

Supplementary Data and Appendix

For Online Publication

FIGURE A1: TAX LETTERS: EXAMPLES BY TREATMENT GROUP

A: Status Quo Tax Rate

REPUBLIQUE DEMOCRATIQUE DU CONGO
PROVINCE DU KASAÏ OCCIDENTAL
DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL
DGRKOC

Pour la campagne de collecte de l'Impôt Foncier 2018 :

La parcelle, No. 595047,

appartenant à _____,

est assujettie à un taux de : 3000 FC*

à payer au percepteur de la DGRKOC une fois par année.

Comme preuve de paiement, vous recevrez un reçu imprimé sur place (voir l'exemple du reçu à droite).

Il est important de payer l'impôt foncier.

* D'autres montants s'appliquent si vous habitez dans une maison en matériaux durables.

DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL	
REPUBLIQUE DEMOCRATIQUE DU CONGO	
KANGINDA	
IMPOT SUR LA SUPERFICIE DES PROPRIETES FONCIERES BATIES ET NON BATIES	
Première Copie	
Date et Heure : 22-FEB-2018 11:54:35	
No : KG21802000000001-000016	
Nom du contribuable : Mutsombo	
Dikembe Jean-Jacques	
Licence d'Exploitation : 202005	
Type de taxe :	Profit 3.000
Unité :	Terrain
Quantité/Base :	1
Taux :	1,5
Montant (CDF) :	3000
Nom de l'Agent : Kabweya Kabweya Jean	
(KN2018000000000)	

B:17% Reduction in the Status Quo Rate

REPUBLIQUE DEMOCRATIQUE DU CONGO
PROVINCE DU KASAÏ OCCIDENTAL
DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL
DGRKOC

Pour la campagne de collecte de l'Impôt Foncier 2018 :

La parcelle, No. 595031,

appartenant à _____,

est assujettie à un taux de : 2500 FC*

à payer au percepteur de la DGRKOC une fois par année.

Comme preuve de paiement, vous recevrez un reçu imprimé sur place (voir l'exemple du reçu à droite).

Il est important de payer l'impôt foncier.

* D'autres montants s'appliquent si vous habitez dans une maison en matériaux durables.

DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL	
REPUBLIQUE DEMOCRATIQUE DU CONGO	
KANGINDA	
IMPOT SUR LA SUPERFICIE DES PROPRIETES FONCIERES BATIES ET NON BATIES	
Première Copie	
Date et Heure : 22-FEB-2018 11:54:35	
No : KG21802000000001-000016	
Nom du contribuable : Mutsombo	
Dikembe Jean-Jacques	
Licence d'Exploitation : 202005	
Type de taxe :	Profit 3.000
Unité :	Terrain
Quantité/Base :	1
Taux :	1,25
Montant (CDF) :	2500
Nom de l'Agent : Kabweya Kabweya Jean	
(KN2018000000000)	

C: 33% Reduction in the Status Quo Rate

REPUBLIQUE DEMOCRATIQUE DU CONGO
PROVINCE DU KASAÏ OCCIDENTAL
DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL
DGRKOC

Pour la campagne de collecte de l'Impôt Foncier 2018 :

La parcelle, No. 595069,

appartenant à _____,

est assujettie à un taux de : 2000 FC*

à payer au percepteur de la DGRKOC une fois par année.

Comme preuve de paiement, vous recevrez un reçu imprimé sur place (voir l'exemple du reçu à droite).

Il est important de payer l'impôt foncier.

* D'autres montants s'appliquent si vous habitez dans une maison en matériaux durables.

DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL	
REPUBLIQUE DEMOCRATIQUE DU CONGO	
KANGINDA	
IMPOT SUR LA SUPERFICIE DES PROPRIETES FONCIERES BATIES ET NON BATIES	
Première Copie	
Date et Heure : 22-FEB-2018 11:54:35	
No : KG21802000000001-000016	
Nom du contribuable : Mutsombo	
Dikembe Jean-Jacques	
Licence d'Exploitation : 202005	
Type de taxe :	Profit 3.000
Unité :	Terrain
Quantité/Base :	1
Taux :	0,75
Montant (CDF) :	2000
Nom de l'Agent : Kabweya Kabweya Jean	
(KN2018000000000)	

D: 50% Reduction in the Status Quo Rate

REPUBLIQUE DEMOCRATIQUE DU CONGO
PROVINCE DU KASAÏ OCCIDENTAL
DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL
DGRKOC

Pour la campagne de collecte de l'Impôt Foncier 2018 :

La parcelle, No. 595071,

appartenant à _____,

est assujettie à un taux de : 1500 FC*

à payer au percepteur de la DGRKOC une fois par année.

Comme preuve de paiement, vous recevrez un reçu imprimé sur place (voir l'exemple du reçu à droite).

Il est important de payer l'impôt foncier.

* D'autres montants s'appliquent si vous habitez dans une maison en matériaux durables.

DIRECTION GENERALE DES RECETTES DU KASAÏ OCCIDENTAL	
REPUBLIQUE DEMOCRATIQUE DU CONGO	
KANGINDA	
IMPOT SUR LA SUPERFICIE DES PROPRIETES FONCIERES BATIES ET NON BATIES	
Première Copie	
Date et Heure : 22-FEB-2018 11:54:35	
No : KG21802000000001-000016	
Nom du contribuable : Mutsombo	
Dikembe Jean-Jacques	
Licence d'Exploitation : 202005	
Type de taxe :	Profit 3.000
Unité :	Terrain
Quantité/Base :	1
Taux :	0,5
Montant (CDF) :	1500
Nom de l'Agent : Kabweya Kabweya Jean	
(KN2018000000000)	

Notes: This figure shows examples of tax letters for owners of properties in the low-value band for each of the tax abatement treatment groups. Panel A shows a picture of a letter for a property owner assigned to the status-quo annual tax rate (control), and Panels B, C, and D show the letter for a property owner assigned to a 17%, 33%, and 50% tax abatement, respectively. The main text of the fliers (from “Pour la campagne ...” to “... droite.”) translates in English as: “For the 2018 property tax collection campaign, the property Number [Property ID] belonging to [Property Owner Name] is subject to a tax rate of [Tax Rate] CF to pay to the DGRKOC collector once a year. As proof of payment, you will receive a printed receipt on the spot (see the example of the receipt at right).” The footnote indicated by an asterisk reads: “Other amounts apply if you live in a house made of durable materials.” The randomization of property tax abatements is discussed in Section 3.

TABLE A1: TAX ABATEMENT TREATMENT ALLOCATION

Tax Rate Abatement Treatment Groups	Tax Rates by Type of Property			
	Low-value band properties		High-value band properties	
	Rate	N	Rate	N
Status Quo Tax Rate	3,000 CF	8,282	13,200 CF	971
17% Reduction in Tax Rate	2,500 CF	8,569	11,000 CF	1,047
33% Reduction in Tax Rate	2,000 CF	8,372	8,800 CF	1,113
50% Reduction in Tax Rate	1,500 CF	8,633	6,600 CF	1,041

Notes: This table shows the number of properties assigned to each tax abatement treatment. Property owners in the low-value band were randomly assigned to an annual status quo property tax rate of 3,000 CF or to tax abatements of 17% (2,500 CF), 33% (2,000 CF), or 50% (1,500 CF). Similarly, property owners in the high-value band were randomly assigned to an annual status quo property tax rate of 13,200 CF or to tax abatements of 17% (11,000 CF), 33% (8,800 CF), or 50% (6,600 CF). We discuss these treatments in Section 3.3.

TABLE A2: ACTIVITIES OF COLLECTORS, ENUMERATORS AND LAND SURVEYORS

Activity	Timing	Observations	Neighborhoods
Tax Campaign - Collectors			
Property registration	May-Dec 2018	44,361	351
Tax collection	May-Dec 2018	38,028	351
Household Surveys - Enumerators			
Baseline survey	Jul-Dec 2017	3,358	351
Midline survey	Jun '18-Feb '19	29,634	351
Endline survey	Mar-Sep 2019	2,760	351
Collector Surveys - Enumerators			
Baseline survey	Jan-Apr 2018	44	NA
Endline survey	Feb-Apr 2019	33	NA
Other Data - Land Surveyors			
Property value estimation	Aug-Dec 2019	1,654	364

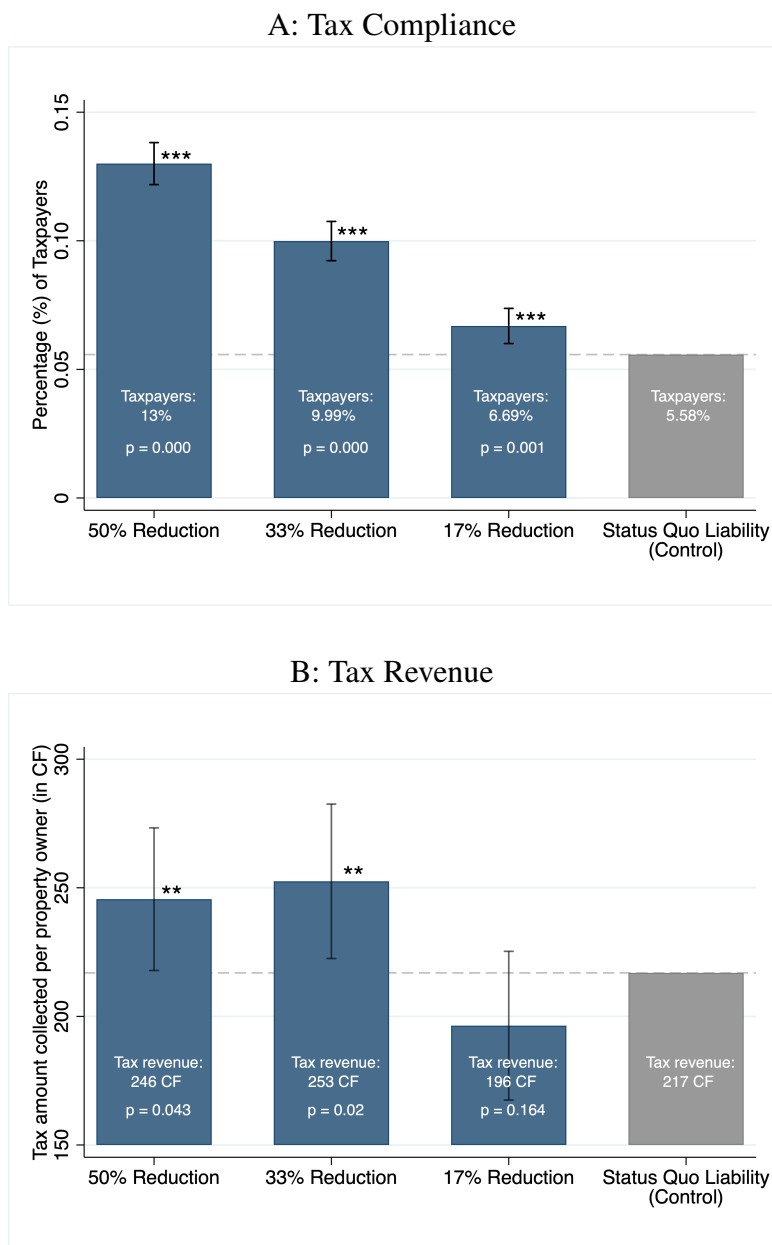
Notes: This table reports the components of the 2018 property tax campaign and its evaluation. The tax campaign was implemented by tax collectors, the household and collector surveys by enumerators, and the property value estimation by land surveyors. The numbers of observations and neighborhoods in this table reflect the sample used in the main analysis, in which we exclude the 8 neighborhoods where the logistics pilot took place, the 5 pure control neighborhoods in [Balan et al. \(2022\)](#) where no door-to-door collection took place, and exempted households (with robustness to alternative samples shown in [Table A4](#)). Thus, of the 44,361 properties registered (Row 1), only 38,028 properties were non-exempt. As explained in detail in [Section 4](#), the midline sample consists of 29,634 (77.93%) of the 38,028 non-exempted households that the enumerators managed to survey at midline. Attrition from baseline and endline was roughly 10% and is uncorrelated with predicted property value and household income. Enumerators conducted pre-campaign surveys with the 44 tax collectors studied in [Section 7.2](#), and again with 33 of them at endline. Finally, the property value estimation was conducted with 1,654 randomly chosen property owners from the 364 total neighborhoods of Kananga (including those chosen for the logistics pilot and the pure control group in [Balan et al. \(2022\)](#)). These data sources are discussed in [Section 4](#).

