

Digitalization in Kenya

Revolutionizing Tax Design and Revenue Administration

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INTRODUCTION

The digital revolution has paved the way for profound changes in tax policy design and revenue administration. In several developing countries, digital technologies have transformed how payments are made, enabling financial inclusion through easy virtual access to bank accounts.

Kenya has been among the success stories, leading the way with a mobile-phone-based financial services platform, set in motion by the inception of the M-Pesa, a money-transfer system that gradually advanced into real-time retail payments and further into a virtual savings and credit supply platform. These innovations have led to a broad retail payment platform, which has made payments more efficient, transparent, and safe, facilitating financial inclusion regardless of income level. The broader platform has been useful for functions including e-commerce, tax payments, and revenue administration. Digitalization has also begun to change the way fiscal policy works, with the March 2017 launch of M-Akiba for micro-investment in government securities using the mobile-phone platform.¹

This chapter explores developments in Kenya—from M-Pesa to national retail payments, to the positive impact of digitalization on financial inclusion and the

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¹M-Akiba is a government-issued retail bond that investors can purchase using their mobile phones. It is aimed at small investors to build financial inclusion for economic development. The money raised from issuance will go toward infrastructural development projects. Traditionally, of course, investing and trading in government securities has been a major business for banks and brokerage firms. The idea that small savers could invest their savings in government securities with good returns underscores the success of digitalization in the country.

rollout of a range of products made possible by the M-Pesa payments platform. The chapter further shows that M-Pesa and pressure for institutional reform were the catalysts for innovation that revolutionized tax designs and revenue administration. The acceleration of digitalization after the introduction of M-Pesa has pushed reforms in different directions, but the data are too limited to disentangle the effects of institutional reforms in the KRA (Kenya Revenue Authority) from the nationwide success in digitalization.

The next section discusses the preconditions for the reform of tax design and revenue administration in Kenya, how digitalization has progressed, the role of government, and reforms of the KRA. The chapter then reviews the impact of the reforms and the iTax system, the KRA M-Service, and the outcomes of digitalization at the KRA.

The chapter posits that tax design and revenue administration cannot work efficiently without an effective payments system. In some years in Kenya, the national payments system was thought to be adequate, but mobile-phone-based retail payments have provided important lessons and pointed the way forward. In countries like Kenya, the starting point for financial inclusion is the existence of a financial transactions platform that, in addition to payments, improves and broadens the availability of savings and investment. This is the innovation that M-Pesa has provided.

PRECONDITIONS FOR TAX DESIGN AND REVENUE ADMINISTRATION REFORMS

Technological advances and innovations have vast potential to transform fiscal formulation and implementation, but several preconditions exist before reforms to tax design and revenue administration can take place.

How Digitalization Progressed in Kenya

The year 2017 marks a decade of rapid development in Kenya's financial sector, driven by the desire for financial inclusion and, as noted, spearheaded by M-Pesa (from the words for "mobile money").

M-Pesa was launched in March 2007 as a bank product in partnership with Safaricom, a telecommunication company, and the Commercial Bank of Africa, a commercial bank in Kenya. M-Pesa enabled users to store value on their mobile phone or mobile account as electronic currency for multiple uses, including transfers to other users, payments for goods and services, and conversion to and from cash.

The structure of M-Pesa was based on a person-to-person money transfer system by Safaricom that enabled millions of Kenyans to use the M-Pesa platform to make payments and send remittances. Safaricom supervised and regulated its network of agents, who formed the point-of-service countrywide, and another class of agents, the aggregators, who ensured efficient, effective, and transparent liquidity distribution across the country.

Box 10.1. M-Pesa and the Digital Financial System

M-Pesa developed in four stages, shaping financial market developments in Kenya and what is now referred to as the Digital Financial System:

- **First stage:** using the M-Pesa technological platform for transfers, payments, and settlement. This led to an expansion of the platform for more person-to-person transfers, payments, and settlements, as well as participants in the transaction platform.
- **Second stage:** introduction of virtual savings accounts using the M-Pesa platform, complemented by virtual banking services. That is, the phone could be used to deposit or withdraw from personal savings accounts. Subsequently, virtual banking services enabled costless transfer of money from M-Pesa to a savings account. A technological platform to manage micro-savings accounts was therefore now in place and developing for small savers with low and irregular income who were previously excluded.
- **Third stage:** a natural progression of supply and disbursement of short-term credit through the M-Pesa technological platform. Banks and telecommunication companies invested in a more versatile platform that used the transactions and savings data to generate credit scores to evaluate savers and to price short-term credit at an individual level, changing the costly collateral technology that had inhibited development of the credit market in most African economies. As of June 2016, this platform had 15.2 million accounts and Kenyans ages 18–34 were the main drivers.
- **Fourth stage:** expansion of the technological platform to enable cross-border and international remittances. The immediate impact of this development has been the transformation of the informal *Hawala* money transfer system into a network of formal money remittances companies as well as standalone payments units.

