

TANZANIA

CASE STUDY

Person-to-Government
payments: Lessons from
Tanzania's digitization efforts



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TANZANIA

Case Study

This case study explores the factors both supporting and impeding the widespread adoption of Person-to-Government (P2G) and Business-to-Government (B2G) payments in Tanzania, focusing on the period from 2012 to 2016. It also extrapolates from these findings to show that digitization of payments could increase Tanzania's annual tax revenue by at least \$477million per annum, which would help push up the country's tax/GDP ratio, currently at 12%. The policy initiatives taken by Tanzania's Central Bank and actions taken by Tanzanian government agencies and the private sector have provided valuable lessons from which policymakers and businesses in other countries can learn as they go about digitizing P2G and B2G payments.

TABLE OF CONTENTS

1. EXECUTIVE
SUMMARY
/4

2. DEFINITION AND
FRAMEWORK FOR
DIGITAL P2G AND
B2G PAYMENTS
/10

3. TANZANIA: THE RIGHT
FOUNDATIONS FOR P2G
AND B2G PAYMENTS
/15

4. DIGITAL P2G AND B2G
INITIATIVES ARE ALREADY
HAVING A MAJOR IMPACT
/28

5. P2G AND B2G PAYMENTS
IN TANZANIA: FROM
PRESENT TO FUTURE
/39

6. KEY LESSONS AND
NEW OPPORTUNITIES
/49

ANNEXES

ACRONYMS /54

P2G REGIONAL LANDSCAPE /56

INTERVIEWEES /61

METHODOLOGY /62

STUDY HYPOTHESES /63

1. EXECUTIVE SUMMARY

This case study explores the factors both supporting and impeding the widespread adoption of Person-to-Government (P2G) and Business-to-Government (B2G) payments in Tanzania, focusing on the period from 2012 to 2016. It also extrapolates from these findings to show that digitization of payments could increase Tanzania's annual tax revenue by at least \$477million per annum,¹ which would help push up the country's tax/GDP ratio, currently at 12%. The policy initiatives taken by Tanzania's Central Bank and actions taken by Tanzanian government agencies and the private sector have provided valuable lessons from which policymakers and businesses in other countries can learn as they go about digitizing P2G and B2G payments.

The lessons from this case study are intended to serve as a starting point for more detailed diagnostic research into specific payment issues to inform future policymaking in Tanzania. Substantial savings could be achieved by digitizing bulk disbursements such as Government-to-Person (G2P) payments (e.g., wages for government employees, social support transfers, and pensions), particularly by reducing "leakage" through inaccurate or fraudulent payments. Further digitizing payments could also deliver a major boost to Tanzania's efforts to modernize its economy, and create a dynamic and productive business environment, driving new investment and economic growth.

This executive summary provides highlights of both the direct benefits of digitization and the lessons from Tanzania.

Direct benefits of digitization: the evidence of increased revenues, reduction in leakages and efficiency gains

1. Digitizing P2G and B2G payments can significantly cut transaction costs and increase efficiencies. However, an overarching digital payments strategy, along with connectivity and interoperability between payment instruments and across payment systems, is crucial to maximizing these gains.

- Annual motor vehicle license fee payments account for less than 2% of the Tanzanian Revenue Authority's (TRA) domestic taxes, but traditionally have posed a very substantial administrative burden. Digitization of these taxes is delivering significant efficiency gains in tax collection, with nearly **42% of motor vehicle taxes being collected via mobile money** within three weeks of the launch of the digital payment option in 2013.²
- Digitization of customs clearance and duties resulted in major efficiency gains – reducing the country's import clearance times from **nine days to less than a day**.³ Specifically, the development of the Tanzania Customs Integrated System (TANCIS), launched in 2014, was part of a targeted program by the TRA to modernize the country's customs processing and payment systems, driving efficiency and reducing transaction costs in order to attract more international trade activity in Tanzania. The TANCIS system, coupled with the digitization of import and export clearance payments, aims to reduce the US\$ 1.8 billion annual cost to Tanzania's GDP⁴ (2013 estimates).