TABLE A3: RANDOMIZATION BALANCE

	Sample	Obs.	Mean status quo	Rate Reductions		
	(1)	(2)	(3)	17%	33%	50 %
				(4)	(5)	(6)
<u>Panel A: Property Characteristics</u>						
Distance to city center (in km)	Registration	37,790	3.204	0.000 (0.002)	-0.002 (0.002)	0.001 (0.002)
Distance to market (in km)	Registration	37,790	0.809	-0.002 (0.002)	-0.004* (0.002)	-0.002 (0.002)
Distance to gas station (in km)	Registration	37,790	1.924	0.001 (0.002)	-0.001 (0.002)	0.004 (0.002)
Distance to health center (in km)	Registration	37,790	0.350	0.002 (0.002)	0.001 (0.002)	0.003 (0.002)
Distance to government building (in km)	Registration	37,790	0.998	-0.000 (0.002)	-0.001 (0.002)	0.003 (0.002)
Distance to police station (in km)	Registration	37,790	0.801	-0.000 (0.002)	-0.001 (0.002)	0.001 (0.002)
Distance to private school (in km)	Registration	37,790	0.322	-0.001 (0.002)	0.002 (0.002)	0.002 (0.002)
Distance to public school (in km)	Registration	37,790	0.425	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)
Distance to university (in km)	Registration	37,790	1.314	0.001 (0.002)	-0.001 (0.002)	0.001 (0.002)
Distance to road (in km)	Registration	37,237	0.427	0.001 (0.002)	0.001 (0.002)	0.002 (0.002)
Distance to major erosion (in km)	Registration	37,237	0.128	0.000 (0.001)	0.000 (0.001)	-0.001 (0.001)
Roof Quality	Midline	29,740	0.970	-0.004 (0.003)	-0.006** (0.003)	-0.006** (0.003)
Walls Quality	Midline	29,413	1.163	-0.005 (0.005)	-0.006 (0.005)	-0.004 (0.005)
Fence Quality	Midline	27,071	1.391	-0.003 (0.007)	-0.006 (0.007)	-0.011 (0.007)
Erosion Threat	Midline	29,634	0.402	-0.002 (0.008)	-0.007 (0.008)	0.004 (0.008)
Property value (in USD) Machine Learning estimate	Registration	38,028	1338	-6.304 (23.484)	3.094 (23.918)	-34.503 (23.409)
<u>Panel B: Property Owner Characteristics</u>						
Employed Indicator	Midline	20,441	0.793	0.006 (0.008)	-0.000 (0.008)	0.013 (0.008)
Salaried Indicator	Midline	20,441	0.265	0.003 (0.009)	-0.006 (0.009)	-0.003 (0.009)
Work for Government Indicator	Midline	20,441	0.157	0.006 (0.007)	-0.002 (0.007)	0.004 (0.007)
Relative Work for Government Indicator	Midline	22,667	0.229	0.008 (0.008)	-0.004 (0.008)	0.012 (0.008)
<u>Panel C: Property Owner Characteristics</u>						
Gender	Baseline	2,760	1.339	-0.013 (0.027)	-0.022 (0.027)	-0.001 (0.027)
Age	Baseline	2,753	47.763	-1.158 (0.880)	0.232 (0.854)	-0.138 (0.872)
Main Tribe Indicator	Baseline	2,760	0.750	0.023 (0.024)	0.022 (0.024)	0.014 (0.025)
Years of Education	Baseline	2,751	10.745	-0.112 (0.239)	-0.055 (0.240)	-0.085 (0.244)
Has Electricity	Baseline	2,760	0.152	-0.016 (0.020)	-0.005 (0.021)	-0.017 (0.020)
Log Monthly Income (CF)	Baseline	2,735	10.687	-0.006 (0.133)	-0.005 (0.133)	-0.209 (0.148)
Trust Chief	Baseline	2,749	3.151	-0.013 (0.059)	-0.014 (0.060)	-0.031 (0.060)
Trust National Government	Baseline	2,611	2.569	-0.036 (0.073)	-0.095 (0.075)	0.013 (0.074)
Trust Provincial Government	Baseline	2,628	2.493	-0.060 (0.071)	-0.030 (0.073)	-0.026 (0.072)
Trust Tax Ministry	Baseline	2,600	2.353	0.040 (0.070)	0.011 (0.072)	0.044 (0.071)
<u>Panel D: Attrition</u>						
Registration to Midline	Registration	38,028	0.213	-0.001 (0.004)	-0.002 (0.004)	-0.003 (0.004)

Notes: This table reports coefficients from balance tests conducted by regressing baseline and midline characteristics for properties (Panel A) and property owners (Panels B and C) or an indicator for attrition (Panel D) on treatment indicators, with an indicator for the property value band and randomization stratum (neighborhood) fixed effects. Robust standard errors are reported. All balance checks are conducted in the same samples of the primary analysis, which excludes neighborhoods from the logistics pilot, pure control group of [Balan et al. \(2022\)](#) in which no door-to-door collection took place, and exempted households (with robustness to alternative samples shown in [Table A4](#)). Specifically, Panel A considers the sample of 38,028 non-exempt properties. Rows 1–11 exclude 238 properties with missing GPS information; Rows 12–15 use midline surveys conducted with 29,634 property owners; and Row 16 uses the predicted property value for the 38,028 non-exempt properties. Panels B and C use 22,667 midline surveys and 2,760 baseline surveys with property owners, respectively. Missing values in Panels B–C reflect non-response to individual survey questions. Panel D contains an indicator for attrition between registration and the midline survey. We cannot test whether attrition between the baseline and endline survey is balanced across treatments since information on treatment assignment for baseline respondents was recovered at endline, and is therefore missing for attriters. The results are summarized in [Section 4.1](#). The variables are described in detail in [Section B8](#).

FIGURE A2: TREATMENT EFFECTS ON TAX COMPLIANCE AND REVENUE



Notes: This figure reports estimates from Equation (1), comparing property tax compliance and revenue in the tax abatement treatment groups (in blue) relative to the status quo property tax rate (the control group, in gray). Panel A uses an indicator for tax compliance as the dependent variable while Panel B uses tax revenue (in Congolese Francs). All estimations include an indicator for the property value band. Panel A corresponds to the results in Column 1 of Table 1, while Panel B corresponds to the results in Column 5 of Table 1. The black lines show the 95% confidence interval for each of the estimates using robust standard errors. The horizontal dashed gray line corresponds to the control group’s mean. The Figure also reports the average tax compliance (Panel A) and revenue (Panel B) for the tax abatement treatment groups and the status quo rate group, and the p-values for non-zero treatment effects. The data include all non-exempt properties registered by tax collectors merged with the government’s property tax database. We discuss these results in Section 5.2.

TABLE A4: ROBUSTNESS — INCLUDING CONTROLS, PILOT NEIGHBORHOODS, PURE CONTROL NEIGHBORHOODS, AND EXEMPT PROPERTIES

	Outcome: Tax Compliance (Indicator)						Outcome: Tax Revenue (in CF)					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: Treatment Effects												
50% Reduction	0.073*** (0.004)	0.073*** (0.004)	0.073*** (0.004)	0.075*** (0.004)	0.072*** (0.004)	0.064*** (0.004)	24.769* (13.819)	24.565* (13.841)	23.652* (13.817)	27.975** (13.568)	24.809* (13.589)	24.876** (11.970)
33% Reduction	0.044*** (0.004)	0.044*** (0.004)	0.043*** (0.004)	0.045*** (0.004)	0.043*** (0.004)	0.038*** (0.003)	33.328** (14.936)	33.807** (14.953)	32.934** (14.935)	36.914** (14.690)	33.417** (14.646)	28.958** (12.874)
17% Reduction	0.011*** (0.003)	0.011*** (0.003)	0.011*** (0.003)	0.012*** (0.003)	0.011*** (0.003)	0.010** (0.003)	-20.795 (14.418)	-20.311 (14.423)	-20.517 (14.410)	-18.161 (14.171)	-20.037 (14.156)	-16.924 (12.453)
Mean (control)	0.056	0.056	0.056	0.055	0.055	0.048	216.903	216.903	216.903	214.874	212.696	186.066
Panel B: Marginal Effects												
ln(Tax Rate in CF)	-0.110*** (0.006)	-0.110*** (0.006)	-0.109*** (0.006)	-0.113*** (0.006)	-0.108*** (0.006)	-0.097*** (0.005)	-56.040** (18.256)	-55.642** (18.294)	-54.205** (18.249)	-60.187*** (17.936)	-55.712** (17.966)	-52.779*** (15.837)
Mean (sample)	0.088	0.088	0.088	0.089	0.087	0.076	229.662	229.662	229.662	229.515	225.588	198.548
Panel C: Elasticities												
Elasticity	-1.247 (0.061)	-1.245 (0.061)	-1.238 (0.060)	-1.267 (0.060)	-1.248 (0.061)	-1.263 (0.062)	-0.244 (0.079)	-0.242 (0.079)	-0.236 (0.079)	-0.262 (0.078)	-0.247 (0.079)	-0.266 (0.080)
p-value (elasticity=0)							0.0021	0.0022	0.0029	0.0008	0.0018	0.0009
Controls:												
Age, Age-squared, Gender	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No	No
Roof Quality, Distance to Market (Imbalanced)	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No
Employed, Salaried	No	No	Yes	No	No	No	No	No	Yes	No	No	No
Government Job (Self & Fam.)	No	No	Yes	No	No	No	No	No	Yes	No	No	No
Adjustments:												
Includes Pilot Nbdhs.	No	No	No	Yes	No	No	No	No	No	Yes	No	No
Includes Pure Control Nbdhs.	No	No	No	No	Yes	No	No	No	No	No	Yes	No
Includes Exempted Properties	No	No	No	No	No	Yes	No	No	No	No	No	Yes
Observations	38028	38028	38028	38899	38744	44361	38028	38028	38028	38899	38744	44361
Sample	Midline	Midline	Midline	All	All	All	Midline	Midline	Midline	All	All	All
	sample	sample	sample	properties	properties	properties	sample	sample	sample	properties	properties	properties
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table explores a series of robustness checks concerning the main treatment effects on compliance and revenue. It reports estimates from Equations (1), (2), and (3). In Columns 1–6, the dependent variable is an indicator for compliance, while in Columns 7–12, the dependent variable is tax revenue (in Congolese Francs). Panel A reports treatment effects from Equation (1) comparing property tax compliance and property tax revenue for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). Panel B reports the mean tax compliance and revenue as well as the marginal effect of property tax rates (in CF) on tax compliance and revenue from Equation (2). These two estimates are used in Panel C to compute the elasticity of tax compliance and revenue with respect to the tax rate following Equation (3) and to calculate the p-value associated with the elasticity of tax revenue. All regressions include an indicator for the property value band and randomization stratum (neighborhood) fixed effects. Panels A and B report robust standard errors. Standard errors in Panel C are bootstrapped (with 1,000 iterations). Columns 1 and 7 control for basic covariates (age, age squared, and gender), measured at baseline; Columns 2 and 8 add controls for roof quality and distance to the nearest market (the imbalanced covariates in Table A3); Columns 3 and 9 add controls for having any job, a salaried job, and a government job, and a family member with a government job. When including controls, we replace missing values in control variables with the mean for the entire sample and include a separate dummy (for each control variable) for the value being missing. Columns 4 and 10 include pilot neighborhoods; Columns 5 and 11 include pure control neighborhoods; and Columns 6 and 12 include exempt properties. The data include all properties registered by tax collectors merged with the government’s property tax database. We discuss these results in Section 5.2.

A1 Treatment Effects on Secondary Outcomes

This section explores if lowering tax rates had adverse outcomes from the perspective of the government by fueling bribe payments, crowding out other tax payments, or eroding the perceived legitimacy of the government.

A1.1 Bribe Payments

Lowering tax rates could potentially backfire by leading tax collectors to extract more bribes.⁶⁰ For instance, collectors might have asked property owners in the tax abatement treatment groups to pay part of the difference between the status quo rate and the reduced rate as a bribe in order to receive a tax receipt.