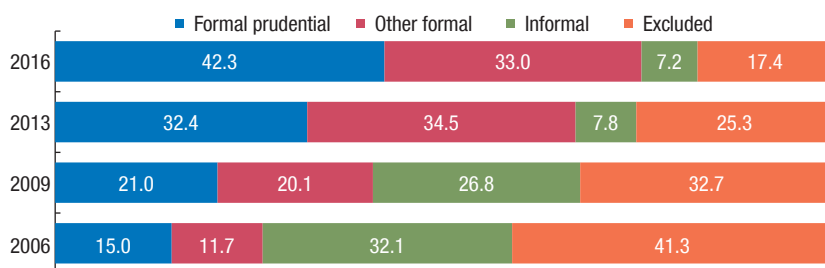
Funds were held in a trust account with the Commercial Bank of Africa that formed the transaction platform. Safaricom issued electronic money in exchange for cash at par value, and this was stored in the SIM card for the customer and simultaneously loaded into the trust account at the Commercial Bank of Africa. The trust account was under the custody of trustees, its funds separated from Safaricom business account funds, meaning that Safaricom could not access them.

Trust accounts became the payments system platform in commercial banks, separating regulatory issues for banks from those of telecommunication companies. This gave the market confidence that cash and transactions were secure.

The M-Pesa platform quickly developed into a platform for payments of goods and services and subsequently to mobile-banking functions. Box 10.1 explains the evolution and its support for financial inclusion and retail payments.

Commercial and microfinance banks in Kenya have leveraged the Digital Financial System platform to manage micro-accounts, build up deposits, and extend financial services to the previously unbanked and underserved. The innovative financial products and services they have provided have broadened financial inclusion (Figure 10.1).

As the figure shows, the adult population served by formal financial service providers increased to 75.3 percent in 2016 from 66.9 percent in 2013,

Figure 10.1. Kenya's Financial Inclusion Profile: 2000–16

Source: Various FinAccess surveys.

30.5 percent in 2009, and 27.4 percent in 2006. Informal financial channels were serving only 7.2 percent of the adult population in 2016, from 35.2 percent in 2006. And the financially excluded population, though still high, declined to 17.4 percent of the adult population in 2016, from 41.3 percent in 2006.

Moreover, information and data from the Central Bank of Kenya show that commercial banks' branch outlets increased from 534 in 2005 to 1,443 in 2015; deposit accounts increased from 2.55 million in 2005 to nearly 34 million in 2016, with more than 90 percent of them micro-accounts. Since 2009, when Safaricom launched its pay-bill service on the M-Pesa platform, Safaricom has partnered with 25 banks and more than 700 businesses to facilitate fund deposits, bank transfers, and the regular payment of utility bills, insurance premiums, and loan installments.

Financial access touch points in Kenya have also continued to expand, with more bank branches, ATMs, telecommunication agents, and an agency network for banks. According to FSD (2013), about 76.7 percent of Kenyans are within five kilometers of financial access points, compared with 35.1 percent of Tanzanians, 42.7 percent of Ugandans, and 47.3 percent of Nigerians.

THE ROLE OF GOVERNMENT

The digital economy requires a strong analog foundation consisting of regulations that create a vibrant environment for economic agents to leverage digital technologies (World Bank 2016). The rapid digital revolution in Kenya's financial sector was supported by the "test-and-learn" approach adopted by the Central Bank of Kenya and the Communications Authority of Kenya, the telecommunications regulator. The approach combined a supportive policy environment with a sound regulatory and supervisory framework that allowed innovators and entrepreneurs to introduce financial innovations and to

Box 10.2. Role of Government

- The Central Bank of Kenya and the Communications Authority of Kenya worked together. This collaboration was necessary because the Digital Financial System involved commercial banks as a transactions platform and telecommunications companies as transmitters of transactions to this platform.
- This system required a national payments and settlement legal framework and guidelines for the market. But parliament had not passed such legislation. To overcome the legal vacuum, the Central Bank of Kenya invoked the Trust Law that required development of the payment platform as a trust account owned by trustees and provided guidelines on how it would be operated.
- The Central Bank of Kenya ensured that regulations were in place so that the M-Pesa platform remained a low-risk money transfer system, and hence improved the regime for anti-money laundering and countering the financing of terrorism. The data trails from M-Pesa transactions make it easier to detect fraud. These trails also help tax authorities to ensure tax compliance.
- The Central Bank of Kenya maintained a ceiling on transactions and on how much money could be stored on the SIM card and provided guidelines on a tiered, know-your-customer framework for account holders, for both M-Pesa and savings products. These thresholds included limiting the size (value) of mobile transactions, set at 35,000 Kenyan shillings (KSh) (then about \$500) per transaction at any one time and maximum limit of KSh 50,000 that a SIM card could hold (about \$700) at any one time. These thresholds were later revised to KSh 70,000 per transaction and a maximum of KSh 14,000 transactions per day and can hold a maximum of KSh 100,000 on the SIM card.

diversify products (Ndung'u 2017). Box 10.2 summarizes the government's role during the digital revolution.

