense that coercive capacity fails to generate meaningful levels of compliance in the absence of legitimacy: “The strongest is never strong enough to be always the master unless he transforms strength into right and obedience into duty.”

Illustrating Complementarities: Abusive Chiefs Fail to Obtain Compliance

This argument also implies that when TPIs use coercion in a way that detracts from the public good, they diminish their performance legitimacy and their ability to secure compliance. Using two chiefdom level vignettes, I find evidence that TPIs' use of their coercive capacity varies across chiefdoms. Specifically, I document variation in citizens' perceptions of traditional leaders' enforcement of local laws. In Lei Chiefdom, I find systematic complaints regarding the enforcement of local laws: there are widespread complaints against chiefdom leaders regarding their handling of ongoing conflict between crop farmers and cattle rearers. Conversely, in Gbane Chiefdom, I do not find complaints against enacted local laws or their implementation. According to my argument, TPIs' ability to obtain compliance from citizen should be lower in Lei Chiefdom than in Gbane Chiefdom. Indeed, when I turn back to experimental data and decompose treatment effects by chiefdom, I find that (1) the magnitude of this effect varies across chiefdoms and (2) the effect is 6.75 times larger in Gbane Chiefdom than in Lei Chiefdom.

Lei Chiefdom

In Lei Chiefdom a local law has been passed that outlines compensation for crop farmers when cattle damage their crops and compensation due to herders if a farmer attacks a cow.⁹⁰ In three of the five villages where our team conducted interviews in Lei, multiple respondents highlighted frustration with chiefdom authorities regarding their handing of the conflict between crop farmers and cattle rearers. A respondent in one village takes issue not with the law itself but with its implementation.

I have a problem with one [law] that has not been implemented fairly. This is occurring during the process of adjudicating on matters where a livestock farmer's animal has eaten a farmer's crop. In matters like that, the crop farmer's complaint is not treated seriously or followed through on according to the byelaw and most times unreasonable [i.e., very low] compensation is made. On the other hand, if a crop farmer kills a cow of a livestock farmer, [that crop farmer] will be beaten, molested, and treated poorly. There is no equity in [chief's] judgment of this byelaw. Cattle rearers are favored against crop farmers.⁹¹

Says another respondent in the same village agrees, "The laws between the cattle owners and the crops farmers are very fine in writing and when reading them, but its implementation is very

⁹⁰Interview: 96. I use "cow" to refer to the singular of cattle, but I do not intend to convey sex. The cattle in this context are both male and female.

⁹¹Interview: 100

bad.”⁹² A third respondent from the same village takes issue with the perceived difference in standards applied by chiefdom authorities to crop farmers and cattle rearers, “If a cow eats the rice you’ve planted, they eat the money that you would need to pay the children’s school fees. If you complain nothing happens. . . But if you kill one cow. . . [inaudible] that’s an issue.”⁹³

This perception that crop farmers are getting the short end of the stick turns up in other villages. Says a respondent in a different village, “If a cow ruins someone’s farm, [the authorities] should summon that person [to court]. At times it can take the chief a month to do so, as they are avoiding the case. But if something happens to a cattle, within 30 minutes or an hour, an arrest is made and someone is detained.”⁹⁴ Another respondent in the same village has similar frustrations with inaction from chiefdom authorities: “If a cow eats my rice, and I make a report to [the section chief] take action! ...[the authorities] should take action, but they don’t.”⁹⁵ In a third village, there are similar complaints, “As a man of the country, I haven’t see anything good yet that [chiefdom authorities] have done. Like when those cows ruin our rice, we cry. The money! But when the cattle herder comes [inaudible] he doesn’t have money [for us]. The authorities don’t do anything.”⁹⁶ Even Chiefdom leaders admit that this is a problem. In a section headquarter town in Lei, when asked what chiefdom authorities could improve, the first topic discussed by the Section Chief is the “settling of dispute among farmers and cattle rearers.”⁹⁷

Gbane Chiefdom

In Gbane Chiefdom, I fail to find similar systematic complaints about local law enforcement. While many of citizens’ complaints in Lei Chiefdom focused on planter herder conflict, there were no such issues that cut across the six villages where we conducted interviews in Gbane Chiefdom. In fact, only in one village did respondents’ complaints converge on a topic: the role of chiefdom leaders in resolving a boundary dispute with a neighboring village. Three of the eight interviews I reviewed in this village mention the boundary dispute and place negative judgment on chiefs’ role in this dispute. Across 30 interviews I reviewed in the remaining five villages, I fail to document strong criticism of local laws (or their implementation). In two of these villages, the strongest criticism I can find against chiefs is that the paramount chief does not live in the chiefdom headquarter town, but the district headquarter. For reference, nearly all paramount chiefs reside most of the time in the district headquarter town (Koidu).⁹⁸ In the remaining three villages, the

⁹²Interview: 130

⁹³Interview: 10

⁹⁴Interview: 1

⁹⁵Interview: 31

⁹⁶Interview: 106

⁹⁷Interview: 76

⁹⁸Traveling from to Koidu to Gbane’s chiefdom headquarter town is a several hour trip on bad roads.

biggest complaints against chiefs are fairly normal demands for development (e.g., improve water access, improve roads), demands that are also commonplace in other chiefdoms.⁹⁹ I cannot find a complaint against a law or implementation of a law.

