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African Tax Administration Paper 9

Intelligent Government: How Research Can Help Increase Tax Compliance

Mick Moore

May 2019

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The ICTD's African Tax Administration Papers (ATAPs) are research papers that will be of specific interest to people working in tax administration in Africa. The purpose is to encourage and support useful, policy-oriented research by African professionals directly involved in tax administration.

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Intelligent Government: How Research Can Help Increase Tax Compliance

Mick Moore

Summary

How can governments and tax authorities best encourage taxpayers to be compliant, i.e. to be more honest in declaring information about their tax obligations and paying what is due? Unfortunately, one common response, rather misleadingly termed ‘education’, is to preach at taxpayers: to tell them that it is their duty to pay taxes, and threaten them with punishment if they fail. This kind of ‘education’ is not very effective, and may even reduce compliance. By contrast, there is a growing range of low-cost research techniques that can help tax authorities understand, for particular taxes and contexts in particular countries, how tax compliance can best be increased through the actions of the tax authorities themselves. It is increasingly possible for tax authorities to understand how their ‘clients’ behave in response to the tax collection procedures that are in place, and then to modify those procedures to increase compliance. These research techniques are increasingly used in low income countries, and by the staff of tax authorities rather than (solely) by external research experts. The paper summarises three research experiments successfully concluded in Africa in recent years by combinations of tax authority staff and external researchers. One of those experiments reveals the value of efforts genuinely to educate taxpayers – rather than to preach at them.

Keywords: tax compliance, research, taxpayer education, low income countries, tax experiments.

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Acronyms

CIT	Corporate income tax
EFD	Electronic fiscal device
PIT	Personal income tax
RRA	Rwanda Revenue Authority
VAT	Value added tax

Introduction

Worldwide, taxpayers are not very good at complying with their obligations either to declare their taxable assets, incomes and transactions or to actually pay tax. This generally seems to be a bigger problem in lower income countries. The question of how to make taxpayers more compliant is the subject of endless discussion and speculation. My experience is that within what we might call 'official circles', the responses of government ministers, politicians, senior public servants and tax collectors themselves to this question are often unproductive. The typical discussion starts with the concept of 'education'. But it soon becomes clear that, in many cases, 'education' means preaching or hectoring: telling taxpayers that they <u>should</u> pay their taxes, that it is their <u>duty</u> to pay, or that the consequences of non-payment can be quite <u>severe</u>.

We have no good evaluations of government tax campaigns that are framed in these didactic terms. For a range of reasons, reliable evaluation is probably virtually impossible. However, a range of more anecdotal evidence suggests that these campaigns are probably mostly ineffective and possibly even dysfunctional, i.e. they reduce the willingness of taxpayers to comply. Why should this be so? The answers are not hard to find. We are talking of countries where, when carefully interviewed, large proportions of taxpayers express great unhappiness with both the tax system and the public spending that it supports. They frequently say that: they do not know how government uses their tax money; they believe much of it is wasted or stolen; they do not understand the tax system and why they are asked to pay particular sums; they think tax collectors are corrupt; they believe the tax burden is allocated unfairly; and that the process of paying taxes is unnecessarily complex and burdensome (Aiko and Logan 2014). There is likely an element of self-justification in these answers: taxpayers may exaggerate the dysfunctions within the tax system as a way of excusing their own non-compliance. Even so, in those circumstances, injunctions that they should pay taxes as a matter of duty may be perceived as insults to their intelligence.

Why then do governments persist in advocating or implementing didactic pay-your-tax campaigns that are unlikely to achieve anything? There are several possible explanations. One is that, in this as in other domains, political and governmental elites underestimate the intelligence of ordinary people and overestimate their own capacity to shape the thinking of the people over whom they rule. We can do very little to change these dysfunctional attitudes, at least in the short term. However, there is another explanation for this didactic approach to promoting tax compliance that provides opportunities for researchers to intervene productively. This is that political and governmental elites know very little about the business of tax administration, or about the experiences of other countries that have been open-minded and experimental in encouraging compliance. The politicians say: 'educate [i.e. try to indoctrinate] the taxpayer' because they are unaware that there are better ways not only of improving tax compliance in general, but also of finding out how best to do that in specific contexts. To some extent, the politicians can be forgiven: the sophisticated research techniques that can be used to help determine the best ways of increasing tax compliance are relatively new, and it is only in the last few years that they have been used at all in low income countries.

These new research techniques are smart. Their use not only makes governments look intelligent, but can actually make governments more intelligent, at least when it comes to dealing with their taxpayers. It is possible for governments to collect more revenue through inducing taxpayers to be more compliant with their obligations, without in the process irritating or upsetting the taxpayers – and possibly even inducing in them a bit of empathy for the tax collectors.

The purpose of this paper is to explain the basics of these new research techniques, through examples of successful research projects. I select three cases where the staff of national tax administrations were deeply engaged in the research. This engagement is not absolutely essential. Smart, policy-relevant research can be done without the involvement of tax collectors. But there is a very good reason to involve them wherever possible: they sit on increasingly large quantities of data about taxpayers that they collect in the course of their daily business; and it is increasingly easy and cheap to deploy digital technologies so that this data can be used for research purposes.