KRA Revenue Administration Reforms

To improve domestic resource mobilization, the KRA has implemented initiatives and reforms to modernize Kenya's tax system. Before 2003, the KRA achieved little in digitalizing tax administration, lacking as it did the appropriate developments in the national payments system. After 2003, the KRA laid the groundwork for the current momentum of digitalization and reforms in tax design and revenue administration launched under the Revenue Administration Reforms and Modernization Program.

The reform strategy was based on six components: customs reform and modernization, domestic taxes reform and modernization, road transport reform and modernization, business automation, human resources revitalization, and infrastructure development (KRA 2010). Box 10.3 describes the main digitalization initiatives that preceded the iTax system and KRA M-Service.

The reforms described in this section, made possible by the technological revolution, were the prerequisites for development and adoption of the iTax system and the KRA M-Service. The financial sector has become more inclusive,

Box 10.3. Pre-iTax KRA Reform Agenda

- The Kenya Revenue Authority (KRA) implemented the Withholding VAT Agency System in October 2003. It was introduced in order to capture credit, zero credit, and non-filers and reduce uncollected debts. In July 2005, the Electronic Tax Register system was introduced to enforce record keeping for business transactions.
- The Simba system (System of Information Management and Banking) was introduced in 2005, enabling automation of about 90 percent of the customs operations by introducing online lodging of manifests and entries, electronic processing, automated reports and reconciliations, electronic presentation of customs entries, automated calculation of duties and taxes, and internal accounting (KRA 2010).
- The Simba system also enabled an interface with the Vehicle Management System, which allowed the seamless flow of motor vehicle details into the system to facilitate clearance, registration, and duty payments.
- The KRA introduced electronic banking to expedite payment of duties and taxes through a secure electronic process. The authority developed the Common Cash Receipting System for direct revenue collection through commercial banks, which was interfaced with relevant KRA business systems (Simba, Integrated Tax Management System, and Vehicle Management System). The Common Cash Receipting System allowed a single view of the taxpayer, reduced human intervention in the payments process, improved reconciliations, matched payment and bank reports online, and enabled real-time monitoring of revenue collection (KRA 2010).
- In September 2007, the authority began implementation of the Integrated Tax Management System, rolled out in December 2008. Through it, registration and issuance of personal tax identification numbers was automated. Additionally, the system allowed taxpayers to electronically file their tax returns for value-added tax and PAYE (Pay As You Earn), which was later upgraded to cover electronic filing of corporate tax, stamp duty, and turnover tax, which became mandatory in October 2015.
- The KRA improved the Integrated Tax Management System in 2010 through development and implementation of an additional 11 modules, which form the current iTax system.

banks have integrated the Digital Financial System as an efficient platform to manage micro-savings accounts, and a retail payments system has emerged that does not require a bank account.

A retail payment system has emerged that has allowed formal transactions, and Kenyans have opened virtual savings accounts in banks, raising the national financial inclusion profile. Moving to a digital payments system (away from cash and check payments) is a major boost to financial inclusion, and effective, efficient, transparent, and safe payments and settlements set the stage for other innovations, including improvement in fiscal policy, tax design, and revenue administration. These developments have given market participants and government agencies leeway to develop products and payment lines such as targeted social protection for the aged and the physically challenged, tax payment, and payment of government licenses and fees.

DIGITALIZING TAX ADMINISTRATION

The iTax System

The technological revolution taking place across the world has changed how tax authorities and taxpayers relate. It has allowed authorities to obtain and cross-reference critical taxpayer information in real time or near real time. Prior to 2013, the KRA mainly relied on the Integrated Tax Management System for domestic tax administration. But with further developments in that system and the launch of iTax, the profile of taxation and tax payments has changed. This section describes the iTax system and KRA M-Service and how they have revolutionized tax design and payment, and revenue administration in Kenya through digitalization.

The iTax is a user-friendly, web-enabled, secure application that provides fully integrated and automated administration of all domestic taxes. It allows the taxpayer to register, file, pay, and inquire about status online with real-time monitoring of accounts. The system confirms successful registration, electronic filing, and actual tax payment. It also enables online back-office processing of all Domestic Tax Department transactions. Access is restricted based on the different tax categories. Figure 10.2 outlines the 18 modules of the system.

