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Public disclosure and property tax compliance: A field experiment in Kampala, Uganda

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- Property rates are an important source of revenue for Kampala Capital City Authority (KCCA), making up over 38% of own source revenues in 2019/20. However, compliance with this tax remains an ongoing challenge.
- Through a randomised experiment, we study the effect of public disclosure of tax behaviour. We test the effectiveness of two separate approaches to public disclosure: reporting delinquents and recognising compliers.
- We find positive direct effects of public reporting on compliance for those warned, but negative knock-on effects for taxpayers who receive the reports. Recognition of compliant taxpayers backfires, with both direct and knock-on effects reducing compliance. Overall, we find that simple enforcement reminders are a more effective policy tool for raising compliance.
- Beyond enforcement messages, our findings suggest more can be done to link rates to tangible benefits for citizens, improve relations with KCCA officials, and address information gaps. These can all play a part in raising compliance in the long run.

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1. Property taxes in Kampala – A compliance challenge

Property taxes are an important potential source of revenue for cities. Faced with limited municipal revenues and rapidly growing populations, taxes on the value of land and property can offer a significant source of funding for cities to provide local services and to tap into financing for larger investments.[2] In Kampala, property rates are the single largest source of own-source revenues, accounting for over 38% of own-source revenues in 2019/20.[3]

In theory, taxes on properties provide a relatively efficient way to raise finances – rising urban land values over time are largely driven not by private investments, but by public investments in infrastructure like roads and schools, and by rising demand for space in a city due to urban migration.[4] Property taxes are also attractive since evasion is difficult. Properties are immovable and relatively easy to observe compared to income, sales, and other common taxes.

However, compliance with this tax is low in many low-income country cities, and Kampala is no exception. Only 12% of billed properties paid their rates on time in 2019/20, resulting in only 34% of potential revenue being raised.[5]

Table 1: Property rates compliance by division for financial year 2019/2020

	Number of properties	Share of properties that are compliant[6]	Number of property owners	Share fully compliant owners[7]	Potential annual revenue (UGX)[8]	Collection rate[9]
Central	14,947	33%	5,792	28%	23.2bn	68%
Kawempe	53,627	7%	24,876	5%	14.1bn	13%
Makindye	52,784	13%	26,806	10%	15.6bn	18%
Nakawa	51,985	14%	26,159	10%	20.3bn	34%
Rubaga	49,986	8%	23,229	6%	12.6bn	16%
Total	223,329	12%	106,017	9%	85.9bn	34%

Data source: KCCA eCitie billing and payment data

[2] Moore & Wilson (2017)
[3] Figures supplied by KCCA Directorate of Revenue Collection
[4] A land tax would be even more efficient since property taxes do create distortions to the decision to invest private capital.
[5] authors calculations using administrative data
[6] Here, properties are defined as compliant here if their annual liability was paid within the financial year. Outstanding balances from previous years and payments after July 2020 are not considered.
[7] Fully compliant owners are compliant for all properties they own
[8] Potential revenue is total current rateable value across all properties, and so excludes penalties, waivers, and old debts.
[9] The collection rate is the value of all payments made as a share of total potential annual revenue