We test this possibility using survey data on bribe payments to property tax collectors in the midline survey. Enumerators asked respondents if they paid the “transport” of the collectors — a colloquial expression for bribes — and if so, the amount of the payment. While these measures of bribe payments are self-reported and should therefore be interpreted with caution, reporting petty bribes is not taboo in Kananga.⁶¹ According to these measures, we find no evidence that lowering tax rates increased bribe payments. If anything, lower tax rates are associated with fewer bribe payments on the extensive margin (Table A5, Panel A, Row 1). Although the negative effects on bribe payments are only statistically significant when analyzing the 50% reduction treatment, the elasticity of bribe payments with respect to the tax rate, and bootstrapped standard error, is $\hat{\epsilon}_{B,T} = 0.706$ (0.180). On the intensive margin, the magnitude of the equilibrium bribe also appears to decrease among households assigned to the 50% and 33% rate reduction treatments (Table A5, Panel A, Row 2), yielding an elasticity of $\hat{\epsilon}_{B,T} = 1.604$ (0.210).

Although we prefer the midline bribe measures because of the large sample, we also explore alternative measures of bribes and other informal payments to tax collectors collected in the endline survey, including (i) the gap between self-reported payments and payment according to the administrative data (Table A5, Panel A, Row 3), and (ii) self-reported bribe payments (Table A5, Panel A, Rows 4–6). Re-estimating treatment effects and elasticities using these measures, the results are qualitatively similar though not statistically significant. Thus, although there is some evidence that property owners switched from bribes to tax payments when the rate was sufficiently low, this conclusion is suggestive at best.

A1.2 Payment of Other Taxes

Lowering property tax rates could also backfire, from the government’s point of view, if it crowds out payment of other taxes. For example, higher tax compliance in response to lower property tax rates could reduce payment of other taxes if citizens have a fixed budget or a mental model in which enforcement risk declines sharply for the partially compliant.⁶²

⁶⁰Khan et al. (2015) demonstrate the importance of examining how bribes respond to tax policy changes.

⁶¹For instance, Reid and Weigel (2019) find that nearly half of motorcycle taxi drivers openly admitted to paying bribes at Kananga’s roadway tolls using similar local codes for bribes. The authors also show a high correlation between more and less overt bribe elicitation mechanisms.

⁶²This section builds on the literature on fiscal externalities across tax instruments (Waseem, 2018).

In Kananga, the most common “tax” to which citizens contribute is actually an informal labor levy called *salongo*. *Salongo* is organized on a weekly basis by neighborhood chiefs and involves citizens contributing labor (or occasionally cash or in-kind contributions) to local public good projects, such as road repair and trash collection. In our midline data, 37.6% of citizens reported participating in *salongo* in the past two weeks, with those participating contributing 4.2 hours on average over this period. We estimate treatment effects of property tax rate reductions on reported *salongo* participation in (Table A5, Panel B, Rows 1–2). There are no significant effects on the extensive or intensive margin.

Other formal taxes paid by citizens in Kananga include the vehicle tax (3.6% of endline respondents reported paying), market vendor fees (18.5%), the business tax (5.3%), and the income tax (11.5%). Although these measures are self-reported, our questionnaire included an obsolete poll tax included to gauge possible reporting bias. Estimating treatment effects in the familiar specification, we find no evidence that property tax rate reductions crowded out payment of other formal taxes (Table A5, Panel B, Rows 3–7).

A1.3 Views of the Government

Finally, tax rate reductions could backfire if they cause citizens to update negatively about the government. This could be the case if lowering tax rates were perceived by citizens as signaling that property tax payment is less important or obligatory than they had previously thought, or if it signals a lack of state capacity to enforce compliance at higher rates.⁶³

We investigate this possibility using endline survey data on citizens’ trust in the provincial government, perceptions of the performance of the government, and perceptions of government corruption — as well as corresponding measures for the provincial tax ministry. As shown in Panel C of Table A5, we find no evidence that reductions in tax rates affected views of the provincial government (Rows 1–3) or of the provincial tax ministry (Rows 5–7). Distributing property tax abatements does not appear to have eroded citizens’ attitudes about the government.

Finally, we examine citizens’ perceptions of the fairness of the property tax, an important component of tax morale (Luttmer and Singhal, 2014; Best et al., 2020). The endline survey included questions about citizens’ perceptions of the fairness of property tax collection, property tax rates, and tax collectors. Lower rates do not appear to have affected respondents’ perception of the fairness of the property tax (Table A5, Panel C, Row 7) or of the property tax collectors (Row 9). They did, however, increase how fair citizens viewed property tax rates, with a sizable elasticity of -0.100 (0.048) (Row 8).

⁶³This vein of analysis is motivated by recent work documenting how tax collection shapes citizens’ views of the legitimacy and capacity of the government (Jibao et al., 2017; Weigel, 2020).

TABLE A5: TREATMENT EFFECTS ON SECONDARY OUTCOMES: BRIBE PAYMENTS, PAYMENT OF OTHER TAXES, VIEWS OF THE GOVERNMENT

Dependent variable	Treatment Effects							Marginal Effects			Elasticity		Sample	
	50% Reduction		33% Reduction		17% Reduction		Status Quo	ln(Tax Rate in CF)			Elasticity		Obs.	Sample
	$\hat{\beta}$	SE	$\hat{\beta}$	SE	$\hat{\beta}$	SE	\bar{y}	$\hat{\beta}$	SE	\bar{y}	$\hat{\beta}$	SE		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Panel A: Bribes														
Paid Bribe	-0.007***	0.002	-0.002	0.002	0.001	0.002	0.019	0.012***	0.003	0.017	0.706	0.172	25,558	Midline
Bribe Amount	-28.209***	5.182	-17.455***	5.820	-8.232	6.438	39.467	40.553***	6.480	25.286	1.604	0.209	25,558	Midline
Gap Self v. Admin	-0.005	0.006	-0.010*	0.006	-0.003	0.006	0.103	0.008	0.008	0.098	0.082	0.081	19,146	Midline
Paid Bribe	0.000	0.020	-0.015	0.018	-0.004	0.022	0.027	0.002	0.027	0.034	0.059	0.878	951	Endline
Bribe Amount	-0.538	22.376	-27.530	19.693	-8.189	22.339	27.232	4.000	31.355	29.715	0.135	1.162	949	Endline
Other Payments	-0.019	0.019	-0.038**	0.018	-0.018	0.019	0.136	0.029	0.026	0.118	0.246	0.221	2753	Endline
Panel B: Payments of Other Taxes														
Participation to Salongo	0.009	0.009	0.007	0.009	0.007	0.009	0.374	-0.012	0.013	0.376	-0.032	0.034	18,924	Midline
Hours of Salongo	0.145	0.142	0.077	0.099	-0.033	0.085	1.510	-0.245	0.196	1.539	-0.159	0.129	18,426	Midline
Paid Vehicle Tax	0.005	0.011	-0.005	0.010	-0.003	0.011	0.038	-0.008	0.014	0.036	-0.222	0.403	2,752	Endline
Paid Market Vendor Fee	-0.031	0.022	-0.033	0.022	-0.007	0.022	0.208	0.049	0.030	0.185	0.265	0.166	2,757	Endline
Paid Business Tax	-0.009	0.013	-0.018	0.013	-0.015	0.013	0.067	0.010	0.018	0.053	0.189	0.337	2,753	Endline
Paid Income Tax	0.002	0.018	0.009	0.019	0.000	0.018	0.116	-0.006	0.025	0.115	-0.052	0.219	2,751	Endline
Paid Obsolete Tax	0.002	0.007	0.002	0.007	0.013	0.008	0.013	0.003	0.010	0.017	0.176	0.605	2,725	Endline
Panel C: Views of the Government														
Trust in Provincial Government	-0.069	0.049	-0.033	0.051	-0.013	0.050	1.770	0.100	0.066	1.761	0.057	0.038	2,739	Endline
Provincial Government Performance	0.028	0.067	0.043	0.068	0.074	0.067	3.878	-0.010	0.089	3.924	-0.003	0.023	2,687	Endline
Provincial Government Corruption	3.212	20.012	18.631	19.989	1.080	19.668	567.274	-9.591	27.225	572.370	-0.017	0.048	2,760	Endline
Trust in Tax Ministry	-0.027	0.055	-0.003	0.056	0.026	0.055	2.038	0.055	0.074	2.035	0.027	0.036	2,743	Endline
Tax Ministry Performance	-0.120*	0.070	-0.064	0.071	-0.019	0.071	4.138	0.178*	0.097	4.080	0.044	0.025	2,691	Endline
Tax Ministry Corruption	34.549*	18.617	20.410	18.473	34.927*	18.598	399.903	-35.066	25.367	422.366	-0.083	0.060	2,743	Endline
Fairness Prop. Tax	-0.021	0.033	-0.010	0.032	0.021	0.034	2.021	0.044	0.045	2.008	0.022	0.024	2,745	Endline
Fairness Tax Rates	0.121**	0.049	0.121**	0.049	0.123**	0.048	1.293	-0.138**	0.066	1.384	-0.100	0.049	2,513	Endline
Fairness Tax Coll.	0.005	0.042	-0.027	0.042	0.005	0.041	1.687	0.004	0.057	1.688	0.002	0.034	2,466	Endline

Notes: Each row summarizes the estimation of Equations (1), (2), and (3). Columns 1–7 summarize the OLS estimation of Equations (1). All regressions include an indicator for the property value band and randomization stratum. The $\hat{\beta}$ are the coefficients on the treatment indicators (in Columns 1, 3, and 5 for the 50%, 33%, and 17% tax abatements, respectively) followed by robust standard errors (in Columns 2, 4, and 6). \bar{y} indicates the mean outcome in the control — status quo tax rate — group (Column 7). Columns 8–10 summarize the OLS estimation of Equation (2). $\hat{\beta}$ is the marginal effect of property tax rates (in CF) on the outcome of interest (Column 8), followed by the robust standard error (Column 9) and \bar{y} , the mean outcome in the sample (Column 10). Columns 11–12 summarize the estimation of Equation (3) and present the elasticity of the outcome of interest with respect to the tax rate (Column 11) and the bootstrapped standard errors (Column 12), using the standard deviation across 1,000 bootstrap samples with replacement. Finally, the last two columns provide the number of observations (Column 13) and the sample used, midline or endline (Column 14). In Panel A, the outcome in Rows 1 and 4 are indicators for self-reported bribe payment in the midline and endline surveys, respectively. Rows 2 and 5 report results for the corresponding amount of bribe paid. The outcome in Row 3 indicates property owners who reported paying the tax during the midline survey but who were not recorded as having paid in the administrative data. The outcome in Row 6 is self-reported payment of any informal fee at endline. In Panel B, the outcome in Rows 1 and 2 are indicators for participation in *salongo* and the number of hours devoted to *salongo* at midline, respectively. The outcome in Rows 3–7 are indicators from the endline survey for the payment of the vehicle tax (Row 3), the market vendor fee (Row 4), the business tax (Row 5), the income tax (Row 6), or a fake tax (Row 7). In Panel C, the outcomes are standardized indices measuring trust, perceived performance, and corruption of the provincial government (Rows 1–3) and of the provincial tax ministry (Rows 4–6), followed by the perceived fairness of property tax collection (Row 7), tax rates (Row 8), and tax collectors (Column 9). The number of observations varies across variables in the same survey due to nonresponse. Additionally, analysis of the gap between self-reported and administratively verified tax payments (Row 3) restricts the sample to households deemed non-compliant in the admin data, while analysis of endline bribe measures (Rows 4–5) restricts to the set of households reporting any post-registration visits from collectors (who had opportunities to pay bribes). Midline and endline survey data collection is described in Section 4, and the variables used in this table are described in Section B8. We discuss these results in Section A1.