Good Chief, Good Collaborating Partner

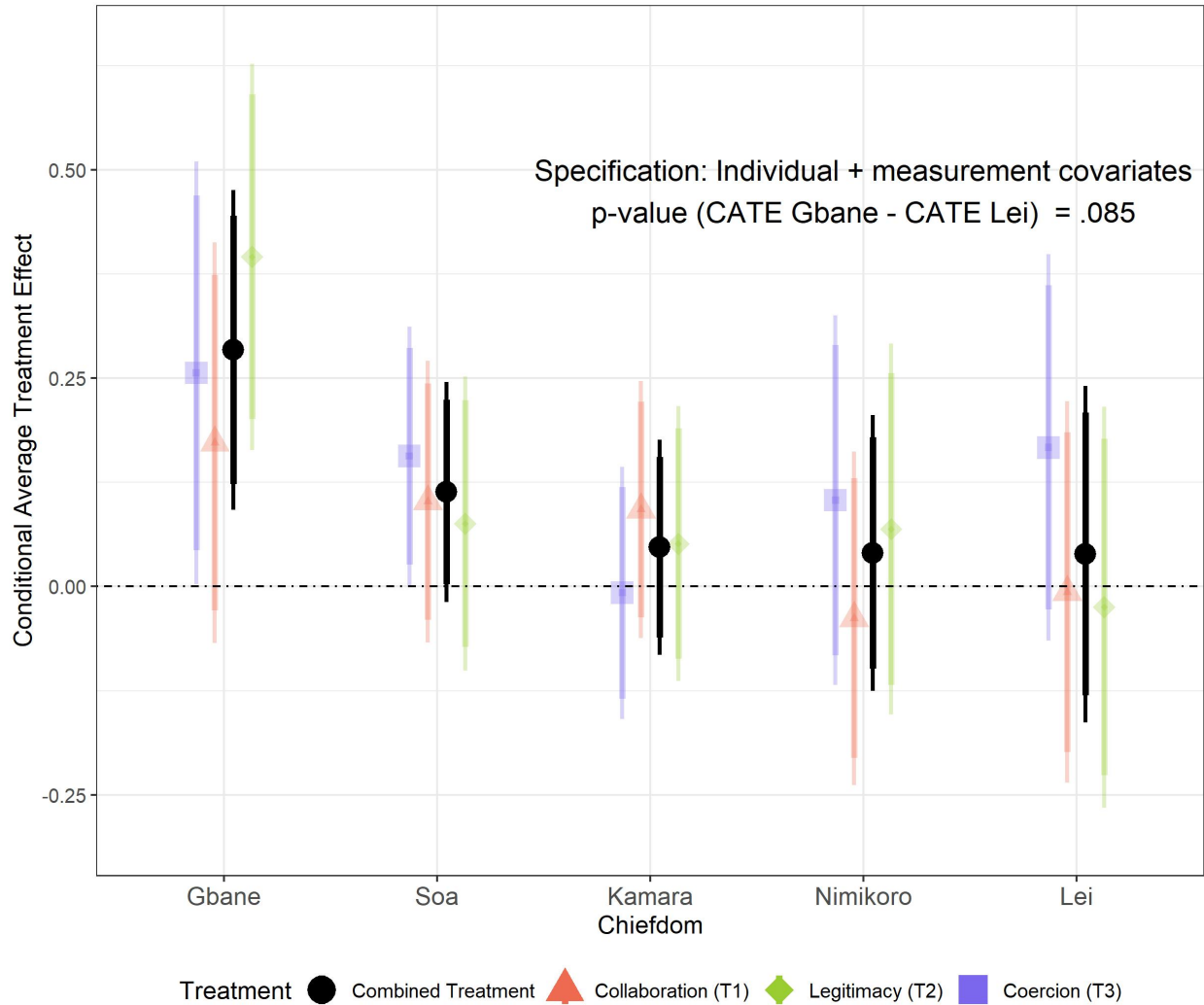
Figure 3 presents the treatment effect of collaboration conditional on chiefdom. The bolded black lines display the joint treatment effect, pooling across all treatment conditions (T1+T2+T3). Pooling buys more statistical power, as T1, T2, and T3 all feature the relevant paramount chief and contain messaging about collaboration. While this strategy bundles the effects of collaboration with the effects of legitimacy appeals and coercion appeals, this is appropriate because the objective is to explore variation in the authority of TPIs across chiefdom, and not necessarily to tease out the mechanism behind that authority. For transparency, the fainter lines alongside these pooled estimates present the treatment effect of each treatment condition individually, relative to control.

Figure 3 provides evidence that magnitude of the collaboration effect varies across chiefdoms. Focusing on the pooled estimates, we see that the effect of collaboration in Gbane Chiefdom is 0.284, more than four times the ATE of 0.068. By contrast, the effect of collaboration in Lei Chiefdom is 0.039, 43% smaller than the ATE. The difference between these effects is statistically significant at a 90% confidence level.

In summary, in Lei Chiefdom, where I estimate small chiefdom level treatment effects, I uncovered evidence that chiefdom authorities were using their coercive power *against the public good*, contravening the law on the books. By contrast, in Gbane Chiefdom, where I find the largest conditional treatment effect, coercion is used to enforce socially beneficial laws; I fail to find any evidence that chiefdom authorities use coercion outside the rule of law. This suggests that state actors should be wary when selecting collaborating partners, as collaboration may only be effective where TPIs use their coercive capacity to facilitate the production of public goods.

⁹⁹These complaints are stronger in one village, where several informants feel left out of development that they say is occurring in other places in the chiefdom. However, there are no complaints about the way laws are implemented.

Figure 3: Combined Treatment Effects by Chiefdom



Conclusion

Against the predictions of modernization theorists (e.g., [Huntington 1968](#)), traditional political institutions are “resurgent” across contemporary sub-Saharan Africa (e.g., [Englebert 2005](#)), with increasing legal protection ([Baldwin 2016](#); [Holzinger et al. 2020](#), chpt. 3) and high levels of public support ([Logan and Amakoh 2022](#)).¹⁰⁰ Using a field experiment in Sierra Leone, I show that governments can increase citizens’ tax compliance by collaborating with TPIs. This finding appears robust: using a preregistered specification, all three treatments that mention collaboration

¹⁰⁰Legal protection of TPIs today is stronger than in independence era constitutions ([Baldwin 2016](#)) and the constitutions of 1990s ([Holzinger et al. 2020](#)).

increase both a preregistered tax compliance index and respondents' belief that they ought to pay taxes. My focus on traditional, non-state institutions departs from the fiscal capacity literature that has concentrated on improving the effectiveness of state institutions. Does collaboration with TPIs undermine state leaders' attempts to build effective bureaucracies? While recent work suggests that citizens may view TPIs and government as complementary ([Van der Windt et al. 2019](#)), we have little evidence about how the state's collaboration with TPIs impacts citizens' attitudes and behaviors towards state officials.¹⁰¹ This is one potentially fruitful path for future research.

The polarizing literature on TPIs contains competing accounts of these institutions, often dichotomously casting them as either coercive and despotic or legitimate. Combining experimental and qualitative evidence, in the case of Sierra Leone, I find support for both legitimacy and coercion arguments. Digging deeper into qualitative data, I argue that these mechanisms of authority are complementary. This conclusion does not contradict the many case studies that document TPIs' abuses of power. While my findings suggest that most people think that their traditional leaders are performing their roles well most of the time, my qualitative data contain numerous allegations of individual chiefs abusing power or otherwise performing poorly. Indeed, in an exploratory analysis, I find evidence that some traditional leaders are using their coercive power *against the public good* and I find that collaboration is less effective in these areas. However, I make no attempt to explain why some chiefs govern better than others. We know little about what explains variation in governance quality across TPIs, though [Acemoglu et al. \(2014\)](#) are a notable exception with their argument about electoral competition. Future research should explore this variation, possibly through more systematic data collection on the coercive powers, institutional checks, and governance performance of TPIs.

¹⁰¹Also relevant here is [Henn \(2023\)](#), who argues that whether TPIs and the state are complements or substitutes depends on whether TPIs are integrated into a country's constitutional framework.

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Appendices

A Context

Table 8: Influence of and Attitudes Towards TPIs (Afrobarometer data)

	Sierra Leone (%)	Other Countries (%)	Sierra Leone (rank of 31)
Panel A: TPIs are politically relevant			
Local governance (“some” or “a lot”)	91.5	62.5	1
Solving dispute (“some” or “a lot”)	94.9	70.9	1
Land allocation (“some” or “a lot”)	78.1	55.3	5
Influence votes (“some” or “a lot”)	16.5	41.3	31
Panel B: Attitudes towards traditional leaders			
Trust (“somewhat” or “a lot”)	77.1	66.8	8
Job approval (“approve” or “strongly approve”)	75.2	69.2	13
Involved in corruption (“none” or “some”)	67.7	72.4	22
Traditional Leaders serve community interests	67.3	58.9	12

Table 8 reports the perceived influence of and attitudes towards Traditional Leaders in 31 African countries (source: Round 8 of the Afrobarometer survey). This table reports only responses from rural residents, to match the context of this study. Therefore, Cape Verde, Tunisia, and Mauritius are excluded because reported questions were not asked. Survey questions Rows 1-4: How much influence do traditional leaders currently have in each of the following areas: (1) Governing your local community? (2) Solving local disputes? (3) Allocating land? (4) Influencing how people in their communities vote? Survey question for Row 5: “How much do you trust each of the following, or haven’t you heard enough about them to say: traditional leaders?” Survey question for Row 6: “Do you approve or disapprove of the way the following people have performed their jobs over the past twelve months, or haven’t you heard enough about them to say: Your traditional leader?” Survey question for Row 7: “How many of the following people do you think are involved in corruption, or haven’t you heard enough about them to say: traditional leaders?” Survey question for Row 8: “Which of these statements is closest to your own opinion? traditional leaders: (i) mostly look out for what is best for the people in their communities; (ii) mostly serve the interests of politicians and government officials; (iii) mostly look out for their own personal interests.