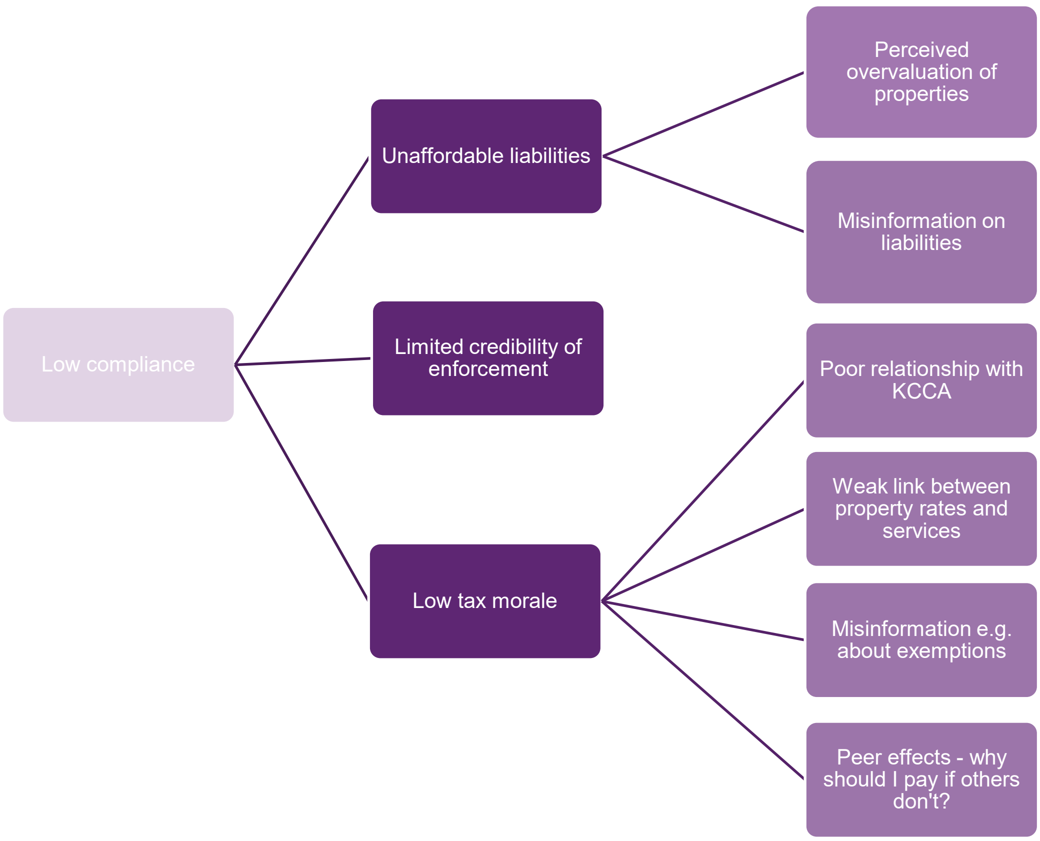
2. What drives tax compliance?

Why are compliance rates so low? The determinants of property tax compliance can be grouped into two broad categories:

1. **Direct policy parameters** affecting tax evasion, which include the tax rate, the probability of being caught evading taxes, and penalties for evasion.
2. **Tax morale**, which covers a number of additional reasons for which taxpayers may or may not be willing to pay their taxes. This can include intrinsic motivation to pay taxes, reciprocity (the willingness to pay taxes in exchange for benefits that the state provides and/or the perceived legitimacy of the state), peer effects (where taxpayers are influenced by peers and the possibility of social recognition or sanctions), and information imperfections (misunderstandings that make particular taxpayers more or less likely to pay for example, about what is owed and how to pay).

Focus group discussions and a baseline survey conducted with 1,000 taxpayers in 2020 highlight several reasons for low compliance in Kampala, summarised in Figure 1 below.[10]

Figure 1: Reported issues with property rate payments in Kampala



[10] See Ahabwe et al. (2020) and Ahabwe et al. (2021) for more details

3. Testing the potential for public disclosure

In this context, we studied the impact of a common policy tool aimed at raising tax compliance: **public disclosure of tax behaviour**. Despite mixed evidence on the effectiveness of public disclosure policies, many governments use varieties of 'shame' or 'honour' lists to try to promote tax compliance.[11] More than half of US states, for example, have or have had 'name and shame' programmes in which the names of top tax debtors are revealed publicly on state websites.[12] The Uganda Revenue Authority (URA) annually honours the largest corporate income taxpayers by district and across the country.