TABLE A6: TREATMENT EFFECTS ON REVENUE — ROBUSTNESS: ACCOUNTING FOR KNOWLEDGE OF OTHERS’ RATES, PAST RATES, EXPECTATIONS OF FUTURE RATES, AND PAST EXPOSURE TO TAX COLLECTION

Outcome: Tax Revenue (in CF)										
	Neighbors’ rate Ctrl for 5 Ctrl for 10		Neighbors’ rate Doesn’t Know Knows		Discounts Doesn’t Know Knows		Past rates Doesn’t Know Knows		Past tax campaign No Yes	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Panel A: Treatment Effects</u>										
50% Reduction	24.829* (13.829)	24.603* (13.843)	31.000 (24.196)	2.066 (63.235)	-2.676 (35.987)	-64.522 (680.464)	51.831 (77.198)	133.677 (176.085)	39.711 (24.254)	15.271 (16.647)
33% Reduction	33.947** (14.933)	34.167** (14.931)	42.073 (25.663)	42.736 (61.768)	71.435* (39.649)	-621.510 (1129.941)	-32.192 (80.482)	72.279 (211.148)	23.625 (25.358)	40.434** (18.432)
17% Reduction	-20.193 (14.421)	-20.023 (14.422)	-38.543 (24.935)	-28.680 (66.992)	-42.812 (37.663)	-372.198 (642.694)	-97.065 (81.063)	27.455 (207.580)	-28.553 (24.764)	-16.780 (17.602)
Mean (control)	216.903	216.903	258.357	330.055	227.411	634.286	301.250	428.571	225.726	211.524
Tests of coef. equality:										
50% Reduction			$P_{50\%} = 0.647$		$P_{50\%} = 0.459$		$P_{50\%} = 0.555$		$P_{50\%} = 0.343$	
33% Reduction			$P_{33\%} = 0.992$		$P_{33\%} = 0.499$		$P_{33\%} = 0.516$		$P_{33\%} = 0.675$	
17% Reduction			$P_{17\%} = 0.883$		$P_{17\%} = 0.399$		$P_{17\%} = 0.433$		$P_{17\%} = 0.765$	
All Reductions			$P_{All\%} = 0.925$		$P_{All\%} = 0.865$		$P_{All\%} = 0.882$		$P_{All\%} = 0.353$	
<u>Panel B: Marginal Effects</u>										
ln(Tax Rate in CF)	-55.992** (18.274)	-55.651** (18.305)	-76.148** (32.165)	-30.241 (87.645)	-41.952 (46.021)	294.168 (1174.460)	-119.342 (107.128)	-195.964 (232.279)	-78.392** (31.950)	-42.766* (22.013)
Mean (sample)	229.662	229.662	272.444	317.748	225.010	399.320	328.565	329.177	239.047	223.150
<u>Panel C: Elasticities</u>										
Elasticity	-0.244 (0.082)	-0.242 (0.082)	-0.280 (0.174)	-0.095 (2.529)	-0.186 (0.194)	0.737 (2.978)	-0.363 (0.350)	-0.595 (0.733)	-0.328 (0.140)	-0.192 (0.103)
p-value (elasticity=0)	0.0030	0.0032	0.1073	0.9700	0.3371	0.8056	0.2998	0.4176	0.0188	0.0630
Observations	38028	38028	13046	2158	5098	147	2069	401	14590	23296
Sample	All properties	All properties	Midline Sample	Midline Sample	Midline Sample	Midline Sample	Baseline Sample	Baseline Sample	All properties	All properties
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	No	No	No	No	No	No	No	No
Neighbor Rate Controls	Yes	Yes	No	No	No	No	No	No	No	No

Notes: This table explores whether other components of the experimental design could have influenced taxpayers’ responses to tax abatements. It reports estimates from Equations (1), (2), and (3). The dependent variable is tax revenues (in Congolese Francs). Panel A reports treatment effects from Equation (1) comparing property tax revenue for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). It also reports the p-values associated with F-tests for equality of the treatment effects when considering heterogeneity by knowledge of others’ rates (Columns 3–4), tax reduction (Columns 5–6), past rates (Columns 7–8), and by past exposure to tax collection (Columns 9–10). Panel B reports the mean tax revenue in the sample as well as the marginal effect of property tax rates (in CF) on tax revenue from Equation (2). These two estimates are used in Panel C to compute the elasticity of tax revenue with respect to the tax rate following Equation (3) and to calculate the p-value associated with the elasticity of tax revenue. All regressions include an indicator for the property value band and for randomization stratum (neighborhood). Panels A and B report robust standard errors. Standard errors in Panel C are bootstrapped (with 1,000 iterations). The effects are reported for: owners who reported not knowing or knowing their neighbors’ rate in Columns 3–4; owners who reported knowing or not knowing about the existence of tax abatements in Kananga in Columns 5–6; and owners who accurately reported the status quo rate or not in Columns 7–8. The variables that define these subsamples come from the baseline and midline survey (indicated in the bottom panel of the table) and are described in Section B8. Columns 9 and 10 estimate treatment effects for neighborhoods where door-to-door tax collection took place during the previous (2016) property tax campaign and neighborhoods where no door-to-door collection took place, using the treatment assignment from Weigel (2020). The sample in Columns 3–6 is smaller than the total midline sample because these questions were introduced after midline enumeration began, and the question about knowledge of discounts randomly appeared for a subset of respondents (to increase the pace of survey administration). We discuss these results in Section 5.3.

TABLE A7: ROBUSTNESS — ACCOUNTING FOR NEIGHBORS' TAX RATES

	Outcome: Tax Compliance (Indicator)			Outcome: Tax Revenue (in CF)		
	Neighbors' Rate Controls			Neighbors' Rate Controls		
	No (1)	Closest 5 (2)	Closest 10 (3)	No (4)	Closest 5 (5)	Closest 10 (6)
50% Reduction	0.073150*** (0.004057)	0.073183*** (0.004058)	0.073185*** (0.004058)	24.710779* (13.828226)	24.828665* (13.829044)	24.602730* (13.842639)
33% Reduction	0.043992*** (0.003790)	0.043958*** (0.003789)	0.044011*** (0.003789)	34.069000** (14.937406)	33.946848** (14.933235)	34.166802** (14.930843)
17% Reduction	0.011407*** (0.003415)	0.011395*** (0.003416)	0.011418*** (0.003415)	-20.202272 (14.420118)	-20.192966 (14.420714)	-20.023098 (14.421936)
1st Neighbor Rate		-0.000000 (0.000001)	-0.000001 (0.000001)		-0.001699 (0.003547)	-0.002459 (0.003577)
2nd Neighbor Rate		0.000001 (0.000001)	0.000001 (0.000001)		0.002359 (0.003799)	0.001639 (0.003811)
3rd Neighbor Rate		0.000001 (0.000001)	0.000001 (0.000001)		0.005773 (0.003811)	0.005070 (0.003842)
4th Neighbor Rate		0.000000 (0.000001)	0.000000 (0.000001)		0.000953 (0.003733)	0.000093 (0.003753)
5th Neighbor Rate		0.000001 (0.000001)	0.000001 (0.000001)		0.000917 (0.003500)	0.000069 (0.003524)
6th Neighbor Rate			0.000000 (0.000001)			0.001143 (0.003505)
7th Neighbor Rate			0.000001 (0.000001)			0.003014 (0.003708)
8th Neighbor Rate			0.000000 (0.000001)			0.004828 (0.003887)
9th Neighbor Rate			-0.000001 (0.000001)			-0.003529 (0.003357)
10th Neighbor Rate			0.000002** (0.000001)			0.005235 (0.003549)
Mean (control)	0.056	0.056	0.056	216.903	216.903	216.903
Observations	38028	38028	38028	38028	38028	38028
Sample	All properties	All properties	All properties	All properties	All properties	All properties
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table examines treatment effects on tax compliance and tax revenue (in Congolese Francs). It reports treatment effects from Equation (1) comparing property tax revenue for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). All regressions include an indicator for the property value band and for randomization stratum (neighborhood). We report robust standard errors. The dependent variable is tax compliance in Columns 1–3 and tax revenue in Columns 4–6. Columns 2 and 5 control for the property tax rate assigned to the nearest 5 properties (using the GPS location of all properties in Kananga). Columns 3 and 6 control for the property tax rate assigned to the nearest 10 properties. The effects of the nearest properties' tax rate on tax compliance and tax revenue are reported. We discuss these results in Section 5.3.

TABLE A8: ROBUSTNESS — ACCOUNTING FOR DIFFERENTIAL TAX COLLECTOR ENFORCEMENT EFFORT BY RATE

	Outcome: Visit Indicator			Outcome: Number of Visits		
	All (1)	Constant Wage (2)	Proportional Wage (3)	All (4)	Constant Wage (5)	Proportional Wage (6)
<u>Panel A: Treatment Effects</u>						
50% Reduction	0.026** (0.009)	0.038** (0.012)	0.015 (0.012)	0.027* (0.014)	0.043** (0.022)	0.015 (0.020)
33% Reduction	0.016* (0.009)	0.015 (0.012)	0.016 (0.012)	0.001 (0.014)	-0.012 (0.021)	0.014 (0.020)
17% Reduction	0.013 (0.009)	0.016 (0.012)	0.011 (0.012)	0.014 (0.015)	-0.001 (0.021)	0.025 (0.022)
Mean (control)	0.407	0.409	0.404	0.560	0.579	0.541
Tests of coef. equality:						
50% Reduction		$p_{50\%} = 0.182$			$p_{50\%} = 0.336$	
33% Reduction		$p_{33\%} = 0.934$			$p_{33\%} = 0.366$	
17% Reduction		$p_{17\%} = 0.782$			$p_{17\%} = 0.377$	
All Reductions		$p_{All\%} = 0.463$			$p_{All\%} = 0.183$	
<u>Panel B: Marginal Effects</u>						
ln(Tax Rate in CF)	-0.034** (0.012)	-0.049** (0.017)	-0.020 (0.016)	-0.031 (0.020)	-0.056* (0.029)	-0.012 (0.027)
Mean (sample)	0.422	0.429	0.416	0.570	0.586	0.554
<u>Panel C: Elasticities</u>						
Elasticity	-0.081 (0.027)	-0.114 (0.039)	-0.049 (0.040)	-0.055 (0.034)	-0.095 (0.048)	-0.021 (0.049)
Observations	23054	11411	11643	22893	11335	11558
Sample	Midline Sample	Midline Sample	Midline Sample	Midline Sample	Midline Sample	Midline Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table explores the possibility that collectors exerted enforcement effort differentially across rates, which could magnify the estimated responses to rate reductions. It reports estimates from Equations (1), (2), and (3). In Columns 1–3, the dependent variable is an indicator for the property owner reporting any visits by tax collectors after property registration. Panel A reports treatment effects from Equation (1) comparing visits for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). It also reports the p-values associated with F-tests for equality of the treatment effects when considering heterogeneity by wage group (Columns 2–3 and 5–6). Panel B reports the mean visits as well as the marginal effect of property tax rates (in CF) on visits from Equation (2). These two estimates are used in Panel C to compute the elasticity of visits with respect to the tax rate following Equation (3). In Columns 4–6, the dependent variable is the number of visits by tax collectors after property registration reported by property owners. Columns 1 and 4 consider all properties. Columns 2 and 5 restrict the sample to properties randomly assigned to the constant tax collector wage group (750 FC per collection), while Columns 3 and 6 restrict to properties assigned to the proportional collector wage group (30% of the amount collected). Collectors’ wage is discussed in Section B1.2. The data include all non-exempt properties registered by tax collectors merged with the government’s property tax database. We discuss these results in Section 5.3.4.