B Using Beans to Measure Perceived Probabilities

For many questions in our survey, we asked respondents to gauge their expectations or perceptions on a 10-point scale. To make this scale more concrete to survey respondents, all enumerators were given 10 beans and a plastic plate, which served as a visual aid regarding the 10-point scale.

Before entering the main modules of the survey, enumerators guided respondents through several sample questions to familiarize respondents with this scale. The response patterns to these practice questions were encouraging and suggested that respondents understood and were comfortable using the 10-point scale. Average responses were low to unlikely events (“chance that the president visits this community tomorrow”) and high for highly likely events (“chance that you will drink water this month”). In addition, the response patterns were in keeping with basic laws of probability—respondents overwhelmingly reported that they had an equal or greater likelihood of visiting the district headquarters town in the next 30 days than in the next seven days: Just 4% of respondents report they are more likely to travel to the district capital over the next seven days than over the next thirty days. Table 9 in reports responses to four key sample question for respondents in the control group.

Table 9: Responses to practice questions (control group)

Question	Average beans
Likelihood of drinking water this month	8.55
Likelihood the president will visit this community tomorrow	1.82
Likelihood of traveling to district capital this week	5.33
Likelihood of traveling to district capital this month	7.44

This exercise also provides insight into how respondents interpreted the levels of my measurement scale. While our enumeration team coached respondents that each bean represented 10 percentage points of probability (“each bean is one chance out of 10”), it seems more likely that respondents understood each bean as an increase (or decrease) in relative likelihood, rather than representing exactly 10 percentage points. This means that between-respondent differences in measured outcomes may represent differences in the way respondents map perceived probabilities to the 10-point scale—in addition, of course, to representing real differences in beliefs.¹⁰² Therefore,

¹⁰²For example, a respondent who believes it to be very unlikely that the President will visit their community tomorrow may represent this believe with zero or one beans. Note that enumerators were trained to emphasize repeatedly that respondents could put as many or as little beans as they like and were allowed to put all ten beans or no beans at all into the plastic plate.

responses to these practice questions might predict responses to other survey questions, a relationship that can be leveraged to reduce noise when estimating treatment effects. In include several of these measures in the pre-specified covariate adjustment.

C Outcomes Description and Summary Statistics

Table 10: Description of Outcome Variables

Indicator Name	Variables Description
Self-reported propensity to pay tax	A survey question that directly asks respondents how likely they are to pay their full tax liability if a tax collector comes to their house today. Respondents are asked to express this likelihood using the beans.
Coins given to KDC's development fund	Number of coins (out of five) donated during the donation game, a dictator game in which the giver is the respondent, and the receiver is the property tax revenue fund. The value of each coin is about US\$0.05.
Perceived neighbors' propensity to pay tax	Proportion of other property owners in the respondent's village that the respondent thinks will pay their property tax. Expressed using the beans.
Tax morale (secondary outcome)	The respondent is asked to imagine a situation in which they would not be fined or penalized for not paying their property tax. The respondent is then asked if they think it is (morally) right to pay their tax. Expressed using the beans on a 10-point scale.
Own village will benefit from tax	Perceived likelihood that respondent's village will benefit from the property tax. Expressed using the beans.
Other villages will benefit from tax	Out of 10 towns in the respondent's chiefdom, how many does the respondent think will benefit from the property tax? Expressed using the beans.
Proportion of revenue towards development	Proportion of the revenue collected from the tax that will be used for development. Expressed using the beans.
Ease of discovering how tax revenue was spent	Perceived ease of finding out how property tax revenue has been spent. Expressed using the beans.
Respondent fined by chiefs if non-compliant	Perceived likelihood that chiefs will fine respondent if they fail to pay the property tax. Expressed using the beans.
Proportion of villages where chiefs fine noncompliers	Out of 10 towns in respondent's chiefdom where some people did not pay property tax, in how many will the chief fine property owners who did not pay? Expressed using the beans.
Chief will favor compliant in land allocation	Perceived likelihood that chiefs are more willing to allocate land (for farming, construction, etc.) to people who pay their property tax compared to people who do not pay. Expressed using the beans.
Chief will favor compliant in dispute resolution	In a dispute between two people, perceived likelihood that chiefs would favor a person who has paid their property tax over a person who has not paid. Expressed using the beans.

Table 11: Summary Statistics (control group)

	Mean	SD	Min	Q25	Q50	Q75	Max	N	Missing
Compliance Outcomes									
Self-reported propensity to pay tax	6.73	3	0	5	6	10	10	428	0
Coins given to KDC's development fund	1.66	1.44	0	1	1	2	5	428	0
Perceived neighbors' propensity to pay tax	5.97	2.32	0	5	6	7	10	405	23
Tax Morale (Secondary outcome)	7.36	2.82	0	5	8	10	10	428	0
Legitimacy Outcomes									
Own village will benefit from tax	7.11	2.85	0	5	7	10	10	421	7
Other villages will benefit from tax	6.71	2.84	0	5	7	10	10	404	24
Proportion of revenue towards development	6.18	2.61	0	5	6	8	10	417	11
Ease of discovering how tax revenue was spent	4.46	3.09	0	2	4	7	10	426	2
Coercion Outcomes									
Respondent fined by chiefs if non-compliant	7.51	2.66	0	5	8	10	10	425	3
Proportion of villages where chiefs fine noncompliers	6.39	3.47	0	4	6	10	10	394	34
Chief will favor compliant in land allocation	7.63	2.46	0	6	8	10	10	425	3
Chief will favor compliant in dispute resolution	6.53	2.79	0	5	6	10	10	426	2

D Survey Sampling

In this section I provide additional details for how I sampled chiefdoms, villages, and respondents for surveying. Kono district contains 14 chiefdoms and roughly 1,300 villages. I used geographic cluster sampling to select 123 villages for the study from a set of 434 eligible villages in five chiefdoms.

Sampling Chiefdoms

The research design relies on the development of chiefdom-specific tax awareness videos. Therefore, it was only possible to conduct the study in chiefdoms where we were able to create a tax awareness video with the paramount chief. I reached out to paramount chiefs or senior chiefdom authorities in all 14 chiefdoms and successfully shot videos with senior chiefs in 10 of those 14 chiefdoms. For the four chiefdoms where I did not shoot a video, I was unable to schedule a recording session in the three-day period for which I had hired a professional filmmaker.¹⁰³ In three chiefdoms, we shot videos not with the paramount chief, but with his representative: I excluded these chiefdoms.¹⁰⁴ I excluded one chiefdom (Gorama Kono) because I judged that the language used by the paramount chief in the video differed too much from the agreed script. Finally, I decided to exclude Toli Chiefdom for practical budgetary reasons. Toli contains less than 2% of the villages in Kono and is the most sparsely populated and least accessible chiefdom in the district. I determined that enumeration costs in Toli would be too high to warrant inclusion in the study. This left five chiefdoms included: Soa, Lei, Gbane, Nimikoro, and Kamara.

