The Role of Information Communication Technology to Enhance Property Tax Revenue in Kenya, Tanzania and Zambia

Summary of Working Paper 88 by William McCluskey, Riël Franzsen, Mundia Kabinga and Chabala Kasese

An administration problem

Public finance theory suggests that property tax is an ideal local tax. But it's also a 'data-hungry' tax, making it difficult and costly to administer properly—especially at the local government level where capacity, skills and resources are often lacking. Given its high data demands, property tax administration lends itself to the application of modern information and communication technology (ICT) systems. Over the last 40 to 50 years, however, studies have shown that weak administration is the core reason for poor revenue performance, particularly issues of data compilation and management, lack of transparency, poor billing and collection practices and weak enforcement.

The promise of ICT

Unsurprisingly, local governments have looked to ICT solutions to improve their property tax collection and other own source revenues (OSRs). ICT is seen as an important tool to support local governments in their efforts to more efficiently administer property taxes. As a result, developing countries are increasingly managing large volumes of data on taxable properties and taxpayers in an ICT environment. Effectively administered, these ICT systems can improve a range of services to taxpayers to make the process of paying and tracking taxes and fees simpler and faster, thereby reducing compliance costs.

City case study results

This study investigated OSR collections by four African cities in three countries: Arusha (Tanzania), Kiambu (Kenya), Kitwe and Ndola (Zambia). Specifically, researchers examined whether the introduction of ICT systems has resulted in improved collections.

Arusha implemented the Local Government Revenue Collection Information System (LGRCIS) in FY2013/14 to support revenue administration. The revenue data shows a clear correlation between use of the system and improved revenue collections. Total OSR collections increased by 227 per cent over the period FY2012/13 to FY2015/16. Property tax revenues over the same period increased by 262 per cent. Discussions with

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council staff suggested that the ICT system played a major role in revenue growth, as did improvements in data from a mass in-the-field data collection process that was part of the LGRCIS implementation.

On the other hand, findings from Kiambu County, which introduced CountyPro in FY2014/15 to support the administration of all local revenue sources, is somewhat mixed. Analysis of the county financial statements showed an increase of 7 per cent in property tax revenue in the first year, and an increase of 15.5 per cent in OSR in 2015/16. By FY2016/17, however, the county actually saw a decrease of 15.3 per cent in OSR collection; interviewees speculated that the decline was more to do with political interference and collection and enforcement issues rather than the ICT system itself.

The two cities administrations in Zambia, Kitwe City Council (KCC) and Ndola City Council (NCC), still use manual administration for property tax and other OSRs. In the case of KCC, financial statements for FY2014/15 showed a 7.7 percent decline in total OSR (from the previous year) and a further decline of 2.3 per cent FY2016/17. Data from NCC showed a similar trend. Interestingly, although KCC and NCC have yet to implement a modern, ICT-supported revenue administration system, their collections per capita is at least comparable to Arusha and Kiambu. In the case of Zambia, it is thus unclear if OSR collection would improve if administrative systems were modernized.

The results of this research demonstrate that the introduction of ICT has led to increased OSR collections in some cases. However, revenue authority staff identified the creation of digital databases as equally important as the new ICT systems themselves to improved revenue collection. Revenue staff noted that this new digital approach resulted in (1) a more professional approach within the revenue authority; (2) more efficient performance of official duties; (3) better-trained staff; (4) more reliable methods of payment (e.g. bank or mobile money transfers); and (5) more dependable, system-printed receipts.

Important takeaway messages

1. The transition from paper records, ledgers and receipt books to digitised electronic databases will take time. For example, Arusha invested considerable effort in the collection of in-the-field core data and the entering of information into the LGRCIS.

2. The location of ICT service providers matters. Relying on a foreign-based suppliers, for instance, has important implications for costs, the timeliness of upgrades, improvements to functionality and staff training. Whether systems are provided by private companies or national governments is also an important consideration.

3. Stand-alone ICT systems, whether commercial off-the-shelf (COTS) or developed in-house, that are not integrated with central government financial reporting systems can introduce significant problems for local revenue authorities.

Final thoughts

Ultimately, ICT systems are only tools to administer revenue sources and are not solutions in and of themselves. They can improve transparency in revenue collection, help identify problem areas in terms of arrears and provide the basis for more efficient budgeting. They cannot, however, directly improve enforcement, which is often a critical element missing in local revenue administration. Indirectly, ICT systems could help improve enforcement, as local administrations are more confident to act against delinquent taxpayers when equipped with higher quality data. However, these benefits are more difficult to quantify. In sum: good ICT systems, coupled with effective enforcement, can be the recipe for improved OSR collections—but the process takes time.