TABLE A9: ROBUSTNESS — ACCOUNTING FOR THE EFFECTS OF DIFFERENTIAL TAX COLLECTOR ENFORCEMENT EFFORT BY RATE ON COMPLIANCE AND REVENUE

	Outcome: Tax Compliance (Indicator)					Outcome: Tax Revenue (in CF)				
	Constant Wage (1)	Proportional Wage (2)	Wage FEs (3)	Visit Ind. Ctrl (4)	Nb of Visits Ctrl (5)	Constant Wage (6)	Proportional Wage (7)	Wage FEs (8)	Visit Ind. Ctrl (9)	Nb of Visits Ctrl (10)
Panel A: Treatment Effects										
50% Reduction	0.076*** (0.006)	0.078*** (0.006)	0.076*** (0.004)	0.081*** (0.006)	0.082*** (0.006)	27.805** (13.125)	32.103** (13.049)	28.267** (9.201)	17.611 (11.953)	18.872 (12.030)
33% Reduction	0.046*** (0.006)	0.048*** (0.006)	0.046*** (0.004)	0.049*** (0.005)	0.051*** (0.005)	34.540** (14.003)	39.966** (13.948)	35.431*** (9.837)	30.898** (12.740)	33.397** (12.833)
17% Reduction	0.011** (0.005)	0.018*** (0.005)	0.014*** (0.004)	0.011** (0.005)	0.011** (0.005)	-1.087 (14.154)	16.983 (14.311)	6.431 (10.034)	-6.041 (13.004)	-6.106 (13.088)
Mean (control)	0.057	0.057	0.057	0.067	0.068	170.13	171.081	170.611	202.205	203.545
Tests of coef. equality:										
50% Reduction	$p_{50\%} = 0.783$					$p_{50\%} = 0.815$				
33% Reduction	$p_{33\%} = 0.736$					$p_{33\%} = 0.782$				
17% Reduction	$p_{17\%} = 0.338$					$p_{17\%} = 0.364$				
All Reductions	$p_{All\%} = 0.817$					$p_{All\%} = 0.802$				
Panel B: Marginal Effects										
ln(Tax Rate in CF)	-0.115*** (0.009)	-0.115*** (0.009)	-0.114*** (0.006)	-0.123*** (0.008)	-0.124*** (0.008)	-50.296** (17.495)	-48.060** (17.400)	-47.038*** (12.267)	-37.292** (15.871)	-39.874** (15.967)
Mean (sample)	0.090	0.093	0.092	0.105	0.105	185.536	192.217	188.888	216.405	217.119
Panel C: Elasticities										
Elasticity	-1.271 (0.093)	-1.235 (0.089)	-1.241 (0.063)	-1.171 (0.071)	-1.183 (0.072)	-0.271 (0.097)	-0.250 (0.091)	-0.249 (0.065)	-0.172 (0.074)	-0.184 (0.075)
p-value (elasticity=0)						0.0053	0.0063	0.0001	0.0199	0.0137
Observations	16870	16986	33856	23054	22893	16870	16986	33856	23054	22893
Sample	All Properties	All Properties	All Properties	Midline Sample	Midline Sample	All Properties	All Properties	All Properties	Midline Sample	Midline Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Wage Group	No	No	Yes	No	No	No	No	Yes	No	No
Visit Controls	No	No	No	Yes	Yes	No	No	No	Yes	Yes

Notes: This table explores the effects of collectors potentially exerting enforcement effort differentially across rates on the estimated responses to rate reductions. It reports estimates from Equations (1), (2), and (3). In Columns 1–5, the dependent variable is an indicator for property tax compliance. In Columns 6–10, the dependent variable is tax revenues (in Congolese Francs). Panel A reports treatment effects from Equation (1) comparing property tax compliance or revenue for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). It also reports the p-values associated with F-tests for equality of the treatment effects when considering heterogeneity by wage group (Columns 1–2 and 6–7). Panel B reports the mean property tax compliance or revenue as well as the marginal effect of property tax rates (in CF) on property tax compliance or revenue from Equation (2). These two estimates are used in Panel C to compute the elasticity of tax compliance or revenue with respect to the tax rate following Equation (3) and to calculate the p-value associated with the elasticity of tax revenue. Columns 1 and 6 restrict the sample to properties randomly assigned to the constant tax collector wage group (750 FC per collection). Columns 2 and 7 restrict to properties assigned to the proportional collector wage group (30% of the amount collected). Collectors’ wage is discussed in Section B1.2. In Columns 3–5 and 8–10, all cases of tax compliance are considered, and we control for a collector wage (constant or proportional) indicator (Columns 3 and 8), a visit indicator (Columns 4 and 9) and for the number of visits (Columns 5 and 10). The data include all non-exempt properties registered by tax collectors merged with the government’s property tax database. We discuss these results in Section 5.3.4.

TABLE A10: TREATMENT EFFECTS ON OWNERS' KNOWLEDGE AND COLLECTORS' STRATEGIES

	Knowledge			Collector Messages								
	Knows Nb Rate (1)	Knows Reductions (2)	Knows Past Rate (3)	Sanctions		Public goods		Show Trust in Gov (8)	It's Important (9)	Legal Obligation (10)	Avoid Social Embarrassment (11)	Other Threat (12)
				Chief (4)	Tax Ministry (5)	Neighborhood (6)	Kananga (7)					
50% Reduction	-0.011 (0.008)	-0.004 (0.007)	-0.019 (0.025)	0.008 (0.025)	-0.003 (0.026)	-0.003 (0.025)	0.018 (0.025)	-0.014 (0.026)	-0.064** (0.026)	-0.003 (0.025)	0.008 (0.023)	-0.005 (0.022)
33% Reduction	-0.014* (0.008)	0.003 (0.007)	-0.000 (0.025)	0.029 (0.024)	0.030 (0.026)	0.051* (0.026)	0.035 (0.025)	-0.006 (0.026)	-0.022 (0.026)	0.008 (0.025)	0.015 (0.023)	0.022 (0.023)
17% Reduction	-0.005 (0.008)	0.002 (0.007)	-0.030 (0.024)	-0.033 (0.024)	-0.021 (0.025)	0.014 (0.025)	0.037 (0.025)	-0.012 (0.025)	-0.036 (0.026)	-0.009 (0.025)	-0.015 (0.022)	-0.007 (0.023)
Mean (control)	0.149	0.029	0.167	0.256	0.278	0.263	0.232	0.324	0.452	0.383	0.203	0.230
Observations	15072	5245	2209	2743	2743	2743	2743	2743	2743	2743	2743	2743
Sample	Midline Sample	Midline Sample	Midline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table examines treatment effects on owners' knowledge of tax rates, tax abatements, and past tax rates as well as the different possible messages used by collectors when demanding payment, as measured in the midline and endline surveys. It reports the treatment effects from Equation (1) comparing the outcome of interest for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). The dependent variable in Column 1 is an indicator for knowing the neighbors' property tax rate. In Column 2 it is an indicator for knowing about the existence of tax abatements. In Column 3 it is an indicator for knowing the status quo tax rate. In Columns 4–12 the outcomes are indicators for the different messages used by the property tax collectors during tax collection: sanctions by the chief (Column 4), sanctions by the tax ministry (Column 5), provision of public goods in the neighborhood (Column 6) or in Kananga (Column 7), showing trust in the government (in Column 8), the importance of paying the property tax (Column 9), tax compliance as a legal obligation (Column 10), social embarrassment associated with tax delinquency (Column 11), and any other threats in the case of tax delinquency (Column 12). All regressions include an indicator for the property value band and for randomization stratum (neighborhood). We report robust standard errors. The variables are described in Section B8. We discuss these results in Section 5.3.

TABLE A11: KNOWLEDGE OF STATUS QUO TAX RATE BY PAST ASSIGNMENT TO DOOR-TO-DOOR PROPERTY TAX COLLECTION

<i>Outcome:</i>	Has Heard of Tax Ministry	Has Heard of Property Tax	Accurately reported status quo tax rate		
<i>Sample:</i>	2016 Treatment Vs Control	2016 Treatment Vs Control	2016 Treatment Vs Control	Paid in 2016 Treatment Vs Control – self reported	Paid in 2016 Treatment Vs Control – administrative data
	(1)	(2)	(3)	(4)	(5)
Past door-to-door collection	0.070*** (0.021)	0.058* (0.034)	0.033** (0.016)	0.078*** (0.023)	0.134*** (0.040)
Control Mean	0.833	0.492	0.142	0.142	0.142
Observations	1607	2426	2423	1465	1101
Sample	Baseline Sample	Baseline Sample	Baseline Sample	Baseline Sample	Baseline Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes

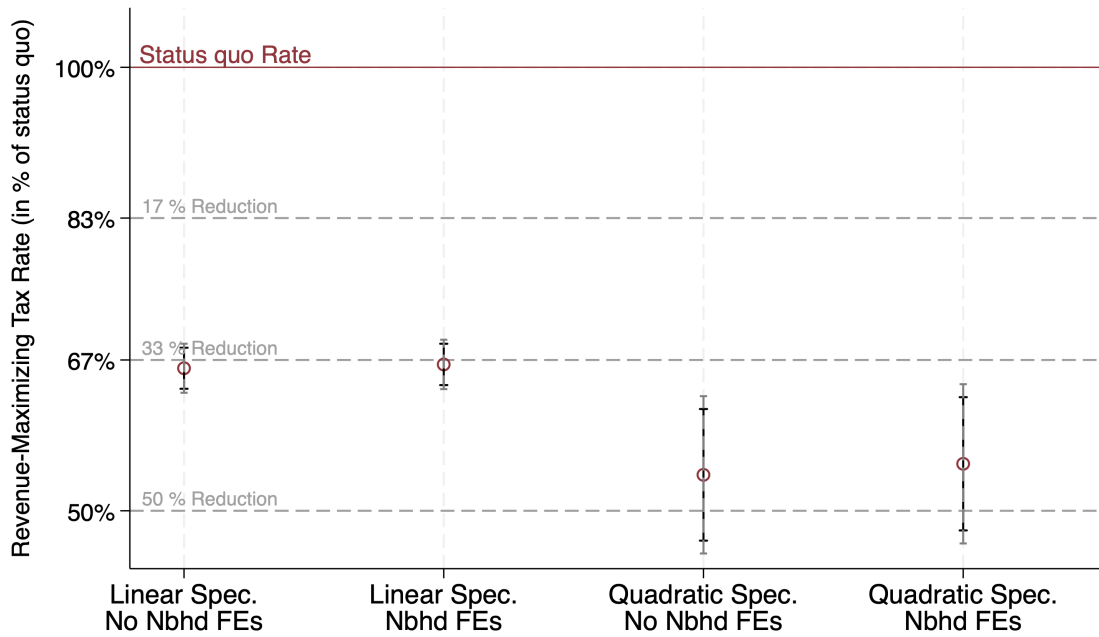
Notes: This table examines the treatment effects of assignment to door-to-door tax collection in the 2016 property tax campaign, using the treatment assignment from [Weigel \(2020\)](#), on knowledge of the tax ministry (Column 1), knowledge of the property tax (Column 2), and an indicator for the property owner accurately reporting the status quo tax rate at baseline in 2017 (Columns 3–5). Columns 1–3 report the results when considering all baseline respondents. Columns 4–5 include everyone in the control group from [Weigel \(2020\)](#), where no door-to-door tax collection took place in 2016, compared to tax-compliant households in the treatment group from [Weigel \(2020\)](#), where tax collection did occur in 2016. In Column 4, tax compliance status is self-reported, while in Column 5 it is measured using administrative data. All regressions include an indicator for the property value band and the randomization strata from [Weigel \(2020\)](#). Standard errors are clustered at the neighborhood level, the unit of randomization in [Weigel \(2020\)](#). The data include all property owners surveyed at baseline merged with the government’s property tax databases. We discuss these results in Section 5.3.

