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Teach to Comply? Evidence from a Taxpayer Education Programme in Rwanda

Summary of ICTD Working Paper 91 by Giulia Mascagni, Fabrizio Santoro and Denis Mukama

African revenue authorities developed a growing interest in tax education as a key driver of compliance and in the context of a modern approach to tax administration (Mascagni and Santoro, 2018). Indeed, poor tax knowledge has a number of potentially serious implications. Firstly, it is likely to affect compliance. On the one hand, uninformed taxpayers may find it hard to navigate complex tax systems and thus may fail to comply. On the other hand, they may be unaware of tax benefits available to them and might end up paying more than they should. Secondly, taxpayers who are confused about their tax rights and obligations are more vulnerable to corruption and may therefore perceive the tax system as unfair. These issues are especially serious in low-income countries, where administrative capacity is weak and both access to and quality of tax information and advice is generally low.

While taxpayer education plays a potentially crucial role in tax compliance, rigorous evidence is almost inexistent (Mascagni and Santoro, 2017). We aim to fill a gap in the literature by evaluating the effectiveness of a taxpayer education programme, implemented by the Rwandan Revenue Authority (RRA), on taxpayer knowledge, perceptions and tax compliance. To the best of our knowledge, this is the first study of this type in any low-income country and only the second touching upon this theme in any country.[1]

Taxpayer education in Rwanda

As in most African countries, the RRA adopts a number of measures to educate and sensitise taxpayers to the importance of tax compliance, ranging from traditional training to annual events to appreciate taxpayer contributions to national development. The focus of this study is the main tax training programme that the RRA targets specifically at new taxpayers (i.e. recently registered). These trainings focus on basic elements of taxpaying and are designed to accompany new taxpayers in the first year of operation. The format is a half-day session taught by RRA staff and repeated throughout the year all around the country, in the capital and in tax centers in the provinces. These trainings are the main intervention we aim to evaluate. In addition, we also design and evaluate a personalised coaching programme, to be implemented a few weeks before the declaration deadline, in which RRA staff provide assistance to taxpayers via phone.

Data

This study uniquely combines three types of data. The first is survey data from a random group of 1,000 taxpayers invited to 3 different training sessions in August 2017, one in Kigali and two in rural areas. Survey data was collected one week before and one week after the trainings in order to measure any ex-post change in tax knowledge and perceptions. We also collected information on the characteristics of the business (e.g. use of email, books of accounts) and of the owners (e.g. age, gender). Second, we have attendance data for every training session in the country, so we know if each new taxpayer attended the training sessions. Third, we use anonymised tax returns to capture real taxpaying behavior. Merging survey and administrative data is a distinctive feature of this study and it allows us to overcome the most common drawbacks of both data sources: response bias in surveys and limited range of background variables available in tax returns.

Taxpayer knowledge and perceptions at baseline

Survey data provides a comprehensive picture of income taxpayers in the first year after registration. As expected, they are mostly small businesses. Over 90% have less than 5 employees and they are mostly rather unsophisticated: a large proportion do not use emails (75%), do not have a bank account (56%), or do not keep proper books of accounts (53%). Most interestingly, tax knowledge is very low before the training. On average,

[1] See Chetty and Saez (2013), who show no effect on reported income for an education programme in the United States.

taxpayers respond correctly to only a third of the 19 questions in our tax knowledge module. No respondent gave the right answer to all questions. Interestingly, 37% of the sample did not know what tax type they registered for. At the same time, perceptions are fairly positive. Virtually all taxpayers agree with the tax attitude statements we provide, for example on the government's authority to make people pay tax (95%), fairness of the tax system (98%), and tax as a social duty (98%). However, 30% find the tax system complex, reflecting the poor tax knowledge. Although we do not have baseline data on tax compliance since these are all new taxpayers, we know from our administrative dataset that declaration rates are very low in Rwanda, with about half of all new taxpayers failing to file in most years for which we have data available.

Does the training programme improve knowledge and perceptions?

Although attendance to the training could not be randomised, attendees and non-attendees are comparable before the training, in terms of individual characteristics (e.g. size, age, gender), baseline knowledge and perceptions. This encouraged us to use an OLS framework to capture impact. Nevertheless, we performed additional tests to provide more robust estimates (i.e. propensity score matching and an instrumental variable strategy). Results show that attendees significantly score 1.3 (out of 10) points more, when compared to non-attendees. This translates to a 40% increase over the baseline score. At the same time, perceptions do not change much, most likely due to the already high baseline level. Interestingly, the perception of complexity significantly improves, falling by 10%, in line with the increased tax knowledge.

What is the programme's impact on tax compliance?

Having detected large increases in knowledge, we investigated whether the programme also improved compliance. Given the multidimensionality of compliance, we explored three behavioral outcomes: the probability to declare (i.e. file a return), the probability to file a nil return, and the amount of tax declared. Our strongest result is that the programme significantly increased the probability to declare by 9.4%, which corresponds to a 27% increase compared to the control group. This effect remained significant and increased to 15% in our most robust estimation, the IV strategy – or a 43% increase compared to the control group. This finding is particularly relevant to the Rwandan context, as over half of all new registered taxpayers fail to file a return in the first year. The effect on other compliance outcomes is less robust to potential empirical threats. While the OLS estimations show a significant and relatively large impact on nil-filing and the tax amount, these effects are not robust to the IV estimation. This could be due to the insufficient sample size or the ambiguous effect that better knowledge can have on the amount of tax declared. Finally, the coaching treatment has no significant impact on compliance. Capacity constraints and low uptake (only 160 respondents have been coached) make it hard to find any meaningful result.

Conclusions and recommendations

Combined, our results show that tax trainings can have positive impacts on tax knowledge and compliance. In terms of policy, our study offers three important insights. First, the main goal of tax education programmes should not relate solely to immediate revenue gains. The finding that the programme increases the likelihood to file is important particularly in light of the low declaration rates observed in Rwanda amongst new taxpayers. From RRA returns data, we argue that if a taxpayer files in his first year he is 55% and 86% likely to file again in the second and third year, while those who fail to declare are 99% likely to fail to file in the following years. A one-time educational input can push taxpayers into the habit of declaring, which in turn builds a culture of compliance and may bring positive revenue gains down the line. Second, much more could be done to increase the reach of the training programme, which is currently limited. This might imply increasing capacity in the departments in charge of taxpayer services, which are typically understaffed. Third, we recommend continuing collecting attendance data in future trainings. With a simple fix in the registration procedure we were able to greatly improve the low-quality information on attendance previously available. This specific case illustrates the broader point that good data is an essential foundation to evidence-based policymaking.

Further reading

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Credits

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