1 Case 1: Are retail sales recorded for VAT purposes? Tanzania, 2017[1]

Like an increasing number of tax administrations in low income countries, the Tanzania Revenue Authority has in recent years introduced what it terms *electronic fiscal devices* (EFDs) – otherwise known, for example, as *fiscal registers* or *electronic tax registers* (Casey and Castro 2015). These devices are designed mainly to record transactions that should be subject to value added tax (VAT). In essence, sellers should record all sales on EFDs. The data will then be transmitted electronically to the tax authority, where it can be used to check and verify transactions and VAT obligations. The Tanzania Revenue Authority has chosen to install EFDs at the sales points of larger retailers. The retailers are legally obligated to record on the EFDs all sales of goods that are subject to VAT. They should simultaneously issue their customers with a receipt, that is printed on the EFD, so that the customer knows that they have paid VAT on their purchase.

The weak link in the chain is obvious. What is to stop the retailer from either:

- Not recording the transaction and not charging the customer any or all of the 18 per cent VAT that is due on the purchase?
- Charging the customer the 18 per cent VAT, but not recording the transaction, not issuing a receipt, and therefore pocketing the VAT element in the price?

Any tax administrator will know that the system is not foolproof. But it was never expected to be. The pragmatic tax administrator is not looking for 100 per cent compliance. But 80 per cent would be good, and 90 per cent would be excellent. The practical questions are:

- To what extent are EFDs being bypassed?
- What are the characteristics of those transactions where bypass is taking place?

If we know the answer to the last question, we might be able to find ways of reducing the frequency of bypass.

The researchers seeking to answer these questions investigated 314 transactions in different locations in Dar es Salaam in 2017. Here, as in the other cases below, I am giving no technical details of the research – for example, on sampling, interview or statistical techniques. Neither do I deal with issues such as response rates and the extent of drop out from surveys. These are all centrally important issues in the execution of reliable research. Our concern here is with the basic structure of the research design.

The study of each of those 314 transactions involved two small pairs of field investigators, who started by waiting around outside retail points where EFDs were installed. Once a transaction had been observed and the customer left the shop, one pair followed the

[1] For details of this research, see Fjeldstad, Kagoma, Mdee, Sjursen and Somville 2018.

customer and interviewed her or him about the transaction. They started with the question of whether the customer had been issued a receipt, and whether they had been given it without having to request it. Overall, a receipt had been issued automatically in 163 cases. That represents 52 per cent of the total. In another 93 cases (30 per cent), the customer received a receipt only after asking for it. That information alone is quite useful. The Revenue Authority could take heart from the facts that, in Dar es Salaam at least, (a) receipts were issued in 82 per cent of cases and (b) 62 per cent of the 151 customers who were not automatically given a receipt then asked for one and obtained it.

Having established the facts about receipts, the first pair of investigators then interviewed the customer about their knowledge of the relevant tax law and their perception of the likelihood that they would be detected if they engaged in a transaction where a VAT receipt was not issued. Meanwhile, the other pair of investigators went into the retail outlet and interviewed the person responsible for the sale. The sales people were asked a wider range of questions relating to: the perceived risk of detection and punishment for failure to record sales on EFDs; their attitudes to taxation; their perceptions of the fairness of the tax system; their understanding of how other retailers behaved in respect of the EFDs and the issue of receipts; and their level of satisfaction with public services.

These interviews generated enough data for the primary researchers to undertake sophisticated statistical analysis of the factors associated with the issue or non-issue of receipts for these 314 transactions. Again, for present purposes we don't need to explore what statistical techniques were used. We trust that the researchers did a professional job. The statistical analysis revealed that transactions were more likely to be recorded on EFDs and receipts issued where: (a) retailers thought that other businesses similar to theirs were following the law by recording the transactions; and (b) customers knew the relevant law and feared detection for breaking it.

These are useful findings. They may need to be verified for the parts of Tanzania outside Dar es Salaam. For Dar es Salaam, they suggest that:

- Educating the ordinary public about the need for VAT receipts is working.
- Retailers can be induced to use EFDs more frequently if they can be persuaded that other people in their line of business are using their EFDs.

The cost of doing the survey is not high. In this case, the researchers did not actually exploit the fact that the Revenue Authority already has in its records a great deal of data about VAT payments. Taking advantage of information already in the files of the tax administration was central to the remaining two cases reported here.

2 Case 2: Do reminder messages increase the frequency and accuracy of filing for business profits tax? Rwanda, 2016[2]

In Rwanda, as in most countries, business owners are required to file their returns for the purposes of business profits tax (corporate income tax) annually at the end of the financial year. In Rwanda, businesses are fairly good at filing business profits tax returns once they are actually registered with the Rwanda Revenue Authority. But do they file accurate returns? A high proportion are what are termed 'nil filers': they send in a tax return, but

[2] For details of this research, see Mascagni, Nell and Monkam 2017, and Mascagni, Nell, Monkam and Mukama 2017.

declare either no business activity or no profits. The researchers set out to answer three questions:

- If registered taxpayers were sent some kind of reminder message just before the time when they were due to file, would they be more likely to file accurately (i.e. to declare more taxable income)?
- What kind of message was most likely to generate more accurate filing?
- What mode of delivering the message was most likely to be effective?

