



## Tax morale, public goods, and politics: Experimental evidence from Mozambique

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- This policy brief presents findings from a study of how taxpayers respond to information cues about public good provision and local government autonomy in a Mozambican city.
- Informing people about the public goods built by their municipal government – roads, drainage ditches, etc. – increased their willingness to pay property taxes and their satisfaction with the government.
- Including a political message had no effect on its own and may have reduced the effect of the public goods message.

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## Policy motivation

The urban population of sub-Saharan Africa is expected to double by 2050, creating a vital need to update the social contract in African cities (Saghir and Santoro, 2018) – the balance between citizens' tolerance for tax collection and their satisfaction with the goods and services provided by the state.

Many low- and middle-income countries exist in a low-tax, low-service equilibrium, while high-income countries tend to tax citizens more and provide higher-quality services (Besley and Persson, 2014). Governments seeking to improve service delivery must collect more revenues, but this creates a chicken-and-egg problem: Will citizens be willing to pay more taxes when the quality of existing services is so poor?

This dilemma is especially acute for municipal governments, where the need to upgrade infrastructure and services is most urgent. However, many cities in low- and middle-income countries are highly dependent on transfers from the central government, and there has been little investment in subnational tax collection efforts. In autocratic and semi-autocratic contexts, this fiscal dependency may stifle political innovation that could threaten the regime.

The context for our study is the city of Quelimane, Mozambique, a provincial capital of around 500,000 residents. In recent years, the authority to collect property taxes was devolved to the municipality level. The municipal government has jurisdiction over public goods, including sanitation, roads, and drainage ditches. Politically, Mozambique, while holding elections, has very limited political competition. Quelimane is one of a handful of opposition strongholds in the country, and it has controlled the municipal government for the past decade.

## Research overview

To study how municipal governments might break out of the low-tax, low-service equilibrium, we conducted a survey experiment among property owners in Quelimane, testing two different messages governments might employ to motivate tax compliance:

- **Public goods message.** This message presented the idea of the social contract and provided a summary and photos of recent infrastructure built by the municipal government, including roads repaired, drainage ditches dug, and sanitation improvements.
- **Local autonomy message.** This message highlighted the municipality's budget dependence on the central government and the form in which this dependency constrained the municipality's

political and fiscal autonomy. It also included photos of recent political rallies and speeches by the municipality's mayor.

We conducted our survey among a representative sample of over 900 property owners in the city. This survey was carried out in November/December 2022 in 222 randomly selected city blocks (of the roughly 500 in the city). Before presenting the public goods or local autonomy messages, we collected baseline data on respondents' characteristics, attitudes, and beliefs. For example, we learned that only about half of property owners had any kind of formal documentation of their land tenure, and only about half knew they were supposed to be paying property taxes. Less than 10% had ever had their property visited by a tax assessor, but most people seemed to welcome the idea of more tax enforcement: three quarters agreed that the government has a right to collect taxes, and a majority said they thought the government uses tax revenues well. This is despite widespread acknowledgement of poor public service provision: over half of respondents said the government had never collected garbage or done any repairs on their street.

After collecting baseline variables, we randomised which informational tax motivation message each respondent was given. Treatment assignment of the two messages was cross-randomised and stratified by city block, with at least one respondent per block assigned to each of the four experimental conditions: "control," "public goods," "local autonomy," and "both." We are interested in how these informational messages would affect tax morale. We measured this in two ways. The first was a survey measure that simply asked respondents: If assessors came to evaluate your property, how likely is it that you would pay your property tax? The second introduced a costly choice: a behavioural public goods game, where respondents were grouped with other anonymous survey respondents, each of whom received 1.60 USD in mobile money and was asked to decide how much of it (if any) to contribute to a public fund which would be doubled and split equally among all group members.