The iTax system registers taxpayers based on a unique personal identification number (PIN) acquired through the system. Once registered, a taxpayer account is created that forms the core of the iTax system through its comprehensive information about all taxpayer activities. The commercial banks have integrated with iTax (the KRA Payment Gateway), allowing taxpayers to make payments conveniently through online banking, cash, check, or real-time gross settlement. The system allows real-time access and update of ledgers upon payment registration and submission by partner banks.

Currently, tax payments to all government agencies, ministries, and county governments are made through the central bank's "G-Pay" platform. Integration of iTax with the Central Bank of Kenya and Integrated Financial Management Information System is in the process of ensuring that the system captures tax payments to all levels of government. The Integrated Financial Management Information System is already integrated with the central bank's G-Pay system, which remits the money directly from the respective ministries, state agencies, and county government accounts.

The iTax system has also enabled several online services through the portal,² and provides tools for processing tax returns and tax amendments for all domestic taxes. It also generates estimated assessments, which applies for several taxes.

²These include PIN application and checker, withholding tax certificate checker, tax compliance certificate application, tax compliance certificate checker, generation of e-slip, electronic filing and amending returns, viewing of tax returns filed, viewing of taxpayer account/ledger, e-query, application for refund, transfer of tax credits, application for payment plan, application for waivers and write-offs, and tax agents verification/services.

Figure 10.2. iTax System Modules

Source: Author's presentation of the iTax modules.

The system has enabled the KRA to easily generate weekly, monthly, quarterly, or yearly revenue and audit reports. The system prepares notices to taxpayers and records the time needed for the audit, as well as the audit results. This system has also enabled authorities to easily reconcile payments with assessment debits, identify defaulters, issue reminder letters and demand notices, compute fines and interest for late and nonpayment, and propose additional enforcement.

iTax restricts accessibility of certain modules only to specific users who have permission to view or edit different data to system security and the confidentiality of taxpayers' information. Additionally, its central management module enables incorporation of legal tax changes and amendments into the system without having to change the program code. The iTax system is secure and can be customized to cover all taxes and fees for national and local governments.

Seelmann and others (2010) show that iTax has enabled various tax authorities to move from the traditional tax administration systems based on a specific type of tax—which led to many different systems for different taxes, resulting in data duplication and inconsistency—to an integrated, “future-proof” system in which new technological developments can easily be incorporated to offer new functionalities and to integrate new tax categories.

KRA M-Service Platform

In October 2014, the KRA launched the KRA M-Service platform, a mobile phone application that facilitates tax payment and taxpayers' access to tax information.

It has two service components: informational services, and mobile payment of all taxes and e-slip generation for traffic revenue fees. The informational service enables taxpayers to access specific information from the KRA by text message. The mobile payment of all taxes and e-slip generation component conveniently allows taxpayers to make quick, simple payments of up to 140,000 Kenyan shillings (KSh) (currently about \$1,373) per day through their mobile phones. The service is available on Safaricom M-Pesa and Airtel Money platforms. The payments made are cleared, processed, and credited to the KRA account in real time, and the taxpayer retains the payment confirmation SMS from the mobile financial services provider as proof of payment to the KRA. At the individual level, once a tax assessment or fees are determined, it becomes easier to move back to the M-Pesa platform to effect payments and receive responses from the iTax system.

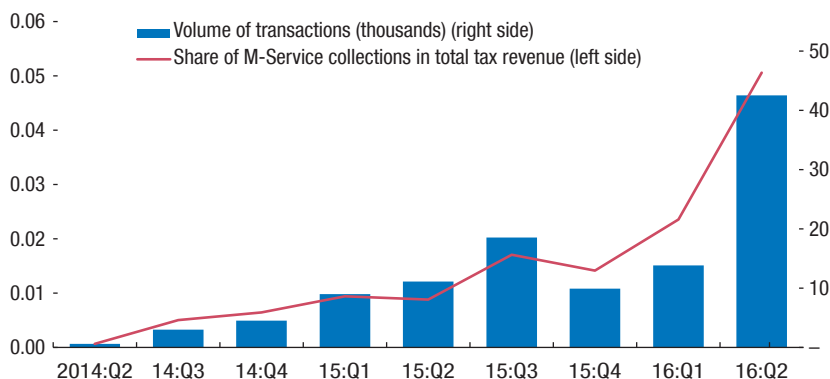
The M-Service platform has encouraged institutional reforms at the KRA that go hand in hand with the institutional capacity.

THE IMPACT OF DIGITALIZATION AND THE KRA REFORMS

The chapter has already shown that digitalization has supported tax design and revenue collection. In assessing the impact, the chapter relies on trend analysis of various tax revenue streams as well as total tax effort over time.

The results realized so far seem to suggest huge potential in digitalization for tax payments and revenue administration. Figure 10.3 shows the trend in volume of transactions and the proportion of total tax payments made through the KRA M-Service platform between launch on 2014 and 2016.