Sampling of Eligible Villages

Here I provide more details on my cluster sampling strategy. I first grouped the 434 eligible villages into 155 geographical clusters, dropping three isolated villages.¹⁰⁵ I then sampled clusters, and within sampled clusters, I sampled villages.

One goal of my sampling process was to generate a final sample that had sufficient variation in

¹⁰³The paramount chief of Sandor was traveling; the paramount chief of Gbane Kandor did not come to Koidu (the district headquarters); and the paramount chiefs of Nimiyama and Tankoro were unable to meet due to scheduling conflicts.

¹⁰⁴In Mafindor Chiefdom, we filmed the video with the acting regent chief, as the paramount chief recently passed away and a new one has not been elected. In Fiama Chiefdom, we filmed the video with the chiefdom speaker, as the paramount chief is the Kono paramount chief representative in parliament. In Gbense Chiefdom, we filmed the video with the chiefdom speaker at the request of the paramount chief.

¹⁰⁵Clustering was done within each chiefdom, so that villages were not clustered across chiefdom boundaries. After initial clustering, 25 villages were in clusters of their own. I placed these villages in the closest cluster. In three instances, these one-cluster villages were more than three kilometers from the closest village in their new cluster; I dropped these three villages.

two village level characteristics: (i) the distance to the chiefdom headquarters town, where the paramount chief resides, and (ii) the size of the village.

I thus coded each of the 155 clusters along these two dimensions. Within each chiefdom, I coded each cluster into one of six strata that combined three levels on the distance dimension and two levels on the village size dimension. On the distance dimension, villages could be near, middle, or far from the chiefdom's headquarters town. On the village size dimension, clusters were coded as either containing a large village or not, with "large" defined as at or above the 75th percentile in terms of population. To increase variation along the distance dimension, I dropped clusters coded as a middle distance from the chiefdom's headquarters town. This leaves me with clusters in four strata from which to draw my sample:

1. Clusters near the chiefdom's headquarters town that contain a large village.
2. Clusters near the chiefdom's headquarters town that do not contain a large village.
3. Clusters far from chiefdom's headquarters town that contain a large village.
4. Clusters far from the chiefdom's headquarters town that do not contain a large village.¹⁰⁶

I then wrote a sampling procedure that aimed to balance my final number of observations across each of the four strata. The specifics of the sampling procedure are as follows:

- First, I drew two clusters in each strata. (There are two strata that contain only one cluster of villages—in these I drew one cluster).¹⁰⁷
- Second, I selected two village in each stratum. In strata that contain large villages, I selected one large and one small village.
- Third, I checked whether the number of potential observations in each stratum was at least 100. As a proxy for the number of potential observations in each village, I used the number of structures recorded in the 2015 census.
- Fourth, in strata where the target number of potential observations was not been met, I drew an additional village from the set of sampled clusters.¹⁰⁸
- It remains possible that the maximum number of potential observations in a given strata did not reach 100. In this case, I drew an additional cluster from the appropriate cluster stratum.

¹⁰⁶In one chiefdom (Kamara), there were no eligible clusters in the stratum representing large village and near the chiefdom's headquarters town. Therefore, I have 19 total strata from which to draw clusters.

¹⁰⁷Of course, I selected no clusters in the one stratum that contains no clusters.

¹⁰⁸For example, if after step 3 the not large villages sampled in a given chiefdom contained fewer than 100 structures, I drew another not large village from the set of sampled clusters in that chiefdom.

Selecting Respondents

Once in a village, the enumeration team used a random walk strategy to select respondents for the survey. The protocol for this strategy was as follows:

- The enumeration team arrived in the village in the morning and went directly to the house of the village chief (or another village authority if the village chief was not present that day). A letter had been dropped off to village authorities within the previous three days specifying the date of the enumeration team's arrival. Enumeration teams ranged between two and six people, depending on the size of the village.
- From the house of the village chief, the enumerators agreed to walk in separate directions. After agreeing which directions they would each travel, enumerators used their tablets to select a distance, which told enumerators whether to interview a respondent at the first, second, third, or fourth house in their chosen direction. If the enumerator found no one home at the relevant house, the enumerator proceeded to the next house in that direction.
- The enumerators asked to speak to the person "most responsible and influential" for making decisions related to the property. If that person was home, the enumerator began the informed consent process to start the interview. If that person was not home, the enumerator asked if he or she would return later that day. If so, the enumerator scheduled a time to return to interview that person. If not, the enumerator asked if there is "someone else who is involved in decision-making related to this property." If so, the enumerator asked to interview that person. If not, the enumerator attempted to schedule an appointment for later. If that was not possible, the enumerator moved on to a different property.
- After completing an interview, the enumerator used the tablet to select the direction and distance of the next house. Previously interviewed houses (marked by a sticker) were not included in the count.
- If an enumerator walked past the last structure of the village in a given direction, he or she turned around and finished the count, walking back in the direction they came.
- If an enumeration team completed interviews with all available respondents before the end of the day, they proceeded to their next scheduled village. Otherwise, the enumerators left for their next scheduled village in the morning.¹⁰⁹

¹⁰⁹Note that in several large villages, enumeration teams were scheduled to conduct interviews for more than one day.

E Attention / Manipulation Checks

Recalling Number and Identity of Speakers in Video

The tax awareness videos contain information that I expect to modify respondents' beliefs in theoretically important ways. First, I check whether respondents can correctly recall the number and identity of the speakers in the video they watched.¹¹⁰ 94% of respondents correctly state the number of speakers and 93% correctly identify the speakers.¹¹¹ Enumerators asked these questions directly after a respondent watched the video.

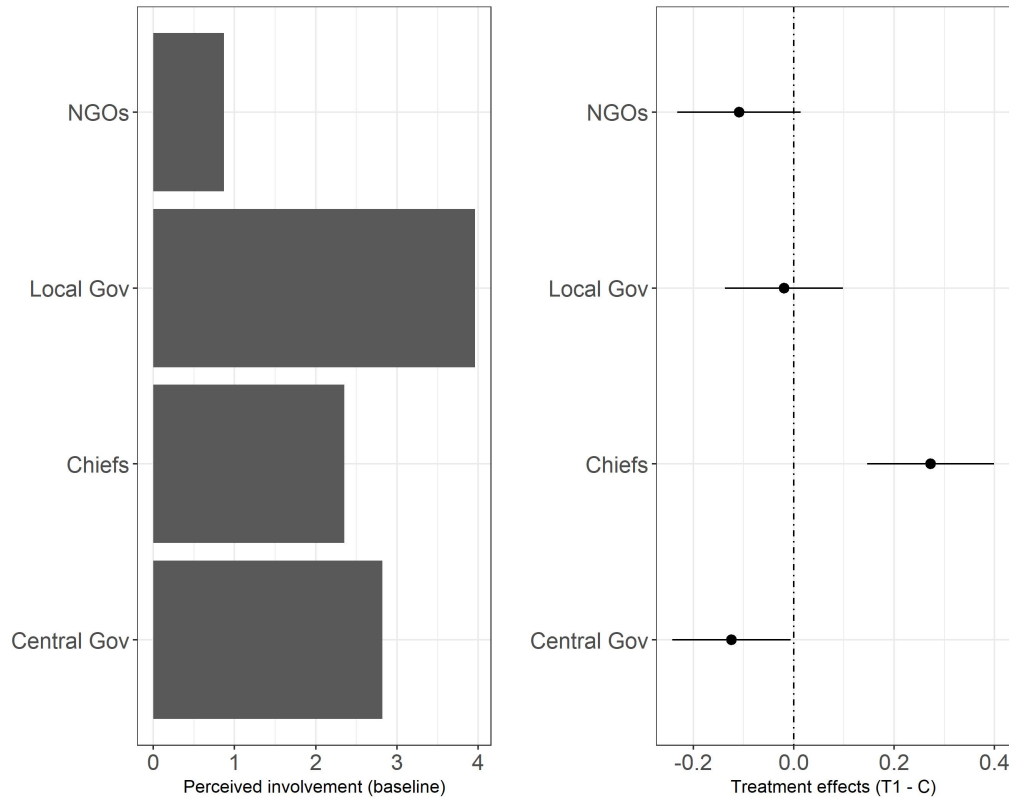
Manipulation Check: Does T1 Increase Perceptions of TPI Involvement?