### Public goods game

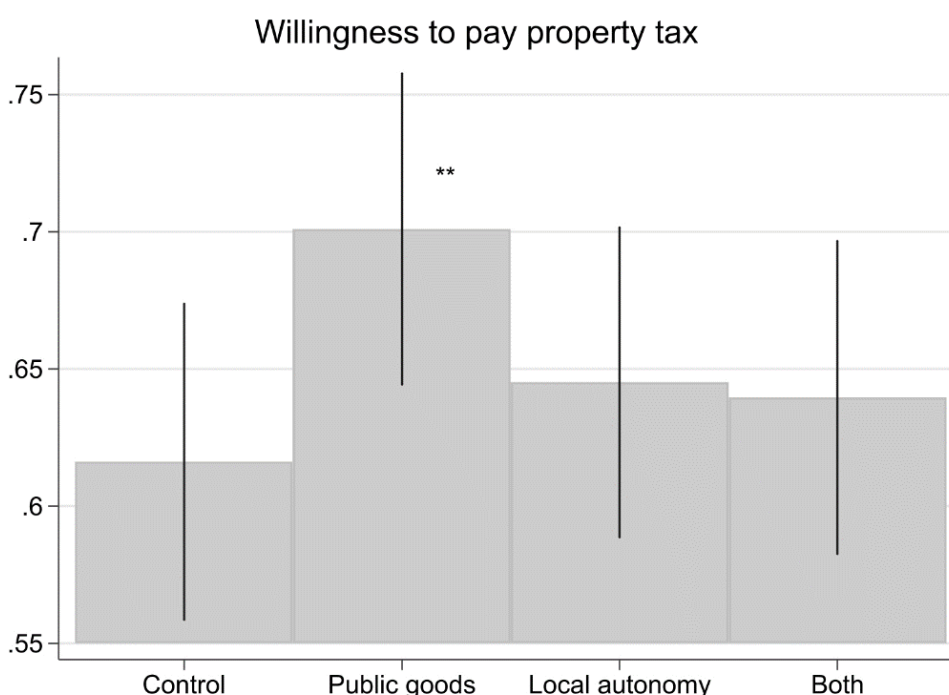
We used a standard behavioural measure called a public goods game to create a real-stakes measure of willingness to pay taxes. This game is designed to mimic the structure of tax payments and public good provision by governments in the real world. Each survey respondent was placed into a group with 9 other (anonymous) respondents. Each was given a mobile money transfer of 1.60 USD and told that they (and all other group members) could decide how much of the transfer to contribute to a "public goods fund." The public goods fund would then be *doubled* and distributed evenly among all participants. No matter what other players choose, any given player can always maximise her expected payout by contributing zero to the public fund.

## Key findings

We found that telling people about the public goods already provided by the government made them more willing to pay taxes.

- Information about public good provision raised tax morale.** In the control condition, 62% of respondents said it was “likely” or “very likely” they would pay the property tax if assessors came to evaluate their property (on a four-point scale from “not at all likely” to “very likely”). The “public good” message raised this by 8.5 percentage points (14%). The effect was not just for people’s self-reported willingness to pay, either; it showed up in costly behaviour as well. In the public good game that simulates tax payments and public good distribution, 32% of control-group participants chose to contribute a positive amount to the public good by making a mobile money transfer. The “public good” treatment raised this by 9.4 percentage points, a 29% increase.