In Tanzania, separate government agencies have developed digital payment acceptance solutions in isolation. These solutions reflect their specific needs, often partly driven by the payment capabilities of private sector entities. While these developments are encouraging, the lack of interconnectivity between a range of closed loop and open loop payment instruments raises questions about the implications for formalization and financial inclusion. An overarching strategy for P2G and B2G payments is needed to support interconnectedness between payment instruments and provide an opportunity for the private sector, particularly industry telecom and banking associations, and government entities, to work together on collaborative solutions.

2. Shifting to digital P2G and B2G payments in cash-heavy industries like tourism can reduce leakage by up to 40%.

In Tanzania's tourism sector – which produces around 13%⁵ of Tanzania's GDP – government entities reported large increases in revenues which they attribute to reduced leakage when moving from cash-based systems to digital systems for payments like conservation park entrance fees paid by tourists and tourism operators. Tanzania's payment digitization efforts in the tourism sector serve as a valuable example to countries where tourism is a major revenue stream and a major source of foreign exchange.

For example, the Ngorongoro Conservation Area Authority (NCAA) switched to smart cards (prepaid store value cards) and credit cards, and banned cash payments for park entrance fees in 2011.⁶ Two years after going cashless, NCAA reported an impressive 40% jump in revenue for the same volume of tourists. Park gate fee revenues went from averaging around TZS 37 billion (US\$ 16 million) to TZS 52 billion (US\$ 23 million).⁷

Lessons from Tanzania: Enabling factors that boost trust and adoption of digital payments.

3. New digital payment instruments and payment options are acting as a gateway to financial inclusion.

New payment instruments, like the closed loop prepaid card for hospital payments introduced by the Cooperative Rural Development Bank (CRDB), are not only bringing in efficiency gains but also introducing people to the concept of digital payments. While closed loop payments serve a limited purpose, they act as an on-ramp to financial inclusion by increasing customer adoption of and trust in digital payments.

4. Seamless digital payments require a robust backend for a better integration and user experience.

A technology backend – that is, technology and functions that process P2G and B2G payments – plays a crucial role in the efficiency and accuracy of digital payments, in turn impacting on public trust in digital payments. A critical first step is ensuring backend technology is capable not only of accepting payments from multiple payment instruments, but also of real-time validation, acknowledgment and periodic reconciliation. Attributes like instant acknowledgment of payments go a long way in building confidence among new users of digital payments instruments.

5. Both the public and private sectors should consider taking proactive steps to increase public awareness of digital payments options.

Interviews of businesses and individuals conducted for this study highlighted a substantial lack of awareness around the various payment digitization efforts undertaken by the government. For example, most micro and small businesses interviewed for this case study did not know that they could pay their presumptive income taxes electronically if they had a bank account. Furthermore, not a single respondent interviewed stated that their bank had encouraged them to use a digital means to pay the revenue authority.

In order to drive adoption of P2G and B2G digital payments, both government and private sector entities – particularly banks and MNOs – have a major role to play in increasing awareness of digital payment options available to them, and the benefits of using those options. Not just in Tanzania, but in any economy seeking to increase P2G and B2G digital payments, governments and private sector entities need to take proactive steps to drive this awareness in order to realize more of the gains available in terms of both financial inclusion and expanded revenues.

6. An integrated policy approach helps maximize the benefits of digital payments and drive adoption of digital B2G payments by businesses.

To pay income taxes in Tanzania, most micro, small, and medium businesses are required to go through an assessment process. Businesses submit their sales records or receipt books to the closest TRA office for assessment, and receive a paper confirmation of the amount of their tax liability. Since most payers are required to travel to the TRA offices anyway, the convenience that emerges from the ability to pay remotely through digital payments is marginal. Since most banks already have branches in or around TRA offices, customers directly pay at the bank in cash or physically sign and authorize a wire transfer to the TRA.

To address this situation, and substantially increase the practical benefit of being able to pay taxes remotely, efforts are needed to enable the initial tax assessment to be conducted remotely. This is a good example from this case study of the need for holistic and integrated policy development to maximize the practical benefits of digital B2G payments and drive further usage among businesses and business people.

