The Impact of Reducing Tax Rates and Strengthening Enforcement on Revenue Collection in the DRC

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Sector(s): Political Economy and Governance

Location: Kananga (Kasai Central), Democratic Republic of Congo

Sample: 38,028 properties

Initiative(s): Governance Initiative (GI)

Target group: Urban population Adults

Outcome of interest: Citizen satisfaction Taxation Corruption and Leakages

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Low tax revenue is a key challenge facing governments across low- and middle-income countries. In partnership with the Provincial Government of Kasaï-Central in the Democratic Republic of Congo, researchers conducted a randomized evaluation during the 2018 property tax collection campaign to test the impact of lower property tax rates and stronger tax enforcement on revenue collection. Reducing property tax rates from current levels increased government revenue due to higher tax compliance. However, the property tax rate that maximized government revenue increased with enforcement, demonstrating the value of increasing tax rates in tandem with tax enforcement in settings with weak capacity to enforce compliance.

Policy issue

Governments in the world's lowest-income countries collect only 10 percent of GDP in taxes, compared to 40 percent in high-income countries. This lack of tax revenue is associated with low-quality public services and infrastructure and is thought to undermine economic growth. Increasing revenue, however, is not as simple as just raising the tax rate—governments must consider how citizens will respond to higher tax rates. For example, higher tax rates could lead to increased tax delinquency, especially in countries where the capacity to enforce tax compliance is weak. Increased tax delinquency could therefore offset any gains in government revenue from tax rate increases where tax enforcement capacity is low.

Although higher tax rates may lead to more tax delinquency in countries where enforcement is weak, if a government invests in its enforcement capacity it could offset this uptick in delinquency. In turn, the combination of higher tax rates and stricter enforcement could lead to more government revenue. This means that for every government, given their level of enforcement,

there is a tax rate that maximizes revenue (or a “revenue-maximizing tax rate”)—tax rates set any higher would lead to increased delinquency. Investments in enforcement capacity could increase this revenue-maximizing tax rate in low-income countries where governments often have a weaker capacity to enforce compliance. How can governments in lower-income countries set their tax rates and their enforcement strategy to improve revenue collection?

Context of the evaluation

The Democratic Republic of Congo is one of the largest and most populous countries in Africa, and in 2018, it was estimated that over 70 percent of the population, or 60 million people, lived on less than US$1.90 per day.[1]

The country’s capacity for tax enforcement is low: from 2000-2017, it was ranked 188th out of 200 countries in terms of its tax-GDP ratio. Between 2010-2015 the DRC raised US$63 in annual tax revenue per person, compared to—for instance—US$17,100 per person in France.

The median monthly household income in Kananga, the provincial capital of the Kasaï-Central province and the fourth largest city in the country, was approximately US$106 in 2016. In Kananga, government tax revenues are extremely low: the province collects about US$2 million per year in tax revenue, amounting to about US$0.30 per person for its six million citizens.

To increase tax revenues, the Provincial Government of Kasaï-Central launched a series of door-to-door property tax campaigns in Kananga beginning in 2016. In the 2016 property tax campaign, property tax rates were determined as follows: “low-value” properties built in non-durable materials (such as mudbricks) were liable for an annual fixed tax of CDF 3,000 (or about US$2), while “high-value” properties built in durable materials (such as cement) were liable for an annual fixed tax of CDF 13,200 (or about US$9). The 2016 property tax campaign was effective at raising property tax compliance, which increased from less than 1 percent to 11 percent. To learn how to increase tax compliance further, the government experimented with changing tax rates and tax enforcement in its 2018 property tax campaign.



People ride a motorcycle.

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Details of the intervention

Researchers partnered with the Provincial Government of Kasaï-Central during the 2018 property tax campaign to evaluate the impact of lowering taxes and implementing stronger tax enforcement on revenue collection.

During this tax campaign, 38,028 properties across 351 neighborhoods in Kananga were randomly assigned to one of four groups:

- *Reductions in tax rates:* The tax rates for properties in three groups were reduced by either 17 percent (9,616 properties), 33 percent (9,485 properties), or 50 percent (9,674 properties).
- *Comparison:* The tax rate for the 9,253 properties in this group did not change.

The assigned tax rates were printed on tax letters and given in-person to each property owner during the property registration phase of the campaign. Property owners in the tax reduction groups were not notified that they had received a reduction.

In addition to studying variation in tax rates, researchers sought to understand how stronger tax enforcement can affect tax collection. They did this by studying two additional sources of random variation: (i) the messages embedded in tax letters distributed by collectors, and (ii) the assignments of tax collectors to different neighborhoods of Kananga. First, 2,665 property owners received in their tax letters one of the following randomly assigned messages:

- *Central enforcement:* This message emphasized that non-payment could lead to audit and investigation by the provincial tax ministry.
- *Local enforcement:* This message was identical to "central enforcement" but replaced "provincial tax ministry" with "chef de quartier", or the city authority that oversees local governance.
- *Control:* This message only read: "paying the property tax is important".