T1 attempts to manipulate respondents' perceptions about the collaboration between state actors and TPIs. To measure perceptions of involvement, enumerators presented respondents with a laminated paper divided into four squares, where each square represented one of the four actors: (i) Kono District Council, (ii) TPIs, (iii) the central government, and (iv) NGOs and civil society organizations. Each respondent was then given 10 beans and asked to allocate the beans across the four squares, placing more beans on actors they thought were more involved in and responsible for the property tax. The left panel of Figure 4 displays baseline (i.e., control) perceptions of the involvement of the four actors and the right panel shows the treatment effects of T1.

¹¹⁰Respondents who see the control video see only one speaker, District Council Chairman Solomon Bundo. Respondents who see treatment videos see two speakers—Chairman Bundo and the paramount chief of their chiefdom.

¹¹¹If there were two speakers, this meant correctly naming both.

Figure 4: T1 Increases Perceived Involvement of TPIs



Additional Attention Checks

I checked whether respondents can recall theoretically important messages delivered in the video they watched. At the end of the survey, we asked respondents a set of six yes/no questions, regarding whether statements were included in the video. We asked respondents whether the following statements were discussed in the video they watched:

1. A property tax that will be collected on houses. [“Tax”]
2. The Chiefdom Council is working with Kono District Council on this property tax. [“Collaboration”]
3. After taxes are collected chiefdom authorities will call a meeting to discuss how to spend the money collected. [“Spend”]
4. After taxes are collected chiefdom authorities will call a meeting to discuss how to punish non-compliers. [“Punish”]
5. Tax collectors will be paid 10% of the money they collect. [“Salary”]
6. All tax collectors have an identification card with their name and picture. [“ID Card”]

Table 12 reports property owner responses by treatment condition. Column 2 (“n”) refers to the number of observations in each treatment group.¹¹² The value in each of the remaining six columns is the percent of respondents that affirmed a given message was given in the video. First, let’s consider a set of three questions that all respondents should answer in a similar way, regardless of treatment condition. Of course, the central messaging of the video is around a house/property tax. Column 3 (“Tax”) tells us that across treatment and control groups 95 to 98 percent of respondents correctly state that the video contained messaging about a house tax.

Respondents were also asked about two statements that did not appear in any video:

- Tax collectors will be paid 10% of the money they collect (Column 7, “Salary”)
- All tax collectors have an identification card with their name and picture (Column 8, “ID card”)

Respondents did well at identifying statements that were not in the videos. Across treatment and control 85% of respondents correctly state that compensation for tax collectors is not discussed and 78% correctly state that tax collector ID cards are not mentioned in the video. As expected, there does not appear to be meaningful differences between treatment arms.

Table 12: Attention Check

Treatment Arm	Tax	Collaboration	Spend	Punish	Salary	ID Card	n
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
C: Tax information	0.95	0.68	0.44	0.42	0.14	0.20	428
T1: TPI collaboration	0.98	0.86	0.53	0.48	0.14	0.22	454
T2: Legitimacy	0.97	0.89	0.78	0.60	0.18	0.24	436
T3: Coercion	0.98	0.90	0.75	0.81	0.15	0.24	433

Next, let’s consider responses to three questions that we do expect to change with the respondent’s treatment condition. First, recall that the treatment videos attempt to manipulate respondents’ perceptions about the collaboration between the state and TPIs. As reference to this collaboration only appears in treatment versions (and not in control), we should see respondents in T1, T2, and T3 more likely to agree that the collaboration between chiefs and state was discussed in the video (compared to control video). Indeed, that is what we see. Respondents in T1, T2, and T3 are respectively 18 percentage points, 21 percentage points, and 22 percentage points more likely to

¹¹²Note that a one respondent is dropped from T2 group, who responded “I don’t know” to these comprehension check questions.

state that collaboration between KDC and chiefdom authorities was mentioned in the video.

The goal of the Legitimacy treatment (T2) is to prime respondents to legitimacy mechanisms in TPIs and the T2 video the paramount chief says he will call a meeting to discuss with his sub-chiefs on how the collected revenue will be spent. Respondents who watched T2 videos are 25 percentage points more likely to affirm that their videos referred to these meetings, compared to respondents who watched the T1 video.¹¹³ In the Coercion treatment (T3) the paramount chief said that he would call a meeting with chiefdom authorities to discuss how to punish non-compliers. Respondents who viewed the T3 video are 33 percentage points more likely to state that their video contained this message, compared to respondents who watched the T1 video.¹¹⁴

The response patterns from the comprehension check exercise are encouraging. Overall, respondents are good at identifying messaging content that was or was not in their video and responses vary in predicted ways with the video version that respondents watched. However, for questions that involve TPIs, the rate of “false positives”—respondents affirming that a message was delivered in their video when in fact it was not—is high. For example, 68% of respondents in the control video (column “Collaboration”) affirm the video discussed collaboration between the local government and the chiefdom council when this was in fact not the case. What should we make of this rather high “false positive” rate?

I argue that the six recall questions should be considered a hard test and that the high rate of false positives is indicative of the difficulty of the test, rather than a lack of respondent comprehension. First, the recall questions are designed as leading questions (“was X in the video?”), which likely generates the confirmation bias that I am here calling a “false positive”. This seems to be only part of the explanation, as this confirmation bias should be consistent across all questions, but we see higher rates of false positives for recall questions about TPIs. Second, recall questions were asked at the end of the survey, whereas the video was shown at the beginning of the survey. The motivation for putting these recall questions at the end of the survey is to avoid priming respondents before measuring outcomes. For example, asking respondents if the video mentioned collaboration between government officials and TPIs might prime control respondents to think about chiefs when they otherwise would not have. The tradeoff is that by placing comprehension questions at the end, survey questions that come prior to the comprehension check questions can also prime respondents. More concretely, respondents are first asked a host of survey questions about TPIs, then at the end of the survey respondents are asked if the video they watched contained messaging about TPIs. It is possible that respondents infer that the subjects they were asked about in the survey (ie., TPIs)

¹¹³This increase jumps to 34 percentage points when comparing T2 to the pure control.

¹¹⁴This increase jumps to 39 percentage points when comparing T3 to the pure control.

Table 13: Attention Checks (pilot)

Treatment Arm	Tax	Collaboration	Spend	Punish	Salary	ID Card	n
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
C: Tax information	0.89	0.30	0.20	0.07	0.09	0.04	46
T1: TPI collaboration	0.93	0.72	0.10	0.14	0.00	0.00	29
T2: Legitimacy	0.92	0.76	0.70	0.24	0.00	0.03	37
T3: Coercion	0.94	0.81	0.50	0.50	0.06	0.11	36

are likely to have been addressed in the video. Third, placing the recall questions at the end of the survey creates a time lapse between the video and the recall questions, which may lower recall.