7. P2G and B2G payers are likely to resist bearing the full costs of digitization.

In 2013, under the second phase of Value-Added-Tax digitization in Tanzania, the TRA required small traders to purchase electronic billing machines costing anywhere between US\$ 274 (TZS 599,512) and US\$ 460 (1,006,480).⁸ The billing machines automatically gave the TRA visibility into sales, and hence into approximate amounts of taxes payable. Most small traders resisted bearing these costs – leading to some instances of violent demonstrations. This case study also found small traders were resistant to providing full visibility into their revenues, for fear of being taxed on their entire revenue, and as a result often offered lower prices to customers prepared to pay in cash, thus avoiding the use of the electronic billing machines. This outcome militates against a key objective of digitizing B2G payment, that is – to decrease the size of the informal economy that operates outside of the taxation system.

As a result of these and other issues, in January 2016 the newly elected Tanzanian government reached an agreement with the Tanzania Traders' Association offering to subsidize the purchase price of the electronic billing machines for small traders.⁹

8. Shifting the audit trail from paper receipts to electronic acknowledgments might require systemic changes

There is a need for a systemic shift around hard copy acknowledgments or receipts of payments. This case study found many P2G and B2G payers prefer cash payments or over-the-counter payments, as they receive physical copies of payment acknowledgments. These acknowledgments not only have short-term but also long-term value. For example, hard copies of utility payments receipts are often required as proof of residence, while hard-copy proof of tax payments can be mandatory in order to obtain short-term loans.

To address these challenges, governments need to work with the private sector to develop alternative forms of proof, including electronically generated and stored receipts that are widely accepted in place of hard copy receipts.

It is important to note this study is not a country diagnostic study which sets out in detail all quantitative elements of various payment flows, achievements, and challenges of P2G and B2G payments in Tanzania. Instead it aims to provide the reader with a broader overview of the state of digital P2G and B2G payments in Tanzania, the key players, successful P2G and B2G payment use cases, and the key lessons from Tanzania for policymakers and other stakeholders who are looking to accelerate the transition from cash to digital economies.

In order to most effectively drive financial inclusion and expand revenue bases, countries including Tanzania need to undertake deeper and more specific diagnostic research and analysis to pinpoint exactly the technical, financial, cultural, and legal impediments to greater usage of digital payments. The BTCA's previous diagnostic studies that were focused on specific countries have demonstrated how such a detailed examination can inform the policy design and implementation process, supporting far superior policy outcomes for governments, businesses, and individuals.

TANZANIA CONTEXT INDICATORS

POPULATION, ¹⁰ 2015 (WB)	51.82 million	ADULT POPULATION (15+), 2014 (WB) ¹¹	39.8 million
% OF ADULTS (15 YEARS+), WITH ACCOUNT AT A FORMAL FINANCIAL INSTITUTION ¹² (FINDEX, WB, 2014)	19%	% OF ADULTS (15 YEARS +), WITH A MOBILE MONEY ACCOUNT ¹³ (FII, DECEMBER 2015) ¹⁴	61%
TELECOM SUBSCRIPTIONS, DECEMBER 2015 (TCRA) ¹⁵	39.8 million	INTERNET USERS / 100 PEOPLE (WB, 2013) ¹⁶	4.9%
ADULT (15 YEARS +) LITERACY RATE ¹⁷ (NATIONAL BUREAU OF STATISTICS, 2014, TANZANIA)	78.1%	COUNTRY INCOME CATEGORY ¹⁸ (WB)	Low-income

The Payment Grid

The matrix below lists the various types of payments that take place among people, businesses, and government within a country.

In order to provide the reader with the latest movements on digital payments in Tanzania, where needed this study makes use of demand side data such as, number of digital accounts (mobile money and banks), digital payment use cases, and user requirement for digital payment account registration and usage, from the recently concluded Financial Inclusion Insights study of December 2015.