In settings with weak tax enforcement capacity, like Kananga, tax collectors have a large influence on taxpayers' perceptions of the state's enforcement capacity because they arrive on taxpayers' doorsteps, inform them of their annual liability, and demand payment. But collectors also vary in their own intrinsic enforcement ability, e.g., their ability to persuade households to pay the tax by emphasizing the importance of taxes for public goods projects, or perhaps by reminding households of the penalties they could face if they do not pay. The random assignment of tax collectors in pairs to different neighborhoods thus creates variation in the intensity of enforcement to which households were subject.

To measure tax compliance and revenue, researchers collected administrative data on payments from the government's tax database. In addition, they conducted three rounds of surveys among property owners: prior to the tax campaign between July and December 2017, four to six weeks after tax collection ended in a given neighborhood, and again between March and September 2019. These surveys covered self-reported experiences with tax collectors, incidences of bribe payments, perceptions of government performance, and perceived fairness of the tax system.

Results and policy lessons

In settings with low enforcement capacity, tax rates might be set above the revenue-maximizing rate. In Kananga, reducing property tax rates from current levels increased government revenue due to higher tax compliance. Increasing enforcement also increased tax compliance and revenues. Crucially, increasing enforcement also raised the revenue-maximizing tax rate, demonstrating the value of increasing tax rates in tandem with tax enforcement in settings with weak capacity to enforce compliance.

Tax collection: Lower tax rates increased compliance. While 5.6 percent of property owners assigned to the comparison group paid the property tax, 6.7, 10, and 13 percent of owners assigned reductions of 17, 33, and 50 percent, respectively, paid the property tax. This effect was driven by reduced tax rates enabling more property owners who were cash-constrained and did not pay taxes at higher rates to comply with the tax policy. The property tax was a flat fee and partial payments were not permitted, so the increase in compliance led to higher revenue. Reductions in the property tax rates of 33 percent and 50 percent increased the Provincial Government's revenues by 16.4 percent and 13.2 percent, respectively.

Revenue-maximizing tax rate: Researchers used the data on how property owners responded to different tax rates to estimate the revenue-maximizing tax rate, or the tax rate at which the government can collect the greatest amount of revenue. The status quo tax rates in Kananga were above the revenue-maximizing tax rate—researchers estimated reducing the property tax by approximately 34 percent would maximize government revenue by increasing tax compliance.

Enforcement capacity: Compared to the control letter, both enforcement letters increased tax compliance and revenues. Enforcement messages increased tax compliance by 1.6 percentage points (or 55 percent) and tax revenues by CDF 36 (US$0.02) per property (or 62 percent). Researchers suggest that the increases in tax payments stemmed from higher perceived probability of sanctions for tax delinquency, without increasing the financial cost of those sanctions for the taxpayer. With higher perceived government enforcement, researchers estimated the revenue-maximizing tax rate was 78 percent of the status quo rate among properties assigned to enforcement messages, compared to 55 percent of the status quo rate among properties assigned to the control message. In other words, tax enforcement activities, such as enforcement messages, raised the revenue-maximizing tax rate. Similarly, researchers found that the revenue-maximizing tax rate was higher for more tax collectors with greater intrinsic

enforcement capacity. These findings suggest that tax rates and enforcement are complementary policy levers for raising government revenue.

Bribe payments, community engagement, and perception: A government with limited capacity to enforce tax compliance might worry that lowering tax rates could have unintended consequences, such as fueling bribe payments, crowding out other tax payments, or eroding the perceived legitimacy of the government. However, researchers found little evidence that tax reductions had adverse effects. First, property owners assigned to receive a 50 percent tax reduction were less likely to pay a bribe overall and paid smaller bribe amounts to the tax collector than property owners in the comparison group. Second, the change in property tax rates did not influence the willingness of property owners to pay informal taxes by contributing to local public goods, nor did it affect payment of other taxes (e.g., firm, vehicle, or market taxes). Third, reductions in tax rates had no impact on how citizens viewed the provincial government and tax ministry, or the perceived fairness of the property tax or property tax collectors. However, a lower tax rate led citizens to view property tax rates as fairer.

Overall, the findings suggest that the Provincial Government of Kasaï-Central could increase tax revenues by lowering tax rates or by jointly increasing enforcement capacity and increasing tax rates.

The researchers are building on the collaboration with the Provincial Government of Kasaï-Central and planning another randomized evaluation studying the role of progressive tax rates in increasing tax compliance and revenue.

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1. World Bank. “Democratic Republic of Congo: Overview.” Available at: https://www.worldbank.org/en/country/drc/overview