If the high false positive rate is driven mainly by the placement of the recall questions at the end of the survey (rather than general lack of comprehension), we should see much lower false positives if the recall questions were asked directly after the video. Prior to undertaking my primary data collection, I conducted a pilot survey where we did ask recall questions directly after the video. Table 13 shows results from that pilot. False positive rates in the control group plummet. Only 30% of respondents who watch the control video incorrectly state their video discussed collaboration, down from the 68% we saw in our true study. Rates of false positives drop across each of the other four comprehension check measures.

F Intervention Development

The tax awareness video was developed in a series of meetings that were attended by members of the Kono Revenue Mobilization Team between 2018 and 2021. Early meetings focused on the development of tax collection protocols and program infrastructure. After 2019, the focus of the meetings shifted toward strategies to improve tax compliance. An awareness-raising campaign (“sensitization plan”) was one oft-discussed strategy for increasing tax compliance. At a July 2020 meeting, the KDC requested that I develop a proposal for that campaign.

At a November 2020 (Zoom) meeting, I presented a proposal for a video-based property tax awareness campaign, involving both KDC officials and traditional leaders. I had two motivations for including traditional leaders in the tax awareness video. First, there was consensus amongst the Revenue Mobilization Team that (i) property owners were unaware that their traditional leaders were collaborating with KDC on the property tax, and (ii) effectively communicating traditional leader involvement to property owners would increase compliance. Second, several interviewed tax collectors reported that they believed property owners would be more willing to pay property tax if they knew their traditional leaders were collaborating with KDC on the property tax.¹¹⁵ The proposal was met with general approval, and I was directed to continue developing plans for a tax awareness video that contained local government officials and traditional leaders.

At a January 2021 meeting in Kono, the Revenue Mobilization Team agreed on the basic contours of a tax awareness video, including the three key messages that traditional leaders should emphasize (collaboration with KDC, accountability, and enforcement). I then met with senior paramount chiefs to workshop the video script.

Chieftdom-specific tax awareness videos were recorded and edited in March 2021. Kono district is named for its predominant ethno-linguistic group, and I expected Kono speakers to dominate our sample. That said, Kono district also contains a significant non-Kono speaking population. Therefore, we filmed the tax awareness videos in both Kono and Krio (an English-based creole that is the country’s lingua franca). As Kono is not a written language, the video script was written in Krio. When filming, we first walked chiefs through the Krio script and then filmed the Krio version. Before filming the Kono version, chiefs listened to a prepared Kono recording and practiced the script with a Kono-speaking senior research assistant. We recorded the videos segment by segment;

¹¹⁵In late 2019 and early 2020, I worked with a research assistant to interview tax collectors to understand what they thought would increase compliance. Several stated that they were more successful collecting taxes when property owners knew that their traditional leaders supported and were involved in the property tax. For example, a tax collector from Tankoro chieftdom noted, “well, if the paramount chief calls a meeting. When the chiefs are more strongly backing this thing [the property tax], that’s going to make people pay. You know that the community people fear/respect their authorities” (my translation).

when chiefs deviated meaningfully from the script, we reshot the segment.

We shot tax awareness videos with traditional leaders in 10 chiefdoms, and I conducted this study in five of those chiefdoms.¹¹⁶ In four of these chiefdoms, we filmed both Kono and Krio versions. In one (Nimikoro), we only filmed a Kono version, so property owners who did not speak Kono were excluded.¹¹⁷

¹¹⁶The selection of chiefdoms is discussed in Section 6.

¹¹⁷In Nimikoro, as in other chiefdoms, we first discussed the script in Krio. However, the paramount chief requested that we film the Kono version before the Krio version. After finishing the filming of the Kono version, the chief left to attend another appointment; we were unable to meet again to film the Krio version while the filmmaker was in Kono district.

G Kono Videos Translation / Transcriptions

This appendix provides translations for Kono versions of the tax awareness videos. For each of the five chiefdoms, we created three treatment video segments. The control video (with only the District Council Chairman) is the same across all chiefdoms. There are two translations for each video segment. One translation was done by my lead research assistant. A second translation was done by the founder of a local research and capacity building NGO.

Control: Tax information

Translation 1: Good morning, good evening, good night. It's your son Solomon Sahr Bundo, Chairman on top the Kono District Council. As you all know, going further – in the morning hours people are calling for water well, roads and other things, they spoke of going further– and as you know going further does not happen for free, it involves money. And this money, we as Kono people, we can come together and gather our money, that will make us to go further.

Everybody that constructs a house, any kind of house, it can be a stick house, it can be zinc house or story building, you should give money for that house. This will make the country to go further.

For this reason, we sit and discuss what you should give for your house for a year– not a month, but a year. The money that I am calling now is for a year. This is what we give for our house for a year. This money you give is not for a month, but a year:

- Thatch house, stick house. The money you give, they call it in Leones twenty-thousand [calls amount in Krio]. As I say, the money you give for stick house and thatch house is 20,000 Leones [This time calls amount in Kono].
- A stick house with a zinc roof is 30,000 leones [calls amount in Krio].
- If you construct a dirty block house, without giving it cement, you only put your block, but you did not plaster it and cover it with a zinc, you pay 40,000 leones.
- The dirty block you plaster with cement, you plaster both in and outside of the house– that is 50,000 Leones.
- If you construct a house, you plaster both in and outside, with a toilet inside– there are many of these now in our villages– you pay 80,000 Leones.
- Now if you want to construct a house and you want to do it with cement block, but you don't put a toilet inside the house, you pay 120,000 Leones.
- If you construct it now, a concrete house with a toilet inside – they call it “self-contain

concrete house” [Krio]”, we call concrete, you construct it with cement, you have the toilet inside the house, you pay 150,000 Leones.

- If you construct your house as a one story building, whatever happens it’s a story building – no matter, they can’t build a story building with mud, they only construct cement block with a story building– you pay 300,000 Leones.
- If you have more than one story in that particular house, it can be one, two, or three or even you touch the sky, we have put this in one category and you pay 400,000 Leones.

Please, I am apologizing. Let’s gather our small money so we can construct our roads, we can maintenance our water wells and build our schools. That will make Kono to go further. It’s me, as I started that is how I am going to end it, it is your son Solomon Sahr Bondu, Chairman of Kono District Council. Thank you very much for listening.

Translation 2: Greetings my people! Good morning, good afternoon and good evening. This is your son Solomon Sahr Gbondo who is heading the Kono District Council. As all of you may know, people are calling for development projects like boreholes, roads rehabilitation and other many more things. But it is worthy of note that, development projects come with a price, it does not happen out of nothing, funds are needed to finance it, these projects. With regards to that, we the people of Kono should come together, work in unity to raise these funds to achieve our development goals.

I want people to know that those that own houses, whether it is constructed with sticks and mud-bricks, covered with local roofs or zinc, cement houses and concrete story buildings, must pay property taxes for that particular structure. After series of engagement, we have agreed that house owners should pay the following amount annually or yearly, please note that, it is not a monthly but yearly and should be done once a year.

- Stick house, with local roof. That is, palm trees leaves. You pay 20,000 Leones.
- Unpaved mud-bricks house with zinc roof. You pay 30,000 Leones.
- Mud-bricks house paved with cement in and out and covered with zinc roof. You pay 40,000 Leones.
- Mud-bricks house paved with cement and has toilet facilities inside. You pay 50,000 Leones.
- House built with cement bricks without toilet facilities inside. You pay 80,000 Leones.
- House built with cement bricks with toilet facilities inside. This is also known as “self-contain house”. You pay 120,000 Leones.