The researchers began with a large sample of taxpayers for which the Rwanda Revenue Authority had filing information for the financial year 2014-5: 9,750 businesses paying corporate income tax (CIT) and 2,800 payers of personal income tax (PIT). Many of the latter run small businesses. The researchers decided to send three different messages:

- A *deterrence* message: a warning of potential penalties in case of failure to file accurate and timely tax returns.
- A *fiscal exchange* message: a reminder that tax revenues finance valuable government services.
- A simple *factual* message, advising that tax returns were due by the end of the financial year.

Each of these messages was delivered through one of three different modes: a physical letter, an SMS message, and an email. There were therefore in total nine different message types, sent to nine different groups of taxpayers. A tenth group of taxpayers, the *control group*, received no message at all.

It is of more than incidental importance that updating their taxpayer databases to make this experiment possible proved a substantial undertaking for the Rwanda Revenue Authority. They discovered that their procedures for maintaining and updating taxpayer information required improvement. This was actually an unanticipated benefit of the research.

The data analysis was technically complicated but in principle simple: it involved a comparison of how much more (or less) taxable income members of each of the ten groups on average declared for the financial year 2015-6, after they had received the reminder messages, compared to the previous financial year.[3] The data showed that (a) the *fiscal exchange* and *factual* messages were most effective at generating additional revenue and (b) SMS and email messages were more cost-effective than physical letters.

From the tax administrators' perspective, there are three further conclusions:

- The project generated an additional US$ 9 million of revenue in 2015-6 alone. The research was very cost-effective.[4]
- The general practice of sending reminder messages is likely to be worth pursuing.
- It would be possible to do further iterations of the research to refine the reminder messages and the ways in which they are delivered – and to see if they need to be modified over time.

[3] Discounting for the average increase in revenue collection from all payers of business profits tax/corporate income tax between 2014-5 and 2015-6.

[4] It was estimated that the total costs per message delivered, including all personnel costs, were about $1.2 for letters, $0.8 for SMS, and $0.25 for emails.

3 Case 3: How effective is taxpayer education? Rwanda, 2017-8[5]

A growing number of tax administrations provide some kind of education to some of their taxpayers, especially business taxpayers. They hope that, once taxpayers have a better understanding of the tax system, they will become more compliant: they will file their returns in a more timely and accurate fashion, and declare more of their income. But there are many different ways of providing taxpayer education. How is any tax authority to know whether or not its taxpayer education programme is effective? The Rwanda Revenue Authority (RRA) recently set out to find the answer.

The RRA provides taxpayer education to newly-registered businesses. In August 2017, the researchers interviewed about 1,000 new taxpayers who had not yet received any taxpayer education. To reduce the research costs, interviews were conducted over the phone. The questions concerned the interviewees' knowledge of and attitudes to tax. The interviewees were later invited to attend a training course that was held in various parts of the country. 367 of them attended; 820 of the original interviewees were then interviewed again, by phone, and asked the same questions. This procedure thus generated two samples of taxpayers: those who had received the training and those who had not.[6]

The responses in the telephone interviews were examined. Those who had attended the training had much more knowledge of the tax system than before the training, and a slightly more positive attitude to paying taxes. Then, the 2017-8 tax returns of those who had attended the training were compared to the returns of those who had not attended. The only statistically significant difference between the two groups was that attendees were much more likely to have filed a tax declaration. Two other differences seemed positive, but were not statistically significant: attendees declared more taxable income than non-attendees; and were less likely to be nil filers, i.e. to declare no taxable income.

These results from the first effort to research the effects of their taxpayer training are broadly encouraging for the RRA. They suggest that the training induces attendees into the habit of filing tax returns. But they also raise many more questions. Will the filing habit persist into the next tax year and the one after that, or does the effect of training wear off quickly? Do trainees declare more income, rather than simply filing their tax declaration more reliably? What kinds of training are most effective? And which are most cost-effective? Using the kinds of research techniques set out above, all these questions are answerable.

4 Conclusion

This paper has summarised just three of the growing number of recent and ongoing research projects that provide valuable, practical guidance on how tax administrations can increase tax compliance and generate additional revenues – without upsetting taxpayers. If they are to be useful, these research projects need careful design and the commitment of resources from tax administrations, including the time of senior staff. Most tax administrations will continue to depend on external research expertise. But the average educational levels of tax administration staff in low income countries are steadily rising, such that they are increasingly able to contribute to, and control, this research themselves. Tax administration processes are steadily being digitalised, such that access to data needed for research purposes is becoming easier and cheaper. There is a large potential for tax administrations to realise.

5 For details of this research, see Mascagni, Santoro and Mukama 2019.

6 Statistical analysis indicates that there was no other consistent difference between the two groups that might have affected the validity of the research findings.

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