TABLE A12: HETEROGENEOUS TREATMENT EFFECTS ON COMPLIANCE BY PROXIES FOR LIQUIDITY

Outcome: Tax Compliance (Indicator)												
	Monthly Income		Weekly Transport		Number of Possessions		Went to Bed Hungry – Past Month		Can find 3,000 CF – Next Four Days		Nb of days w/o 3,000 CF – Past Month	
	≤ median (1)	> median (2)	≤ median (3)	> median (4)	≤ median (5)	> median (6)	Yes (7)	No (8)	No (9)	Yes (10)	> median (11)	≤ median (12)
Panel A: Treatment Effects												
50% Reduction	0.141*** (0.031)	0.070** (0.030)	0.131*** (0.032)	0.072** (0.029)	0.124*** (0.022)	0.052 (0.045)	0.076** (0.031)	0.119*** (0.031)	0.127*** (0.025)	0.069* (0.038)	0.119*** (0.027)	0.102** (0.038)
33% Reduction	0.066** (0.028)	0.022 (0.029)	0.058** (0.029)	0.007 (0.026)	0.056** (0.021)	-0.020 (0.045)	0.080** (0.030)	0.011 (0.027)	0.065** (0.023)	0.011 (0.037)	0.062** (0.025)	-0.009 (0.035)
17% Reduction	0.037 (0.026)	-0.043 (0.027)	0.007 (0.027)	-0.044* (0.025)	0.016 (0.019)	-0.109** (0.040)	0.009 (0.025)	-0.033 (0.026)	0.010 (0.021)	-0.024 (0.034)	-0.016 (0.022)	-0.014 (0.033)
Mean (control)	0.069	0.104	0.069	0.102	0.066	0.150	0.065	0.108	0.076	0.113	0.085	0.096
Tests of coef. equality:												
50% Reduction	$p_{50\%} = 0.058$		$p_{50\%} = 0.117$		$p_{50\%} = 0.263$		$p_{50\%} = 0.259$		$p_{50\%} = 0.128$		$p_{50\%} = 0.664$	
33% Reduction	$p_{33\%} = 0.197$		$p_{33\%} = 0.138$		$p_{33\%} = 0.149$		$p_{33\%} = 0.048$		$p_{33\%} = 0.140$		$p_{33\%} = 0.053$	
17% Reduction	$p_{17\%} = 0.012$		$p_{17\%} = 0.113$		$p_{17\%} = 0.006$		$p_{17\%} = 0.187$		$p_{17\%} = 0.295$		$p_{17\%} = 0.966$	
All Reductions	$p_{All\%} = 0.072$		$p_{All\%} = 0.291$		$p_{All\%} = 0.055$		$p_{All\%} = 0.018$		$p_{All\%} = 0.368$		$p_{All\%} = 0.145$	
Panel B: Marginal Effects												
ln(Tax Rate in CF)	-0.198*** (0.042)	-0.130** (0.041)	-0.202*** (0.045)	-0.127** (0.040)	-0.183*** (0.031)	-0.132** (0.064)	-0.129** (0.042)	-0.184*** (0.042)	-0.192*** (0.034)	-0.115** (0.052)	-0.198*** (0.037)	-0.153** (0.053)
Mean (sample)	0.138	0.125	0.132	0.130	0.124	0.151	0.123	0.139	0.129	0.136	0.137	0.121
Panel C: Elasticities												
Elasticity	-1.438 (0.334)	-1.041 (0.343)	-1.526 (0.368)	-0.977 (0.329)	-1.482 (0.270)	-0.875 (0.451)	-1.05 (0.369)	-1.323 (0.323)	-1.492 (0.276)	-0.850 (0.391)	-1.446 (0.278)	-1.264 (0.473)
Observations	1348	1405	1317	1436	1983	777	1346	1414	1816	944	1769	991
Sample	Baseline Sample	Baseline Sample	Baseline Sample	Baseline Sample	Baseline Sample	Baseline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample	Endline Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table investigates how the effect of tax abatements on compliance varies by household liquidity. It reports estimates from Equations (1), (2), and (3). The dependent variable is an indicator for tax compliance. Panel A reports treatment effects from Equation (1) comparing property tax compliance for the tax abatement treatment groups relative to the status quo property tax rate (the excluded category). It also reports the p-values associated with F-tests for equality of the treatment effects when considering heterogeneity by monthly income (Columns 1–2), weekly transport expenditures (Columns 3–4), number of possessions (Columns 5–6), going to bed hungry in the past 30 days (Columns 7–8), being able to find 3,000 CF in the next four days (Columns 9–10), number of days the respondent did not have 3,000 CF in the past 30 days (Columns 11–12). Panel B reports the mean tax compliance as well as the marginal effect of property tax rates (in Congolese Francs) on tax compliance from Equation (2). These two estimates are used in Panel C to compute the elasticity of tax compliance with respect to the tax rate following Equation (3). All regressions include an indicator for the property value band and for randomization stratum (neighborhood). Panels A and B report robust standard errors. Standard errors in Panel C are bootstrapped (with 1,000 iterations). Columns 1, 3, and 5 restrict the baseline sample to respondents with below-median monthly household income, weekly transport expenditures, and number of possessions, respectively. Columns 2, 4, and 6 restrict the baseline sample to respondents with above-median monthly household income, weekly transport expenditures, and number of possessions, respectively. Columns 7–8 report results by whether endline respondents declared that they went to bed hungry in the past 30 days. Columns 9 and 10 report results by whether respondents declare being able to find 3,000 CF in the next four days. Columns 11–12 report results by whether the number of days the respondent reported not having 3,000 CF in the past month at endline is above or below the median. The variables come from the baseline and endline surveys and are described in Section B8. We discuss these results in Section B6.3.1.

FIGURE A3: THE REVENUE-MAXIMIZING TAX RATE



Notes: This figure reports estimates of the revenue-maximizing tax rate (RMTR) using the expression in Equation (4). The first two estimates assume linearity of tax compliance with respect to the tax rate and correspond to the estimation of Equation (5) using regression specification (6), while the following two estimates assume a quadratic relationship between tax compliance and tax rate. All estimates of the RMTR are expressed as a percentage of the status quo tax rate. All regressions include an indicator for the property value band, and the second and fourth point estimates also include randomization stratum (i.e., neighborhood, or “Nbhd”) fixed effects. The black lines show the 90% confidence interval and the gray lines the 95% confidence interval for each estimate using the standard errors obtained from the delta method. The coefficients and confidence intervals correspond to the point estimates and standard errors reported in Table 3 (Panel B). The data include all non-exempt properties registered by tax collectors merged with the government’s property tax database. We discuss these results in Section 6.3.

TABLE A13: EFFECTS OF TAX LETTER MESSAGES ON TAX COMPLIANCE AND REVENUE

	Tax Compliance			Tax Revenue (in CF)		
	(1)	(2)	(3)	(4)	(5)	(6)
Central Enforcement	0.014 (0.009)	0.016* (0.009)		32.837* (18.610)	36.510** (18.453)	
Local Enforcement	0.014 (0.009)	0.016* (0.009)		31.244* (18.723)	35.545* (18.783)	
Pooled Enforcement			0.016** (0.007)			36.038** (15.589)
Observations	2665	2665	2665	2665	2665	2665
Mean	0.029	0.029	0.029	57.671	57.671	57.671
Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	No	Yes	Yes	No	Yes	Yes

Notes: This table examines the treatment effects of randomized tax letter enforcement messages on compliance, revenues, and perceived sanctions for tax delinquents. It reports estimates from a regression of tax compliance (Columns 1–3) and tax revenue (Columns 4–6) on treatment dummies for households assigned to enforcement messages on tax letters distributed during property registration. Sections 7.1 and B1.4 describe these tax letters and the message randomization. The excluded category is the control message in all regressions. Columns 2–3 and 5–6 introduce randomization stratum (neighborhood) fixed effects. Columns 3 and 6 pool households assigned to the *central enforcement* message and the *local enforcement* message. The data are restricted to the sample of 2,665 properties subject to randomized messages on tax letters, which were introduced toward the end of the tax campaign. We discuss these results in Section 7.1.

TABLE A14: EFFECTS OF TAX LETTER MESSAGES ON PERCEIVED SANCTIONS AND STATE CAPACITY

	Likelihood of Sanctions			Perceived State Capacity			Number of Visits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Central Enforcement	0.064** (0.031)	0.058** (0.029)		0.077 (0.089)	0.011 (0.107)		0.037 (0.042)	0.055 (0.040)	
Local Enforcement	0.019 (0.032)	0.022 (0.030)		0.001 (0.089)	-0.052 (0.100)		-0.027 (0.039)	0.003 (0.036)	
Pooled Enforcement			0.041 (0.025)			-0.021 (0.091)			0.030 (0.033)
Observations	1553	1553	1553	193	193	193	1859	1859	1859
Mean	0.478	0.478	0.478	0.492	0.492	0.492	0.434	0.434	0.434
Sample	Tax Message & Midline Sample	Tax Message & Midline Sample	Tax Message & Midline Sample	Tax Message & Baseline Sample	Tax Message & Baseline Sample	Tax Message & Baseline Sample	Tax Message & Midline Sample	Tax Message & Midline Sample	Tax Message & Midline Sample
FE: Property Value Band	v	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

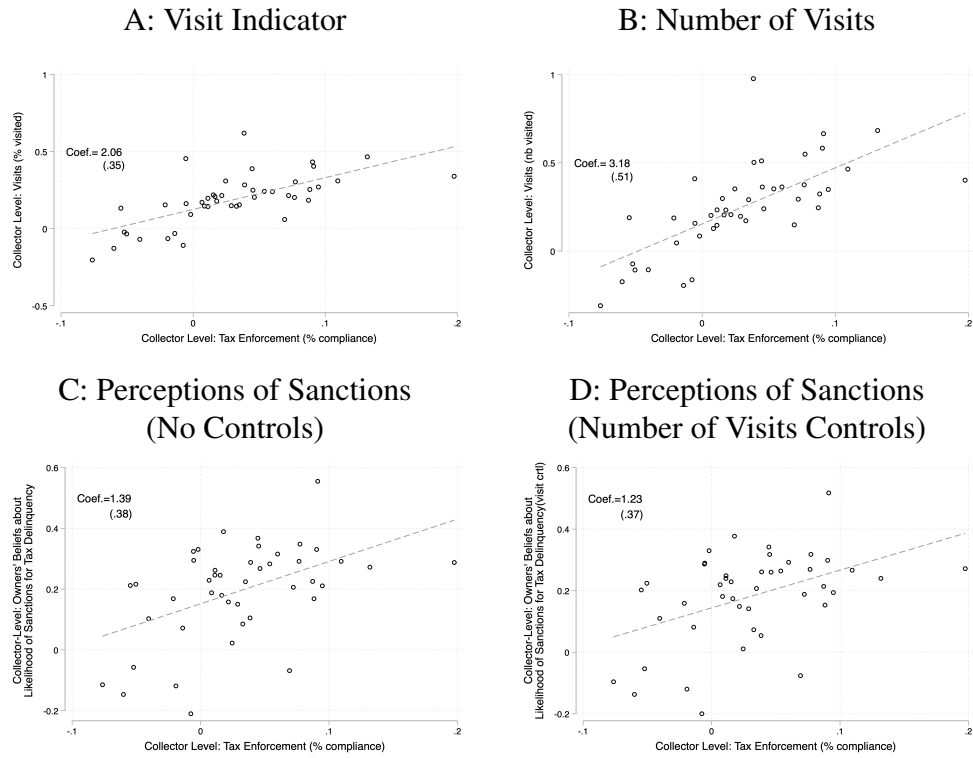
Notes: This table examines the treatment effects of randomized tax letter enforcement messages on perceived sanctions for tax delinquency, perceived state capacity, and visits by tax collectors. It reports estimates from a regression of an indicator for households reporting that sanctions for tax delinquency are “likely” or “very likely” (Columns 1–3), an indicator for respondents reporting that the provincial government would be able to repair the main roads in Kananga within 3 months if they had been badly damaged due to bad weather (Columns 4–6), and the number of tax collectors’ visits after property registration reported by the respondent (Columns 7–9) on treatment dummies for households assigned to enforcement messages on tax letters distributed during property registration. Sections 7.1 and B1.4 describe these tax letters and the message randomization. The excluded category is the control message in all regressions. Columns 2–3, 5–6, and 8–9 introduce randomization stratum (neighborhood) fixed effects. Columns 3, 6, and 9 pool households assigned to the *central enforcement* message and the *local enforcement* message. The data are restricted to the sample of 2,665 properties subject to randomized messages on tax letters, which were introduced toward the end of the tax campaign, but the sample size is smaller in all columns because the outcomes come from the midline survey (Columns 1–3 and 7–9) and the baseline survey (Columns 4–6), rather than the administrative data. We discuss these results in Section 7.1.