We compared the relative effectiveness of two different types of disclosure: publicly reporting tax delinquents, and publicly honouring tax compliers. We ran the experiment over two years, which allowed us to examine two channels of effect through which disclosure could affect compliance:

- In year-1 (FY 2020/21), taxpayers were warned that lists of compliers and non-compliers would be made public. This allows us to examine a direct effect: **do taxpayers change their compliance behaviour when they know that it will be publicised?**
- In year-2 (FY 2021/22), these lists were publicised. This allows us to look at a knock-on effect**: do taxpayers change their behaviour when they are publicly notified of the behaviour of others?**

We compare the effectiveness of these 'fame' and 'shame' lists with messages providing information to taxpayers on; a) enforcement measures that would be imposed in case of non-payment, b) the purpose of rates as payment for public services and, c) details of dedicated client relationship managers (CRMs) who were assigned to address any taxpayer queries.

To study the effect of these different policies, we sent out SMS messages to roughly 80,000 taxpayers in the city. All taxpayers were sent a standard reminder message, and taxpayers were then randomly assigned to receive different types of control, information, reporting, or recognition messages in year-1 and year-2. Messages were sent in both Luganda and English. After the experiment, we conducted an endline survey of 5,000 taxpayers in early 2022.

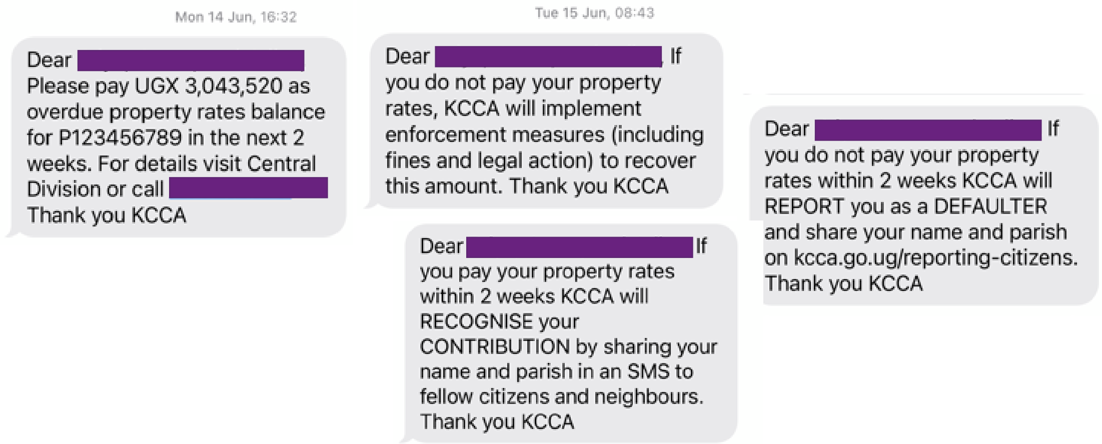
[11] The OECD (2017) cites shaming as the fourth most used instrument of tax debt enforcement behind: obtaining a lien over assets; initiating bankruptcy or liquidation; and imposing a liability on company directors for company tax debts, and ahead of: temporarily closing a business or withdrawing a license; denying access to government services; and imposing restrictions on international travel.
[12] Luttmer & Singhal (2014).

Using SMS as a policy tool

Our study suggests that SMS can be an effective tool for policy communication. Of the 6,303 taxpayers that we were able to reach by phone for the endline survey, 87% had correct phone numbers according to the KCCA database. The majority (88%) of our endline survey respondents recall receiving a message from KCCA regarding property rate compliance at some point in the study year.

However, sending messages with links to online information may be less effective - only 15% of those claiming to have received a link to a website report opening it.

Figure 2: Examples of messages sent out as part of the experiment



This project builds on a growing literature looking at tax morale more broadly, and the effects of public disclosure in particular. While other studies have looked at the effect of tax shaming or recognition, they often cannot directly compare the effectiveness of the two policies, nor can they separate the direct effects on those reported on from the knock-on effects of recipients. In addition, many of these studies take place in high-income countries where average compliance is much higher – less is known about the effects of such policies in low-income settings.