RECIPIENT	GOVERNMENT	BUSINESS	PERSON
ENTITY INVOLVED IN PAYMENTS	G 2 G	G 2 B	G 2 P
	G From one government body to the other	Government ministries and other bodies making payments to suppliers, vendors, and other service providers. Industry subsidies. (e.g., IT services or security services)	Payments by government to individual recipients (e.g., salary payments for government employees, welfare payments)
	B 2 G	B 2 B	B 2 P
	B Payments by businesses to government (e.g., mandatory payments like taxes, government service payments like business licenses)	Payments between businesses (e.g., suppliers, wholesalers, and retailers)	Payments from businesses to individuals (e.g., salary payments, reimbursements)
	P 2 G	P 2 B	P 2 P
	P Payments by individuals to government (e.g., mandatory payments like taxes, government service payments like birth / death certificates, payments for government-supplied utilities)	Payments by individuals to businesses (e.g., payments for purchase from retailers or other merchants, payments for medical and insurance services provided by private sector entities, etc.)	Transfers between individuals (e.g., the mobile money payments between individuals that are already prevalent in Tanzania)

KEY: P=PERSON B=BUSINESS G=GOVERNMENT

FOCUS OF THE STUDY

2. DEFINITION AND FRAMEWORK FOR DIGITAL P2G AND B2G PAYMENTS

Defining digital P2G and B2G payments¹⁹

Globally, there is very little consensus about definitions of digital P2G and B2G payments, just as there is little consensus among policymakers and stakeholders globally about a common definition of “digital payments” in general.²⁰ A broad definition of P2G payments has been provided by the World Bank in its General Guidelines for Development of Government Payment Programs and the GSM Association (GSMA), the industry body for mobile network operators, under its Mobile for Development program.²¹

The focus of this study is on digital P2G and B2G payments with the dual objective of addressing two key questions:

1. Can digital payments strengthen economic growth through benefits like increased economic opportunity and expanded markets for goods and services, increased cost-savings, and revenue that governments can deploy on other productivity and growth-enhancing measures, greater customer compliance, increased business efficiency, reduced leakage, and increased transparency?
2. Can P2G be the driver of financial inclusion? If so, what payment types or solutions can be made available to first-time users, accelerating their integration into the formal economy.

Keeping the economic growth and financial inclusion goals in mind, this study in collaboration with CGAP and Karandaaz has developed and adopted the following definition of digital P2G and B2G payments:

A digital P2G or B2G payment is defined as a transfer of funds, directly from the account of an individual or business, to the account of the government using a digital channel, instrument or store of value.

Under this definition the government is the “payee” or to whom the payment is being made, and the individuals or the businesses making the payments are the “payers.”

Payments made by consumers to government and / or public sector organizations in form of tax payments and payments for obtaining services from these agencies (utilities, licenses, permits, etc.)

DEFINITION OF P2G PAYMENTS, WORLD BANK

P2G and B2G payments can be defined as collecting income, sales and value-added payments, social security and pension contributions, automotive costs (including tolls, and fines), and company registration fees.

DEFINITION OF P2G AND B2G PAYMENTS, GSMA

The matrix below lists and further elaborates on the definition of P2G and B2G payments across four dimensions - the payer, the payee, payment instruments, and channels.