**TABLE A15: REVENUE-MAXIMIZING TAX RATE BY ENFORCEMENT CAPACITY
(TAX LETTER VARIATION)**

	Control Message				Enforcement Message			
	Linear Specification		Quadratic Specification		Linear Specification		Quadratic Specification	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Effect of Tax Rates on Tax Compliance								
Tax Rate (in % of status quo)	-0.082** (0.032)	-0.083** (0.033)	-0.379 (0.336)	-0.399 (0.327)	-0.061** (0.025)	-0.053** (0.025)	0.192 (0.266)	0.210 (0.261)
Tax Rate Squared (in % of status quo)			0.196 (0.211)	0.210 (0.209)			-0.169 (0.172)	-0.175 (0.170)
Constant	0.091*** (0.028)	0.092*** (0.028)	0.197 (0.128)	0.203* (0.123)	0.088*** (0.020)	0.082*** (0.021)	-0.001 (0.097)	-0.010 (0.096)
Panel B: Revenue-Maximizing Tax Rate (RMTR)								
RMTR (in % of status quo rate)	0.557 (0.061)	0.554 (0.063)	0.361 (0.101)	0.354 (0.093)	0.724 (0.138)	0.779 (0.190)	0.756 (0.052)	0.772 (0.050)
Implied Reduction in Tax Rate	44.32%	44.57%	63.91%	64.57%	27.63%	22.12%	24.35%	22.75%
Observations	893	893	893	893	1772	1772	1772	1772
Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample	Tax Message Sample
FE: Property Value Band	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE: Neighborhood	No	Yes	No	Yes	No	Yes	No	Yes
Quadratic Tax Rate Term	No	No	Yes	Yes	No	No	Yes	Yes

Notes: This table examines how the revenue-maximizing tax rate (RMTR), given by Equation (4), varies by enforcement capacity using the variation in messages embedded in tax letters. Columns 1–2 and 5–6 assume linearity of tax compliance with respect to the tax rate. Panel A reports results from estimating Equation (6), and Panel B reports the corresponding RMTR from Equation (5). Columns 3–4 and 7–8 assume a quadratic relationship between tax compliance and tax rate. Panel A reports the regression results, and Panel B reports the RMTR. All estimates in Panels A and B are expressed as a percentage of the status quo tax rate. All regressions include an indicator for the property value band, and Columns 2, 4, 6, and 8 also include randomization stratum (neighborhood) fixed effects. In Panel A, we report robust standard errors. In Panel B, we reported standard errors computed using the delta method. The data are restricted to the sample of 2,665 properties exposed to randomized messages on tax letters. Columns 1–4 further restrict the sample to owners who received the *control* message and Columns 5–8 to owners who received an enforcement message (*central enforcement* or *local enforcement*). We discuss these results in Section 7.1.

FIGURE A4: COLLECTOR ENFORCEMENT CAPACITIES VS. FREQUENCY OF COLLECTOR VISITS AND PERCEPTIONS OF SANCTIONS



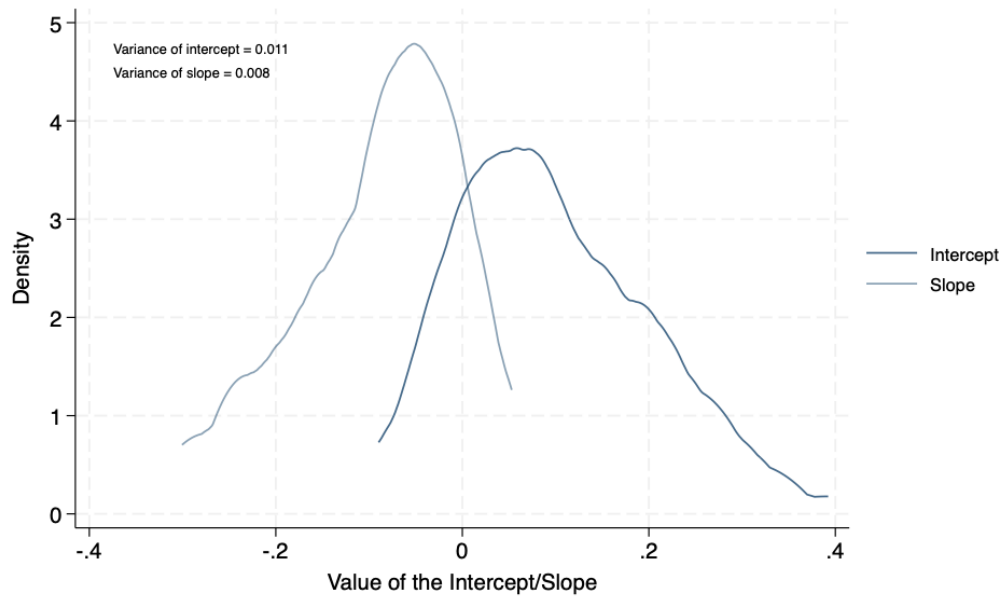
Notes: This figure shows correlations between the collector-specific enforcement capacities and average reported visits and beliefs about the probability of sanctions for tax delinquents in neighborhoods to which collectors were randomly assigned. The x-axis reports estimates of tax collector enforcement capacity using regression specification (7), expressed as the percentage of owners who pay the property tax in all neighborhoods to which a collector was randomly assigned. In Panels A and B, the y-axis reports the collector-level visits on the extensive and intensive margins as reported by households in the midline survey. In Panels C and D, the y-axis reports property owners' midline perception of sanctions for tax delinquency at the collector level. This variable is measured as an indicator for households reporting that sanctions for tax delinquency are "likely" or "very likely". All y-axis estimates are from empirical specification (7). We discuss these results in Section 7.2.

TABLE A16: COLLECTOR ENFORCEMENT CAPACITIES AND REVENUE-MAXIMIZING TAX RATES

	Level-Level		Log-Log	
	OLS (1)	Empirical Bayes (2)	OLS (3)	Empirical Bayes (4)
<u>Panel A: RMTR from Linear Specification</u>				
Enforcement Capacity	2.421** (0.819)	2.797*** (0.666)		
ln(Enforcement Capacity)			0.623** (0.215)	0.465*** (0.108)
Observations	44	44	42	41
<u>Panel B: RMTR from Quadratic Specification</u>				
Enforcement Capacity	1.587* (0.831)	1.597** (0.755)		
ln(Enforcement Capacity)			0.347** (0.159)	0.112** (0.050)
Observations	44	44	43	43
Sample	All state tax collectors	All state tax collectors	All state tax collectors	All state tax collectors

Notes: This table examines the relationship between tax collectors' revenue-maximizing tax rates (RMTR) and their enforcement capacities. Collector-specific enforcement capacities are estimated using regression specification (7). In Columns 1–4, the collector-specific RMTR assumes linearity of tax compliance with respect to the tax rate and is obtained from estimating Equation (8). In Columns 5–8, the collector-specific RMTR assumes a quadratic relationship between tax compliance and the tax rate. Columns 1, 3, 5, and 7 report the fixed effects estimates, while Columns 2, 4, 6, and 8 report the empirical Bayes estimates described in Section B4. Columns 1–2 and 5–6 report the results of a level-level regression, while Columns 3–4 and 7–8 use the log-log specification $\ln(\widehat{T}_c^*) = \alpha + \beta \ln(\widehat{E}_c) + \nu_c$ and can be interpreted as an elasticity. We discuss these results in Section 7.2.

FIGURE A5: DISTRIBUTION OF COLLECTOR SLOPES AND INTERCEPTS



Notes: This figure reports the distribution of the coefficients estimated from regression specification (8). Specifically, it reports the Kernel Density of the collector-level intercepts (β_c^0 in Equation (8)) in dark blue and of the collector-level slopes (β_c^1 in Equation (8)) in light blue. The Kernel densities use the default (Epanechnikov) Kernel function and bandwidth. To document whether the differences in the RMTR across collectors is generated by differences in their intercepts or slopes, the figure also reports the variance of the collector-level intercepts ($Var(\beta_c^0) = 0.011$) and the variance of the collector-level slopes ($Var(\beta_c^1) = 0.008$). We discuss these results in Section 7.2.

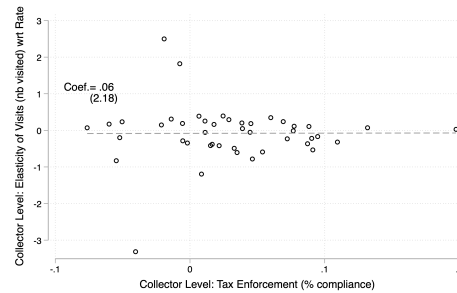
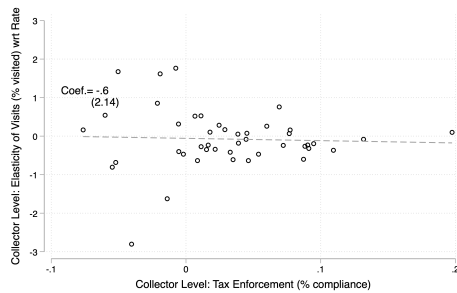
TABLE A17: EFFECT OF COLLECTOR ENFORCEMENT CAPACITY ON INTERCEPT AND SLOPE

	Outcome: Tax Compliance (Indicator)		Outcome: Tax Revenue (in CF)	
	(1)	(2)	(3)	(4)
High-Ability Collector	0.066** (0.031)	0.098*** (0.028)	107.792* (57.547)	158.119** (59.571)
Tax Rate (in % of status quo)	-0.115*** (0.022)	-0.115*** (0.022)	-79.122 (54.389)	-77.694 (54.362)
High-Ability Collector \times Tax Rate (in % of status quo)	-0.043 (0.027)	-0.043 (0.027)	-12.954 (64.808)	-14.668 (64.737)
Constant	0.146*** (0.025)	0.114*** (0.022)	162.135** (49.302)	121.651** (52.638)
Observations	23777	23777	23777	23777
Sample	Collector Sample	Collector Sample	Collector Sample	Collector Sample
FE: Property Value Band	Yes	Yes	Yes	Yes
FE: Treatment from Balan et al.	No	Yes	No	Yes

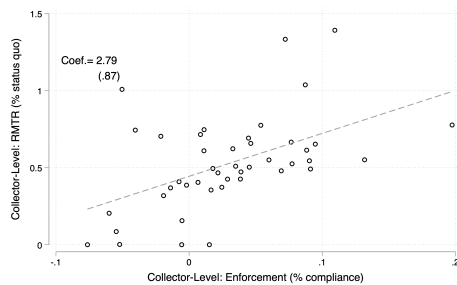
Notes: This table examines whether tax collectors with above median enforcement capacity are characterized by higher tax compliance across all rates (i.e., β_0 in Equation (6)) or differentially affect tax compliance by tax rates (i.e., β_1 in Equation (6)). We estimate the following regression specification: $y_{i,n} = \beta_0 1[c_1(n) = H \text{ or } c_2(n) = H] + \beta_2 Tax Rate_{i,n} + \beta_3 1[c_1(n) = H \text{ or } c_2(n) = H] \times Tax Rate_{i,n} + X'_{i,n} \gamma + \epsilon_{i,n}$, where $y_{i,n}$ measures the outcome of interest (tax compliance or revenue) for individual i living in neighborhood n . $c_1(n)$ and $c_2(n)$ are the two collectors assigned to collect in neighborhood n and $1[c_1(n) = H \text{ or } c_2(n) = H]$ is an indicator for either or both of the collectors' fixed effects — estimated in Equation (7) — being above median. $Tax Rate_{i,n}$ is the tax rate expressed as a percentage of the status quo rate. In Columns 1–4, $X_{i,n}$ contains an indicator for properties in the high-value band. In Columns 2 and 4, it also includes an indicators for the neighborhood-level interventions described in Balan et al. (2022). The dependent variable is an indicator for compliance in Columns 1–2 and tax revenues (in Congolese Francs) in Columns 3–4. We discuss these results in Section 7.2.

FIGURE A6: COLLECTOR ENFORCEMENT CAPACITIES AND VISITS BY RATE

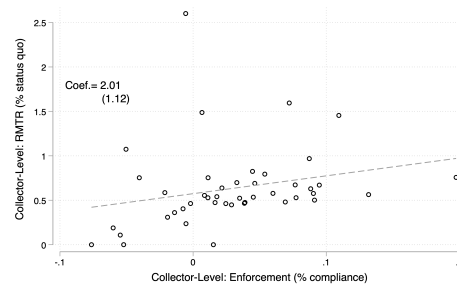
A: Elasticity of Visit Indicator wrt Tax Rates v. Enforcement Capacity **B: Elasticity of Number of Visits** wrt Tax Rates v. Enforcement Capacity



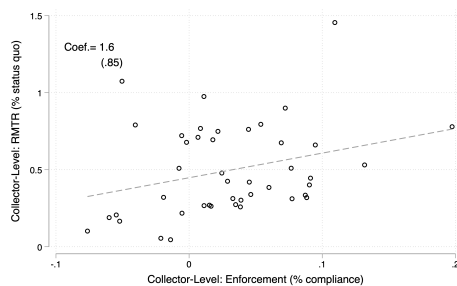
C: Enforcement Capacity v. RMTR Controlling for Visit Indicator (linear spec.)