The first two quarters in the figure were basically the test period. The information available shows that when the system was launched in October 2014, only 1,411 tax payment transactions were made through the mobile phone financial services in a month with a value of KSh 5.23 million (about \$51,274.50). Transactions since increased to over 40,000 by October 2016, with a value of KSh 71.4 million (about \$700,000.00). The figure also shows that the proportion of tax revenue remitted through the KRA M-Service platform has increased since the

Figure 10.3. Tax Remittance through KRA M-Service

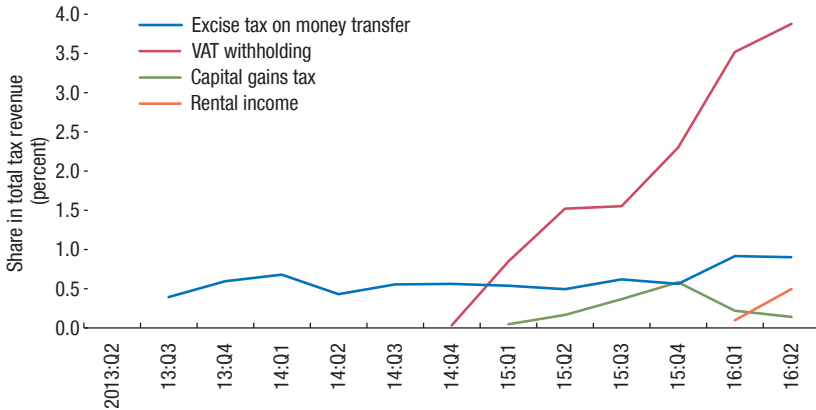
Source: Author's analysis of Kenya Revenue Authority (KRA) data.

second quarter of 2015, reflecting taxpayers' growing confidence in using the platform for tax payments.

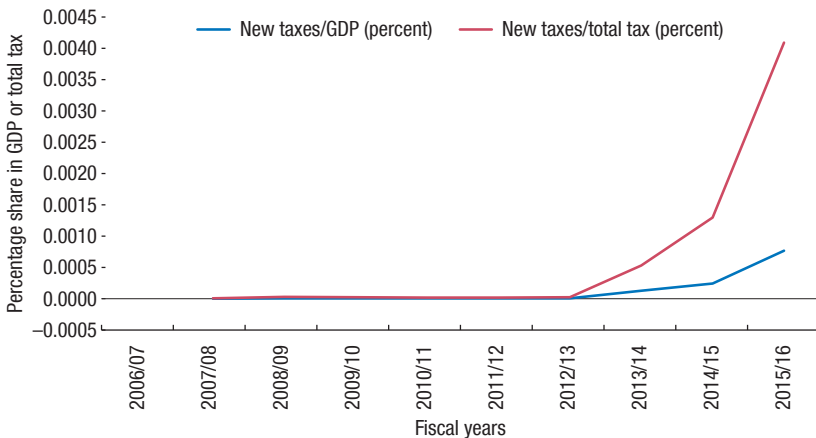
Impact on Tax Design

The digital platform has affected the design of new taxes and improved overall tax collection, but it would be difficult to disentangle other positive factors. Evidently, the tax base for the KRA has expanded, as confirmed by the introduction of new tax categories, such as excise tax on money transfers. This tax was introduced in the third quarter of 2013 and has more than tripled in the three years since its introduction, moving from KSh 896 million (\$8.78 million) in the third quarter of 2013 to KSh 3,187 million (\$31.25 million) in the second quarter of 2016. This steady revenue growth has not been witnessed in other new tax categories introduced at the same time, except withholding value-added tax (VAT). Figure 10.4 shows the quarterly trend in contribution of the new tax categories to total tax revenue.

Put together, the performance trend of the new tax categories (Figure 10.5)—turnover tax from fiscal year (FY) 2007/08, excise tax on money transfers from FY2013/14, withholding VAT from FY2014/15, capital gains tax from FY2014/15, and rental income from FY2015/16—show that the aggregate tax effort (tax-revenue-to-GDP ratio) has increased since FY2012/13. The increase in the tax effort and the percentage share in total tax revenue for the new tax categories from FY2012/13 seems to have been in part because of the introduction of the iTax system in 2013.

Figure 10.4. Contribution of New Tax Categories to Total Tax Revenue

Source: Author's analysis of KRA data.

Figure 10.5. Annual Performance of New Tax Categories

Source: Author's analysis of KRA data.

Impact on the informal sector

Like any other developing country, the informal sector plays a major role in the Kenyan economy. The sector consists of small-scale traders generally operating at subsistence with few employees (World Bank 2006). Their myriad activities include selling or hawking food and clothes, running food stalls and small kiosks, and selling home supplies and fuels. They engage in small manufacturing, production, construction, or repair of goods (World Bank 2006).