- One story building. You pay 300,000 Leones.
- More than one story building. It can have multiple floors. You pay 400,000 Leones.

Please, let us pay our taxes in order for us to be able to carry out development projects in the district like roads rehabilitation, digging of boreholes, building of schools, and other things. If we commit ourselves to such, we will be able to move on with our development projects for the good of the districts. I will conclude in the similar way as I introduced myself at the beginning of the video: I am your son and Chairman of Kono District Council, Solomon Sahr Gbondo. Thank you all!!

Treatment 1: TPI collaboration

Nimikoro Chiefdom

Translation 1: My people, good afternoon. Nimikoro good afternoon, Kono people good afternoon. This is your chief, Paramount Chief Aiah Denti Formansah Bono III, Nimikoro, Kono. My people, I want to tell you that Nimikoro Chiefdom and Kono District Council are working together to collect tax for our properties, our houses.

Translation 2: Greeting's relatives, Nimikoro and people of Kono! This is your Paramount Chief – doubling as head of the Poro Secret Society in his Chiefdom – Aiah Denton Bona the III of Nimikoro Chiefdom. My people, let me take this opportunity to inform you that Nimikoro Chiefdom Committee is working in collaboration with the Kono District Council to ensure we pay taxes for our houses. It is called “Property Tax” in the White Man’s English language.

Gbane Chiefdom

Translation 1: Gbane good afternoon. This is your Chief Aiah Bindi Faefankongor II. Gbane Chiefdom and Kono District Council are working together to collect tax for our properties, especially houses, for us to pay for them.

Translation 2: My Gbane people, I greet you all. This is your Paramount Chief Aiah Bindi Faefankongor the II. Gbane Chiefdom and Kono District Council are working in unity or collaboration to collect property taxes – more importantly taxation for houses– which we should pay.

Lei Chiefdom

Translation 1: My people, good afternoon. This is your Chief Sahr Cheety Mani, Lei Chiefdom. My people - Lei chiefdom is working with Kono District Council to collect property tax for everyone to pay for their house.

Translation 2: Greetings my people! This is your Paramount Chief Sahr Cheety Mani of Lei Chiefdom. My people, the Paramount Chief of Lei Chiefdom is working in collaboration with Kono District Council to ensure people pay taxes for their houses.

Soa Chiefdom

Translation 1: It's me, Paramount Chief Emmanuel Tamba Torcheor Foryoh IV, Soa Chiefdom. Soa Chiefdom Council and the Kono District Council have sat together so that they can collect house rate from us that have built houses. It is called property tax, and it is to be collected to develop our Chiefdom.

Translation 2: I am Paramount Chief Tamba Emmanuel Torcheor Foryoh the IV of Soa Chiefdom. The Soa Chiefdom Council and the Kono District Council held a meeting and have agreed to collect revenue through payment taxes for our houses which we house owners should pay. It is called "Property Tax". We should collect property tax revenues in order for us to be able to fund our development projects in Soa Chiefdom.

Kamara Chiefdom

Translation 1: My people good afternoon. This is your chief, Chief Ngekia, of Kamara Chiefdom. Kamara Chiefdom and Kono District Council are working together so that our taxes will be collected together, and our house rates also together.

Translation 2: My people, greetings. This is your Paramount Chief, Chief Ngekia of Kamara Chiefdom. The Kono District Council and Kamara Chiefdom have agreed to collect taxes, among these taxes are house tax payment.

Treatment 2: Legitimacy

Nimikoro Chiefdom

Translation 1: The reason why I will call Nimikoro Council– we call it in English "Nimikoro Council Committee" – this Nimikoro Council, we'll call everyone and present the money and ask what will we do with the money, so that a single person will not take the money and put it in his own pocket and it will not benefit Nimikoro. If this money is gathered and you didn't see any good thing that the money brings and it didn't bring any benefit in Nimikoro Chiefdom you will not be happy and you will get angry at me.

Translation 2: The reason for this notice is to notify you that after the taxes from property owners

have been collected, we will summon everyone to a meeting and present the money for all of us to see the pool of money that has been collected. Then we will inquire of the people what should be done with the revenue collected with regard to undertaking chiefdom development projects. We are doing such to discourage anyone who may have plan to siphon or misappropriate the funds collected for his or her personal gains at the expense of Nimikoro Chiefdom's interest. After the tax revenue collection exercise, if the people understands that nothing significant is done to facilitate development projects from the money collected, it will spur dissenting view in the minds of the people and they will be annoyed with me.

Gbane Chiefdom

Translation 1: After the collection, I will call a meeting with my chiefs so that we will discuss on the use of the money. I believe that if the right work is not done with the money you will not be happy for Gbane.

Translation 2: After we would have finished collecting the tax payment, I will summon a meeting, in this meeting, I shall request the presence of other subordinate chiefs in the chiefdom for us discuss and map out ways of how the money collected (tax funds paid) is going to be utilized. I am of the belief or conviction that if we do not utilize the funds collected in the best way for the development of the chiefdom, you the chiefdom people will be annoyed.

Lei Chiefdom

Translation 1: When the money is collected, I will call my chiefs for us to sit together and know what we will do with the money for us to develop this chiefdom. I know that this money, if it does not benefit Lei, you will not be happy.

Translation 2: When we are done collecting the taxes. I will summon a meeting that will bring together my subordinate chiefs for us meet, discuss and bring up resolutions on how we are going to use the money collected to foster development projects in the Chiefdom. I am aware that people will not be happy if the chiefdom do not experience a huge benefit out of the collected money.

Soa Chiefdom

Translation 1: The money that would be collected from Soa, here, I will call my chiefs and the Chiefdom Council will sit together and we'll arrange how we will work with the money. I know that the money collected, if we didn't work with it correctly, no one will be happy here in Soa.

Translation 2: When the tax funds would have been collected, I will invite my subordinate Chiefs

and some members of the Chiefdom Council to a meeting in a bid for us to discuss and map out resolutions on how the funds will be utilized. I am mindful of the fact that people will not be pleased, if the tax revenues collected are not properly used to facilitate development projects in the chiefdom.

Kamara Chiefdom

Translation 1: When the taxes are collected, I will call a meeting for everyone to come for us to know the money collected, and what work will we do with it. I know if this tax did not bring any benefit to us here in Kamara, we will not be happy.

Translation 2: After the taxes would have been collected, I will summon a meeting where all the people will be invited to understand and decide on what we will do with the tax funds collected. I am aware that the people of Kamara Chiefdom won't be happy if the money collected does not bring benefits to the chiefdom.

Treatment 3: Coercion

Nimikoro Chiefdom

Translation 1: Why, when we finish collecting the money we will all come and sit together– we will fine those who did not agree to pay their own taxes – and discuss what we will do them. We will not sorry for anyone... when we call a meeting, you that didn't agree, we and the other chiefs, starting from me the Paramount Chief down to all the other chiefs in our villages, we will not be happy with anyone who did not pay the tax. If you did not pay we will charge you and we will not feel sorry for you. We will fine you and take you before court.

Translation 2: Furthermore, another meeting will be summoned, where all of us will meet to discuss and take actions against those who may have refused to pay the property tax. We will not be merciful to anyone who is guilty of tax evasion. During that meeting, I and the other subordinate chiefs in all the towns even down to the least hamlet in this chiefdom, will stand tough in ensuring we bring actions against tax evaders if even it is going to an extent of prosecuting them in the court of law.