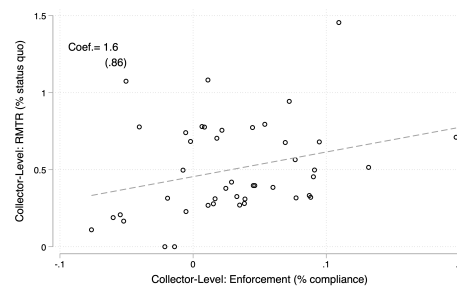
D: Enforcement Capacity v. RMTR Controlling for Number of Visits (linear spec.)



E: Enforcement Capacity v. RMTR Controlling for Visit Indicator (quadratic spec.)

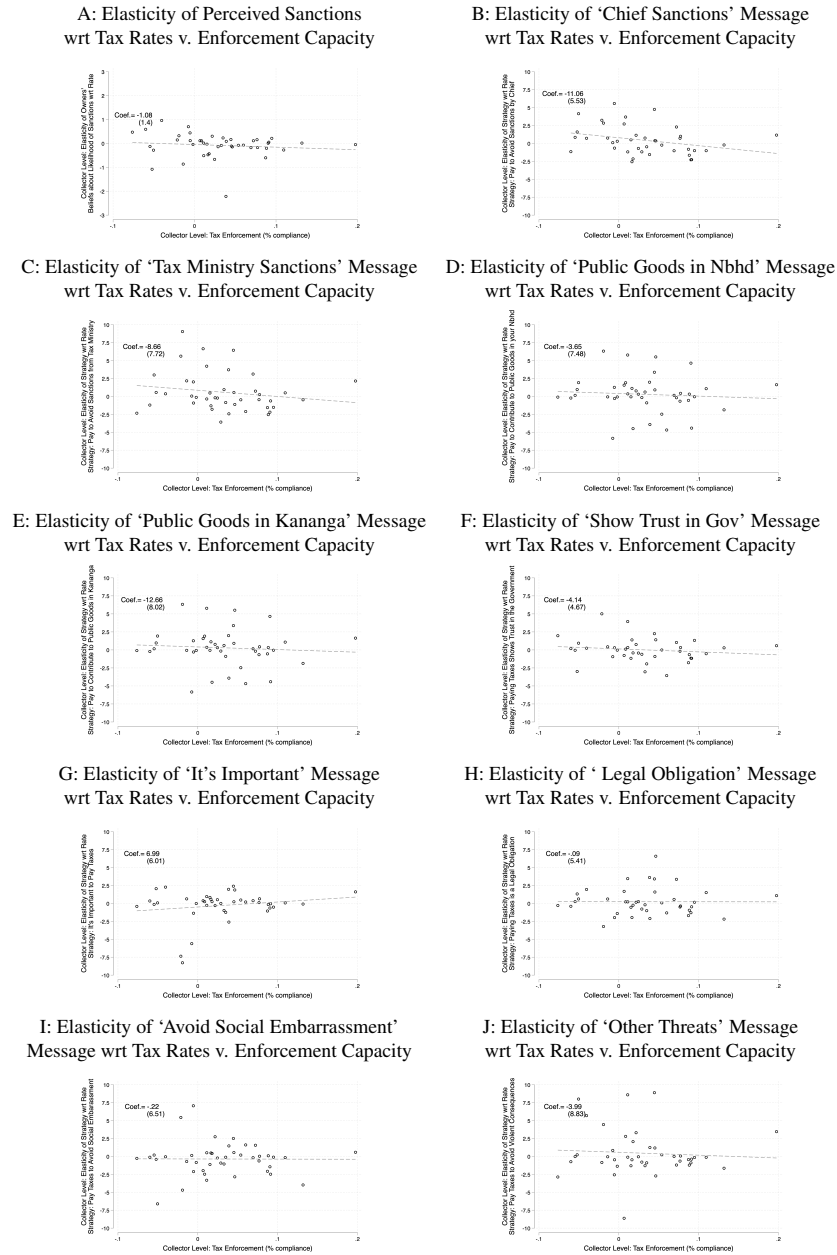


F: Enforcement Capacity v. RMTR Controlling for Number of Visits (quadratic spec.)



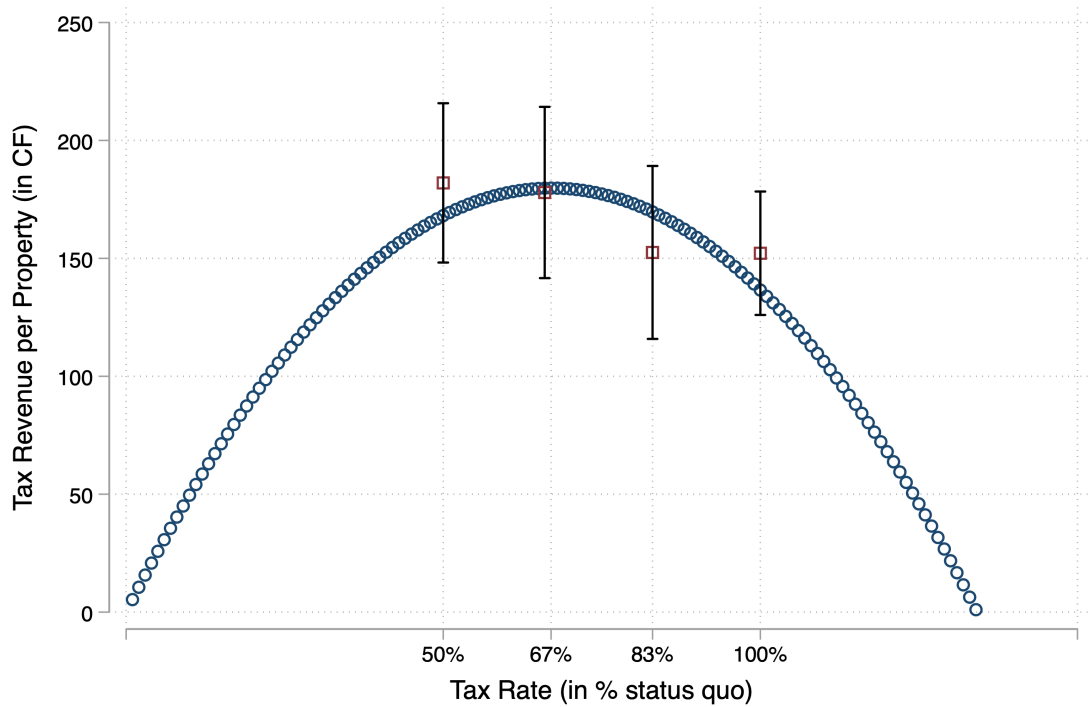
Notes: This figure examines whether high-enforcement collectors exhibit differential elasticity of tax visits by rate and whether controlling for tax visits impacts the observed relationship between collector enforcement capacities and revenue-maximizing tax rates (RMTR). The x-axis of this figure always reports estimates of tax collector enforcement capacity using regression specification (7), expressed as the percentage of owners who pay the property tax. In Panels A and B, the y-axis reports the collector-level elasticity of visits on the extensive (Panel A) and the intensive margin (Panel B) with respect to tax rates. In Panels C–F, the y-axis reports the collector-specific RMTR in Equation (4) controlling for visits on the extensive margin (Panels C and D) and intensive margin (Panels E and F). When estimating the collector-specific RMTR, we assume linearity in Panels C and D and estimate Equation (8), while in Panels E and F we assume a quadratic relationship between tax compliance and tax rate. We discuss these results in Section 7.2.

FIGURE A7: COLLECTOR ENFORCEMENT CAPACITIES AND PERCEIVED LIKELIHOOD OF SANCTIONS OR COLLECTOR MESSAGE BY RATE



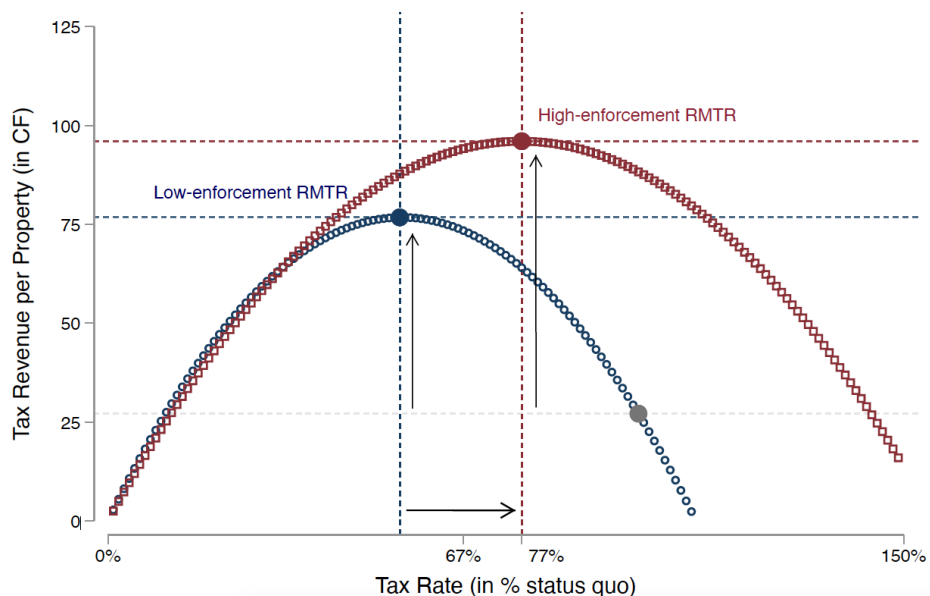
Notes: This figure examines whether high-enforcement collectors result in a different elasticity of owner's beliefs about the likelihood of sanction for tax delinquency wrt rate (Panel A) and a different elasticity of collector messages by rate (Panels B–J). The x-axis of this figure always reports estimates of tax collector enforcement capacity using regression specification (7), expressed as the percentage of owners who pay the property tax. In Panels A the y-axis reports the collector-level elasticity of owner's beliefs about the likelihood of sanctions for tax delinquency with respect to tax rates. Owner's beliefs about the likelihood of sanctions for delinquency is measured in the midline survey. In Panels B–J, the y-axis reports the collector-level elasticity of the message used by the tax collector with respect to the tax rate: sanctions by the chief (Panel B), sanctions by the tax ministry (Panel C), provision of public goods in the neighborhood (Panel D) or in Kananga (Panel E), showing trust in the government (Panel F), the importance of paying the property tax (Panel G), tax compliance as a legal obligation (Panel H), social embarrassment associated with tax delinquency (Panel I), and any other threats in the case of tax delinquency (Panel J). We discuss these results in Section 7.2.

FIGURE A8: RATES AND ENFORCEMENT AS COMPLEMENTS
– FIT OF THE TAX REVENUE VS. TAX RATES RELATIONSHIP



Notes: This figure reports estimates of the relationship between tax rates (x -axis) and tax revenue per property owner (y -axis). The red point estimates are from Equation (1), comparing property tax revenue in the tax abatement treatment groups relative to the status quo property tax rate. The black lines show the 95% confidence interval for each of the estimates using robust standard errors. The blue point estimates are the predicted tax revenue, $T \cdot \widehat{\mathbb{P}(T, \alpha)}$, which we obtain by predicting $\mathbb{P}(T, \alpha)$ at every tax rate T using Equation (6). As described in Section 7.2, we restrict the data to the 23,777 properties subject to tax collection by state tax collectors. We discuss these results in Section 7.3.

**FIGURE A9: RATES AND ENFORCEMENT AS COMPLEMENTS
– REVENUE IMPLICATIONS (TAX LETTERS)**



Notes: This figure reports estimates of the relationship between tax rates (x-axis) and tax revenue per property owner (y-axis). We predict tax revenues at different hypothetical tax rates using the regression coefficients obtained when estimating Equation (6). We compare the estimated relationship among households assigned to the *control* message on their tax letter (blue dotted curve) to households assigned to an enforcement message (red dotted curve). For the latter, we pool the *central enforcement* and *local enforcement* messages. Vertical lines indicate different potential tax rates, while horizontal lines indicate the corresponding revenue levels. The data are restricted to the sample of 2,665 properties that were subject to randomized messages on tax letters. We discuss these results in Section 7.3