The informal sector also has high revenue-generation potential. But informality remains a challenge to domestic resource mobilization in Kenya given the large number of unregistered taxpayers and unreported transactions and incomes associated with it. The Kenya National Bureau of Statistics estimated in 1993 that 910,000 small and medium enterprises (SMEs) operated, employing up to 2 million people, according to a baseline survey in that year. This had expanded dramatically by 2015, with the *Economic Survey 2016* showing that the informal economy employed an estimated 12.5 million people in the year, or 82.8 percent of the workforce (KNBS 2016a).

The statistics bureau's 2016 Micro, Small and Medium Enterprises (MSME) Survey showed that the sector in Kenya had evolved into a highly vibrant and dynamic one. The survey revealed that about 1.56 million licensed MSMEs and 5.85 million unlicensed businesses employed about 14.9 million people. Monthly expenditure on salaries and wages for licensed businesses was reported at KSh 64.1 billion (about \$628.40 million), and unlicensed MSMEs spent KSh 9.0 billion (\$88.24 million) (KNBS 2016b), a significant portion of untapped income tax revenue.

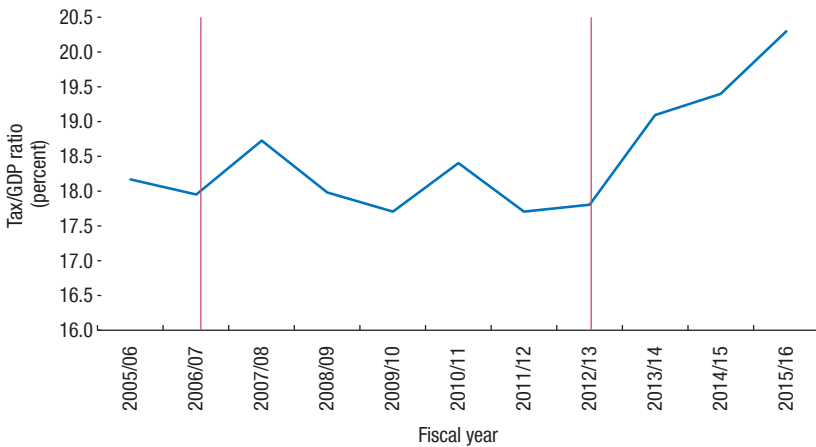
Part of the solution to the challenges in taxing informal businesses lies in ensuring that businesses formalize and grow from micro to small, and small to macro, enterprises. But such progression has not evidently occurred. However, even though this progression is deterred by structural as well as institutional constraints, digitalization allows such businesses to participate in formal financial transactions and to pay their requisite taxes electronically—with time, these formal transactions will translate to formalization of the businesses themselves.

Indeed, it can be shown that, over time, the number of taxpayers has increased, but to assess the impact of M-Pesa on informality would require survey data. Nonetheless, the available literature shows that the banking industry, through the Digital Financial System, is playing an important role in helping SMEs to formalize and grow.

The Digital Financial System platform has made it easier and more convenient for small taxpayers, mainly in the informal sector, to meet their tax obligations. Small taxpayers with no platform of payment had to physically visit KRA offices to make small transactions, a costly bureaucratic process that took time away from business. Booming digital financial services (particularly online and mobile banking), however, allow informal sector business owners to conveniently make small transactions at their marketplaces. GrowthCap and FSD Kenya (2016) show that, on top of the financial services mainly offered through the Digital Financial System, most banks also offer relationship management and business advice (face-to-face and online) to SME clients to help them to formalize and grow their businesses.

Formal and informal businesses have embraced mobile-phone-based solutions in their operations, influencing the design of taxes at the KRA. The businesses use phones to contact customers and suppliers, make money transfers, apply for microcredit, access micro-savings, and make tax payments. They also pay levies and charges to the various county governments, some of which have embraced

Figure 10.6. Kenya's Tax Effort, Tax to GDP
(Percent)



Source: Author's analysis of KRA data.

receipt of such payments through the Digital Financial System. These mobile phone transactions leave data trails, opening a window onto a large segment of the informal economy.