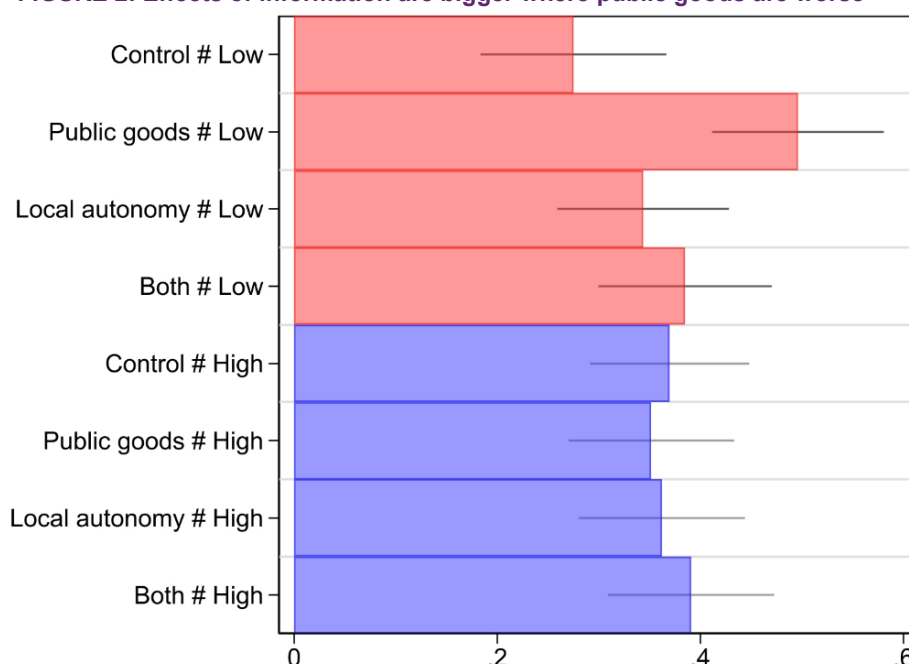
FIGURE 1: Effect of different messages on tax morale



Notes: This figure shows the fraction of respondents in each treatment arm who responded “likely” or “very likely” to the question “If the technicians were to come to assess your property, what’s the probability you would pay the property tax?”, from a four-point scale of “Very likely / likely / not very likely / not at all likely.” The means come from a residualised comparison using city block fixed effects.

- **Effects on tax morale were greatest for those whose own experience of public goods had been worst.** Using our rich pre-treatment survey data, we can measure respondents' prior experience of public services within the municipality's purview: garbage collection, drainage, and road construction/maintenance. We aggregate these measures into an index. The positive effect of the public good message on public good game contributions seems to be concentrated among respondents who report low public good provision from their personal experience at baseline.

**FIGURE 2: Effects of information are bigger where public goods are worse**



Notes: This figure shows the marginal coefficients from a regression of a dummy for whether the respondent contributed in the public goods game on a fully-saturated interaction of treatment with a dummy for high/low public good provision

- **Information about public good provision also increased satisfaction with the government.** This was true for measures of satisfaction with the governments of both Quelimane and Mozambique (increases of 11% and 21%, respectively) – even though all the public goods mentioned in the message were provided by the municipality. The message had no effect on respondents' trust in the incumbent mayor, however, nor in their stated intentions to vote for his party.

- **Political messaging had no discernable effect.** The “local autonomy” message – which had a more overtly political bent than the public goods message – had no effect on any outcomes on its own. But it may have partially negated the effect of the public goods message. When the two messages were combined, the coefficient on the interaction was negative for all outcomes, though only statistically significantly so for the government satisfaction outcomes. This may suggest that taxpayers respond positively to information about public good provision but become disillusioned when the message is adulterated by more overt politicking.

## Policy implications

This study shows that a relatively low-cost intervention – information about existing public goods – can affect tax morale and citizen satisfaction with government. This may offer hope to policymakers who wish to shift their society to a high-tax, high-service equilibrium but struggle to find the revenue to fund better services. Simply making citizens aware of existing efforts to provide public goods can move the needle, especially among those who have not experienced the public good improvements directly. Policymakers should tread lightly when trying to gain political benefits from public good provision. While public goods messaging increases citizens’ satisfaction with the government, overt political messaging may jeopardise these gains.

## References

- Saghir, J., & Santoro, J. (2018). *Urbanization in Sub-Saharan Africa: Meeting Challenges by Bridging Stakeholders* [White paper], CSIS.
- Besley, T., & Persson, T. (2014). Why Do Developing Countries Tax So Little? *Journal of Economic Perspectives*, 28(4): 99–120.