Selected literature on tax morale

While liabilities and enforcement are still thought to be the dominant determinants of compliance, there is growing empirical research studying the importance of tax morale, which is particularly important in contexts of limited enforcement capacity. Many studies have examined the effects of reciprocity, public disclosure, and information gaps on tax compliance across different contexts.

Reciprocity: a number of surveys and studies suggest that taxpayers are more likely to pay when public good delivery in exchange for taxes is particularly salient, especially, higher quality public services.[13]

Public disclosure: the effect of public disclosure has been studied in both low- and high-income countries. Several studies find positive effects of 'shame' and 'fame' lists[14], though there is evidence that public disclosure of non-compliance can demotivate other taxpayers from paying.[15]

Information gaps: some studies have shown that information imperfections can limit tax compliance simply because taxpayers may not know what they owe and how to pay.[16] At the same time, information imperfections can interact with all other determinants of compliance – for example, much of the literature points to positive effects of providing information to taxpayers on enforcement measures and/or detection probability.[17]

4. Key findings

There are five key takeaways from our experiment:

1. We find **positive direct effects of the threat of public reporting on compliance**, which raises the probability of tax payment by 19%.[18] However, this is almost exactly counterbalanced by **negative knock-on effects** of this disclosure: when individuals are notified of fellow citizens' delinquent behaviour, they become less likely to comply themselves. Putting these two effects together, we would expect this policy to have a very small but negative effect on tax compliance if rolled out.

2. Interestingly, the **recognition of compliant taxpayers also backfires** in this context, with both direct and knock-on effects of recognition

[13] Carrilo et al. (2021); de Gramont (2015); Alemika et al. (2011); OECD (2013); Prichard (2010); Prichard & Leonard (2010) ; Daude and Melguizo (2010)
[14] Angaretis et al. (2022); Slemrod et al. (2022); Dwenger & Treber (2018); Bø et al. (2015); Perez-Truglia & Troiano (2018)
[15] Blaufus et al. (2017)
[16] Collin et al. (2021); Cohen (2020); Del Carpio (2014); De Neve et al. (2021)
[17] Bott et al. (2020); Fellner et al. (2013); Castro & Scartascini (2015); Cohen (2020).
[18] While figures here refer to the probability of making any payment, we see qualitatively similar results for paying off annual liability and total balance, and for payment amounts.

reducing compliance by 17%. Evidence from the endline suggests that this is in part due to taxpayers' belief in a right to privacy in tax matters.

3. Instead, a simple message communicating potential **enforcement measures** (for example, fines and legal action) raises compliance by 35% - and does not share the negative 'backfiring' effects of public reporting.

4. Other types of information messages that appeal to reciprocity or that provide contact details of government relationship managers have **no effect on compliance.**

   Survey evidence sheds some light on why this might be: our baseline survey of taxpayers revealed a high degree of dissatisfaction with the provision of public goods, which would explain why messages linking rates to public services did not have a positive effect on compliance.

   At the same time, our endline survey shows that receiving a 'client relationship manager' message did not increase the likelihood that taxpayers had tried to contact their CRM in the last year, suggesting that taxpayers are already aware of this contact person or are reluctant to contact them. Critically, of those who did try to contact their CRMs, the majority (60%) **did not find them to be helpful** in addressing their concerns.

Cost-effectiveness of SMS messages

In the first year of the experiment, comparing payments in the weeks before messages with payments in the weeks after, we see a UGX 770 million rise in total payments from taxpayers who received the reminder (control) SMS message. In the year before the experiment, when these taxpayers did not receive any text messages, they paid UGC 525 million more when comparing the same time periods. Taking the difference between changes in our treatment year and changes in the 'placebo' year suggests that receiving a simple SMS message that only reminds taxpayers of their liability and the deadline for payment raises taxes paid by UGX 16,000 per person on average. We see an even larger effect from our control messages in year-2.