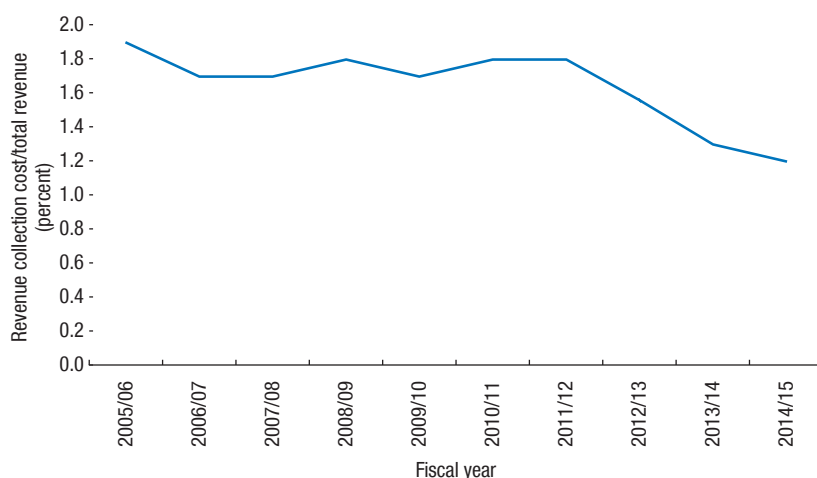
Impact on tax administration

Figure 10.6 shows tax trends. The line at FY2006/07 demarcates when M-Pesa was introduced, setting the pace for digitalization and financial inclusion. It is the same period as when the KRA started to implement the Integrated Tax Management System for domestic tax administration. The second line at FY2012/13 shows when the KRA rolled out the iTax system. The figure shows that Kenya's tax-to-GDP ratio had averaged 18.1 percent from the FY2005/06 to FY2012/13 before the iTax introduction in September 2013. Over the same period, GDP growth (at constant prices) averaged 5.13 percent.

The expanded tax base, institutional reforms, and the ease of tax payment supported by the digital platform enabled the KRA to boost tax collection from KSh 695.9 billion (about \$6.82 billion) in FY2011/12 to KSh 911.8 billion (about \$8.94 billion) in 2013/14. In FY2014/15, it passed the trillion mark for the first time, hitting KSh 1.02 trillion (about \$10 billion).

Tax-to-GDP improved from 19.1 percent in FY2013/14 to about 20.3 percent in FY2015/16, and GDP growth (at constant prices) averaged 5.66 percent. It may also be that this trend is consistent with economic growth, but we show that there is no significant shift in GDP growth in the demarcated periods during 2007–13, with GDP growth averaging 5.02 percent a year and 5.66 percent in 2014–16.

Figure 10.7. Cost of Revenue Collection Including Capital Expenditure (Percent)



Source: Author's analysis of KRA data.

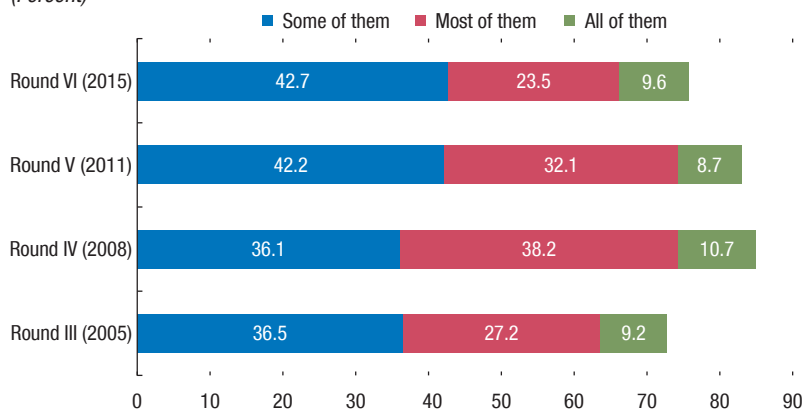
By 2018, the KRA aims to reduce its cost of revenue collection to less than 1 percent of total revenue collected, a target it intends to achieve by automating all its processes and taking advantage of the Digital Financial System to reduce operational and compliance costs for taxpayers.

The trend in Figure 10.7 shows that the cost of revenue collection has been declining since 2011. The reduction may reflect improved efficiency in the tax system through KRA digitalization reforms, which have aided simplification of tax processes, making it easier for taxpayers to comply and reducing opportunities for fraud and tax evasions. This has also improved accuracy of taxpayer accounting data, reduced the time taken by taxpayers when dealing with the KRA, and enhanced speed and accuracy of the KRA to extract data and information on revenue. This has improved the confidentiality of taxpayer information and enhanced taxpayer acceptance.

Specifically, the iTax system is cost-effective because it can handle many taxpayers and has enabled the KRA to reduce workload and operational costs such as for processing, storing, and handling tax returns. The system has helped speed up tax assessment and service delivery and made tax administration more efficient. Currently, taxpayers with internet access can easily file returns anywhere and anytime.

Moreover, the digitalization of tax design and tax collection has reduced taxpayer–tax officer interactions, minimizing opportunities for tax fraud (collusion and tax evasion). Before digitalization, the KRA relied heavily on tax agents. With digitalization, rogue agents who were previously defrauding taxpayers and the KRA have been eliminated, and it is now easier to certify

Figure 10.8. Perceived Corruption of Tax Officials
(Percent)



Source: Author's analysis of Kenya's Afrobarometer survey data.

online that a tax agent is registered by the KRA. Taxpayers who have internet are now able to monitor their accounts in real time and remotely.