Gbane Chiefdom

Translation 1: After the collection I will call a meeting with other chiefs for us to discuss and know how to deal with those that didn't pay for their houses. In addition to that, myself and the other chiefs will not be happy with anyone who did not pay for his house.

Translation 2: Also, after the collection of these taxes, I will hold another meeting with the chiefs to engage or brainstorm on what to do with those that have refused to pay taxes for their houses. Let me emphasize that I and the rest of the chiefs will not be merciful on anyone who have refuse to pay the tax.

Lei Chiefdom

Translation 1: When this money is collected, we will sit with my chiefs for us to decide, those that did not pay for their houses, what we will do with them. Me and the other chiefs we will sit and we will not take kindly to anyone who did not pay for their houses.

Translation 2: Furthermore, after the conclusion of the tax collection exercise, I will summon a meeting again with the chiefs to engage on what actions we should bring up against those that have evaded the payment of taxes for their houses. We will not be merciful or lenient with anyone that do not honor the payment of tax for his or her house.

Soa Chiefdom

Translation 1: In addition to that, when the tax is collected, I will call my chiefs, we will sit together and find out to know, who actually denied to pay the house rate. And these house rates, those who denied to pay, we will find a solution how to deal with them so that tomorrow other people will not deny to pay.

Translation 2: In addition, after tax revenues will have been collected, I will summon my subordinate Chiefs to another meeting again. In this meeting, we will discuss issues pertinent to house owners who may have refused to pay their property tax. Furthermore, we will develop strategies that will discourage the act of property tax evasion to deter people not to evade tax in the future. We will not be tolerant to those who refused to pay their property tax. Such persons will be categorized or listed as individuals who does not like the development of Soa Chiefdom.

Kamara Chiefdom

Translation 1: When the tax is collected, I will call a meeting again for us all to come and sit and know those who didn't pay taxes for their houses, what we will do with them. My self and the other chiefs will take kindly to anyone who did not agree to pay tax for his house.

Translation 2: When the house tax payment exercise concludes, I will summon another meeting where all of the people will be invited to meet and agree on actions that we will take against those people in the chiefdom that have evaded or defaulted in paying their taxes. I and the rest of the

chiefs will not be merciful or compassionate on anyone who flout paying their taxes.

H Qualitative Results: Additional Tables

Table 14: Common Bylaws (Village, Section, Chiefdom)

Mentioned byelaw	Village (%)	Section (%)	Chiefdom (%)	Any (%)
Any law	94	71	68	97
No stealing	41	34	39	65
No abusive language	40	17	19	51
No fighting	28	13	15	39
Participate in communal labor	13	14	14	27
No adultery	15	6	6	19
No rape	3	8	10	15
Law regulating crop harvest	3	5	4	10
Law regulating livestock	0	8	6	9

Table 14 reports byelaws most commonly mentioned by respondents during semi-structured interviews. Columns Village, Section, and Chiefdom present the percent of respondents who mention a given law at this administrative level. The column Any is the percent of respondents who mention this law at any administrative level. Percentages are rounded to the nearest integer.

Table 15: Legitimacy: Participation in Local Policy-making

	% Agree	% Disagree	% Unclear
Meetings called to discuss byelaws			
Village	97.8	0.0	2.2
Chiefdom	97.1	0.0	2.9
Representatives invited to byelaw meetings			
Chiefdom	93.6	1.8	4.7
Active participation for meeting attendees			
Village	83.9	8.6	7.5
Chiefdom	78.3	3.7	18.0

Table 15 describes respondents' perceptions of participation in local policy making. Interviewers asked respondents about the creation of town, section and chiefdom level byelaws, without explicitly mentioning meetings. For ease of exposition, I combine responses about section and chiefdom level meetings. For the first outcome, respondents coded as "agree" ("disagree") explicitly mention that a meeting was (not) called. For the second outcome respondents are coded as "agree" if they say that representatives would be called to attend either section or chiefdom level meetings. For the third outcome, research assistants coded interviews for evidence of active participation ("agree"), evidence of lack of participation ("disagree"), or no evidence for either ("unclear"). Throughout, respondents are coded as "unclear" for a given outcome when their response is ambiguous or when they don't answer a given prompt. If the interviewer did not ask the question the respondent is removed for that outcome.

Table 16: Communal Labor: Monitoring and Punishment strategies

	Village	Chiefdom	Either
	(%)	(%)	(%)
<i>Communal Labor</i>			
Monitoring: Any	60	83	90
Youth Leader informs authorities	46	44	67
Authorities personally identify	8	42	46
Authorities keep attendance list	9	24	33
Punishment			
Fines	60	83	90

Table 16 presents qualitative evidence of TPIs' monitoring and punishment strategies for Communal Labor. Interviewers' prompt: "What happens if someone who was supposed to participate in Community Labor does not? Would the Village (chiefdom) Leaders find out? Would they do anything?" Percentages are rounded to the nearest integer.

Table 17: Traditional Leader Performance and Communal Labor

	% Agree	% Disagree	% Unclear
Panel A: Traditional authorities performance			
TPIs enforce laws well			
Section	15.2	1.44	
Chieftdom	10.1	2.16	
Either	26.0	4.10	
TPIs are doing well to bring development			
Section	28.7	44.8	
Chieftdom	36.5	38.1	
Either	50.8	61.9	
Panel B: Communal Labor			
Communal labor directed towards broad public benefits			
Town	82.6	7.0	10.5
Section	74.6	11.3	14.1
Chieftdom	65.5	18.2	16.4

Table 17 provides qualitative evidence that TPIs use coercion legitimately. Panel A presents citizens' perceptions of the performance of traditional authorities. The prompts were: "Please tell me something the leaders of this section (chieftdom) are doing well?" and "Please tell me something the leaders of this section (chieftdom) could be doing better, that is, could improve?" Responses are coded as "agree" if the informants named law enforcement (top outcome) or development (bottom outcome) as something authorities were doing well and "disagree" if the informants stated that authorities could improve on those dimensions. Panel B presents respondents' perceptions regarding the benefits of mandatory communal labor. Interviewers prompted "Is the Communal Labor called for by the Town (Section; Chieftdom) Leaders usually used in a fair way that benefits the community or is it used in an abusive way that benefits only a few people?" Responses are coded as "agree" respondents say community labor is used for broad community benefits, "disagree" if respondents say community labor is sometimes or often used for narrow benefits, and "unclear" if the response is ambiguous or there was no direct response to the question.

Table 18: Local Tax: Monitoring and Punishment Strategies

	Village	Chiefdom	Either
	(%)	(%)	(%)
Local Tax			
Monitoring: Any	52	49	68
Roadblocks / Checkpoint	11	28	32
Door-to-door checks	23	5	24
Authorities keep records	20	6	24
Punishment: Any	69	55	78
Fines	36	40	55
Taken to higher authorities	34	25	45
Banned from farming	9	2	9

Table 18 presents qualitative evidence of TPIs' monitoring and punishment strategies for Local Tax. Monitoring interview prompt: "Did village (chiefdom) leaders do anything to check if people had paid Local Tax this year (2022)? Or do they not do anything like that?" Punishment interview prompt: "When village (chiefdom) leaders found out that someone had not paid, did they anything about it, or did they not do anything?" Percentages are rounded to the nearest integer.