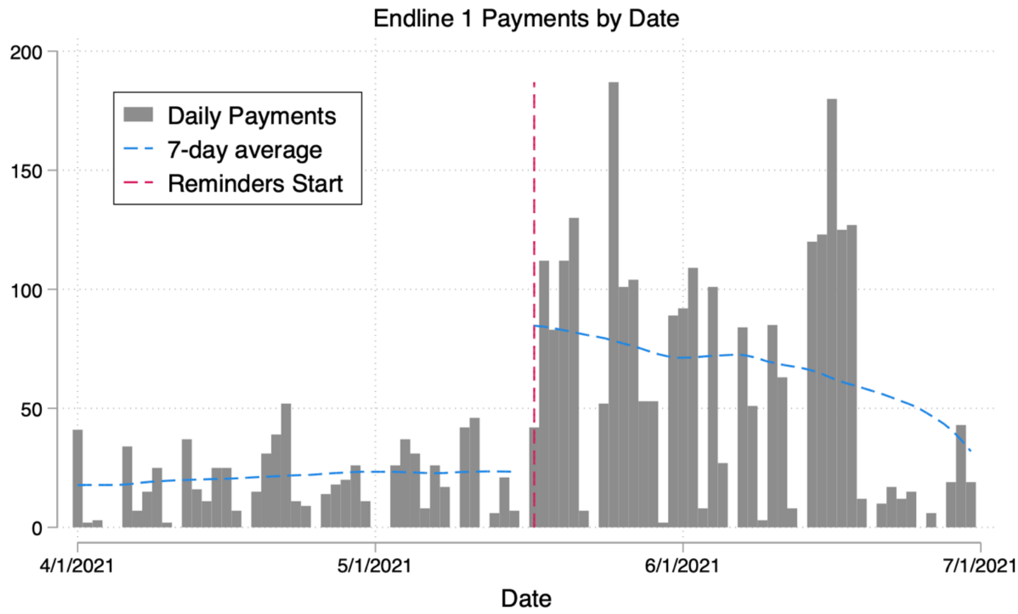
After accounting for the cost of sending these messages, our estimates suggest control (reminder) messages raised at least 90 shillings per shilling spent. Evidence from our experiment shows that enforcement messages raise an additional 25 shillings in revenue per shilling spent on messages, compared to control messages.[19]

[19] It is important to note that the observed effects of such messages may diminish over time if taxpayers become more familiar with their tax liabilities, payment deadlines, and enforcement measures.

5. Examining payments before and after the onset of the experiment among our control group, it appears that receiving **even a simple SMS reminder** appears to play a significant role in raising compliance for those who may not have basic information on property rates. In year-1, payments increased among control message recipients by 298% and total amount paid increased by 159% when comparing the week before and after messages were sent out. In year-2, payments for the same group increased by 55% week-on-week and total amount paid increased by 7%.

   The large effect of an initial reminder suggests there may be large information gaps playing a part in low compliance. Complementary evidence from focus groups and our baseline survey points to high levels of misunderstanding, especially around the due date for taxes.

Figure 3: Property rate payments by date (year-1)



Notes: before and after reminders, the week on week change in payments is 364 (a 298% change).

Building a social compact

It is important to note that 79% of taxpayers stated in our endline survey that they believe not paying property rates is **"wrong, but understandable".**

There are a number of legitimate concerns taxpayers have about public service delivery and their relationship with KCCA officials that may limit the effectiveness of policies that appeal to public morale and peer effects. It may be that public reporting or recognition only becomes effective when citizens can clearly link taxation with tangible benefits.

5. Policy implications

Findings from the experiment, surveys and focus groups conducted as part of this project suggest a number of policy implications:

Sending out SMS messages to taxpayers plays an important role in raising compliance

In particular, sending simple messages outlining potential enforcement measures appears to be a cost-effective way of raising compliance.