The digital platform and implementation of the KRA integrity program have enabled the KRA to increase transparency in its operations and reduce opportunities for corruption within the tax system. Figure 10.8 shows the past four rounds of survey results on public perception of corruption, from Afrobarometer. The research network has surveyed 37 countries in Africa on various aspects of democracy and governance.

Each of the surveys covers a sample size of about 2,400 respondents. The results look at how many tax officials (KRA officials or local government tax collectors) Kenyan citizens perceive to be corrupt. Interesting to note is that, since 2008, the number perceived as such has generally gone down. The Afrobarometer survey results show that respondents who feel that at least some tax officials are corrupt has declined from 85 percent in 2008 to 75.8 percent in 2015.

More specifically, those who felt that most tax officials were corrupt declined from 38.2 percent in 2008 to 23.5 percent in 2015, and those who felt that all tax officials were corrupt declined from 10.7 percent to 9.6 percent. Although these responses capture only the *perceived* number of corrupt KRA officials and local government tax collectors, they clearly indicate that the digitalization of KRA processes and the use of available payments systems for tax revenue collection have significantly reduced opportunities for personal interaction with tax officials and hence incidences of fraud and evasion.

LESSONS FROM THE KENYAN CASE

This chapter has made clear that digitalization has supported the design of potentially more efficient and effective tax categories and revenue administration. The iTax system and the KRA M-Service have enabled a single view of the taxpayer's records, improved reconciliations, matched payment and bank reports online, allowed real-time monitoring of revenue collection, introduced system checks and audit trails, and minimized interaction between taxpayers and tax officers, reducing breaches in integrity in the organization.

Digitalization has given the KRA an opportunity to strengthen and revamp its tax enforcement mechanisms through third-party sharing of information. Currently, the iTax system is already integrated with the Integrated Financial Management Information System and Central Bank of Kenya and plans are under way to integrate with other systems such as the National Social Security Fund, National Health Insurance Fund, and the eCitizen digital platform. This integration will facilitate identification of potential tax defaulters, unregistered businesses, and individuals, and increase active taxpayers and tax compliance.

The Digital Financial System as a nationwide transactions platform has made it easier and convenient for taxpayers to meet their tax obligations wherever they are, improving tax receipts. Taxpayers do not have to visit KRA offices to pay taxes or visit their banks to effect payments. The Digital Financial System also presents a platform the tax authority can use to pay tax refunds promptly and directly into taxpayers' bank accounts or through their mobile phones. This module is yet to be implemented in iTax. This is an opportunity for using the Digital Financial System to shorten the time for refunds to reduce complaints and dissatisfaction with handling of tax refund claims and the reduction in tax revenue distortions associated with tax refunds.

Most developing countries have narrow tax bases owing to many factors, but one clear reason is their large informal markets. In this area, the Digital Financial System is expected to play a major role in helping to formalize informal enterprises and to expand countries' tax bases. Formalization here does not automatically mean that these informal businesses will be registered. But bringing transactions onto the formal platform will allow the government to design incentives to formalize all aspects of such informal businesses. As banks bring SMEs and MSMEs on board through the Digital Financial System platform, most of them are expected to formalize and grow into stable formal enterprises that will grow and become potential taxpayers.

Institutional reforms at the KRA have strengthened its capacity to mobilize domestic resources in the country. Also, corruption, an institutional failure, has been checked through the digitalization of KRA processes, reducing taxpayer–tax official contacts, which many viewed as opportunities for fraud. The decline in perceived corruption by Kenyan tax officials since 2008 confirms this. In addition, revenue administration through the Integrated Financial Management Information System, supported by Central Banks' G-Pay system, has enabled

efficient revenue administration in central and county governments and efficient payments to suppliers and the tendering process.

However, as recognized in the 2016/17 Budget Policy Statement, the Digital Financial System also poses a fiscal risk to the country. The risk is linked to the volume of transactions and the number of taxpayers employed in the system, the thousands of businesses supported by the system, and the tax revenue that consequently accrues to the government. This implies that it is an important source of tax revenue and so the risk of failure will have a significant effect on overall fiscal revenue or the fiscal position of the country.

Generally, the Digital Financial System has changed the game through the opportunities it has generated for greater savings and investment for the previously unbanked, through settlement of payments, including tax payments, and government payments through targeted social protection. Studies so far (Suri and Jack 2016) show that the Digital Financial System driven by M-Pesa has lifted 2 percent of the population out of poverty. The government has slowly moved from cash payments to embrace digitalization, which has made a great difference in revenue administration in Kenya. Moreover, there remains great potential for Kenya to fully automate tax administration and allow integration with other third-party systems.

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