Public disclosure does not seem to be a good idea

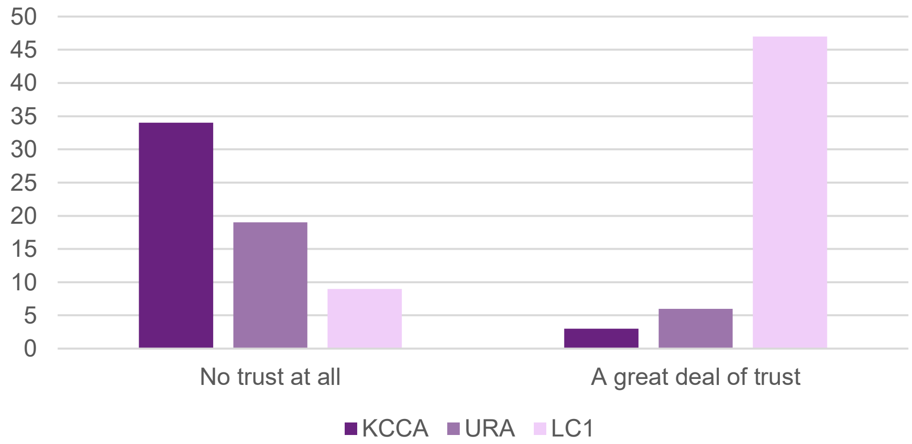
While the threat of public reporting raises compliance of those who are warned, disclosing those who do not comply lowers compliance of others at the same time. Public disclosure of compliers has a negative effect both on those recognised and on those who are notified.

There is a clear need to improve the relationship between taxpayers and the city

It is important for the city to invest in staff time and training for sensitisation, delivery of notices, relationship management and dispute resolution. Providing clearer goals for CRMs on their roles and tracking their engagement with property owners could be beneficial.

Many survey respondents requested more in-person KCCA meetings and consultations on property rates, either with property owners themselves at their village or with their Local Council 1 (LC1). **One potential cost-effective way to increase resources for these activities is to involve local government LC1 leaders** as a provider of information in case of misunderstandings and as a communicator of issues on behalf of an entire community.

Figure 4: How much do you trust the following to do their jobs? (Answers from the baseline survey)[20]



[20] Here we illustrate answers to the two most extreme answer options provided in the survey

It would be valuable to explore ways to link property compliance to provision of public goods and services more closely

This involves providing taxpayers with a voice in determining how their taxes are spent, spending revenues from property rates on public services that are demanded by the public, and clearly communicating to taxpayers that the city is doing so.

Not only may taxpayers be likely to have a better understanding of the public service needs in their community, but they may also be more likely to comply if their tax payments are targeted towards those needs. The very process of engaging citizens may improve their relationship with government and willingness to comply with rates.

Existing expenditures could be made more salient by, for example, creating clear signage alongside investments with the KCCA logo and the project expenditure amount. Investments in signage, television, and radio announcements, and in-person meetings have been used to raise awareness of public benefits of property taxes and compliance in Lagos, Hargeisa, and Arusha.[21]

Addressing information gaps

Evidence from focus groups, the baseline survey, and the experiment suggest that there are large information gaps among taxpayers on tax liabilities and how they are determined, due dates for payments, and how to pay their rates. To remedy this, KCCA would do well to:

- Conduct data audits to improve data quality on taxpayer registries. **It continues to be important to clean and improve property registry data** to limit misinformation/confusion for taxpayers through KCCA communication and improve KCCA ability to monitor and follow up on payments.
- Consider communication methods (online, via SMS, and in writing) in **Luganda** as well as English. A quarter of property owners report being unable to read in English, but 84% of those can read in Luganda.[22]
- **Expand taxpayer sensitisation.** Not only would consultations with citizens improve taxpayer information, but they could also help to correct errors in property valuation and administrative records.

[21] de Gramont (2015) 'Governing Lagos: Unlocking the Politics of Reform' Carnegie Endowment for International Peace, Paul Mundy and Jean du Pleiss, eds. (2010), Count Me in: Surveying for Tenure Security and Urban Land Management. UN-HABITAT, Loy Nabeta (2014) 'Building Arusha: One City's Journey to Better Urban Services, Access and Quality of Life', World Bank.
[22] See Ahabwe et al. (2021).