	WHO IS THE PAYER?	WHO IS (ARE) THE PAYEE(S)?	WHAT PAYMENT INSTRUMENTS AND STORES OF VALUE ARE BEING CONSIDERED?	WHAT PAYMENT CHANNELS TO INCLUDE?
Scope of Definition	<p>This study identifies payers as all individuals and businesses making a payment to a government entity.</p> <p>It does not restrict the definition of payer to citizens of the country or a business that is registered only within the country of scope.</p>	<p>In this study a payee can be a government entity, a parastatal²² OR a quasi-government agency with a government mandate to provide a service.</p>	<p>A payment instrument is the physical or electronic tool that enables a payer to make or initiate a payment.</p> <p>Digital payment instruments considered in this study include:</p> <ul style="list-style-type: none"> • Credit and debit cards • Electronic checks • Electronic Fund Transfer (EFTs) • Real Time Gross Settlements (RTGs) • Digital stores of value are non-cash assets that hold the value of funds that a payer uses and transfer funds. E.g., prepaid cards, bank and mobile wallet accounts and any other type of digital wallet. 	<p>Payment channels are the medium through which money is digitally transferred. For digital payments these could include:</p> <ul style="list-style-type: none"> • Point of Sale (POS) devices • Mobile Phones • ATMs • Laptops
Exclusions		<p>Privately owned and run organizations providing basic services with no government shareholding or ownership.</p>	<p>Cash and paper checks.</p>	
Rationale	<p>Depending on the country context, taking a more inclusive approach to the types of payers considered can increase the relevance of the study.</p> <p>For example, in Tanzania tourism is a vital generator of revenue and foreign exchange for government. However, payments in this space are dominated by non-citizens and non-residents (i.e., foreign tourists). Accordingly, an inclusive approach to 'payers' captures these payments and gives a more accurate picture of the overall digital payments ecosystem in Tanzania, including the contribution of payments to economic growth.</p>	<p>How the government structures services and revenue collection plays an important part in the selection of the universe of payees. This case study has included parastatals – organizations of which the government is a majority owner OR private sector organizations operating under a government mandate to deliver citizen and business services. This provides a more accurate picture of the overall digital payments ecosystem in Tanzania.</p>	<p>To understand this scope, let's take two examples of the same payment type.</p> <ol style="list-style-type: none"> An EFT transaction for tax payments: An individual who owns a bank account could pay for her taxes using internet banking, which is an EFT. However, if her bank does not provide internet banking services she can initiate the same EFT by going to a bank branch, sign an EFT form and request a transfer. In the second case, the payer has a digital account, the transaction flows through a digital channel and is received in a government account. This example fulfills the definition of the P2G payment. However, the difference is that the transaction is not remote and does not involve initiating the transaction via a digital interface. <p>Both these examples count as digital payments in the study.</p> <p>The study also treats prepaid top up cards similarly to mobile money. In both cases individuals need to top up this store of value instrument through an agent.</p>	

Many government agencies within Tanzania and globally have outsourced collection of payments to other financial institutions (e.g., tax or utility payments). In these instances, these outsourced financial institutions are then required to wire-transfer collections directly to the government, thus ensuring cashless collections for the government. However, this shift in collections does not imply that payments are necessarily occurring digitally. For instance, the majority of P2G and B2G payments made in this way through outsourced financial institutions in Tanzania still occur Over-the-Counter (OTC) at designated financial institutions or other cash collection points. Therefore, the definition of digital P2G and B2G payments in this case study does not incorporate these indirect payments through outsourced financial institutions.

The matrix below lists and further elaborates on the definition of P2G and B2G payments across four dimensions – the payer, the payee, payment instruments, and payment channels.

The above dimensions can limit or expand the scope of digital P2G and B2G payments captured in any given study. If the definition of digital payments requires interoperable payment instruments, for example, then it would eliminate P2G payments occurring through closed loop store value cards and some digital wallets, both of which heavily benefit payees and payers. **This case study therefore recognizes that digital payments can follow multiple pathways** and has adopted a more inclusive approach to digital P2G and B2G payments. The **only three criteria** that a payment needs to meet to be included as a digital payment in this study are:

- I. The payment must be initiated from a payer’s digital account or store of value.
- II. The payment must move through an electronic platform.
- III. The payment must be received directly into the payee’s digital account.

Payment use cases:

Payment method or channel and purpose are jointly defined as “use case” in this case study. The range of P2G and B2G payment use cases being considered fall into the following three categories.

PAYMENT CATEGORIES	EXAMPLES
MANDATORY PAYMENTS	Payments required to be paid by an act of law or order of an authority. Example: tax payments, fines, road license fees, and penalties.
GOVERNMENT SERVICES	Payments made in exchange for services provided by government. Example: utilities like power and water, licenses for businesses’ registrations, passport, visa fees, vehicle registration, etc.
GOVERNMENT BENEFITS	Co-payments or payments for benefits provided by government. Example: social security, health insurance, etc.

Many government agencies focus on cashless collection. Cashless does not automatically imply digital.

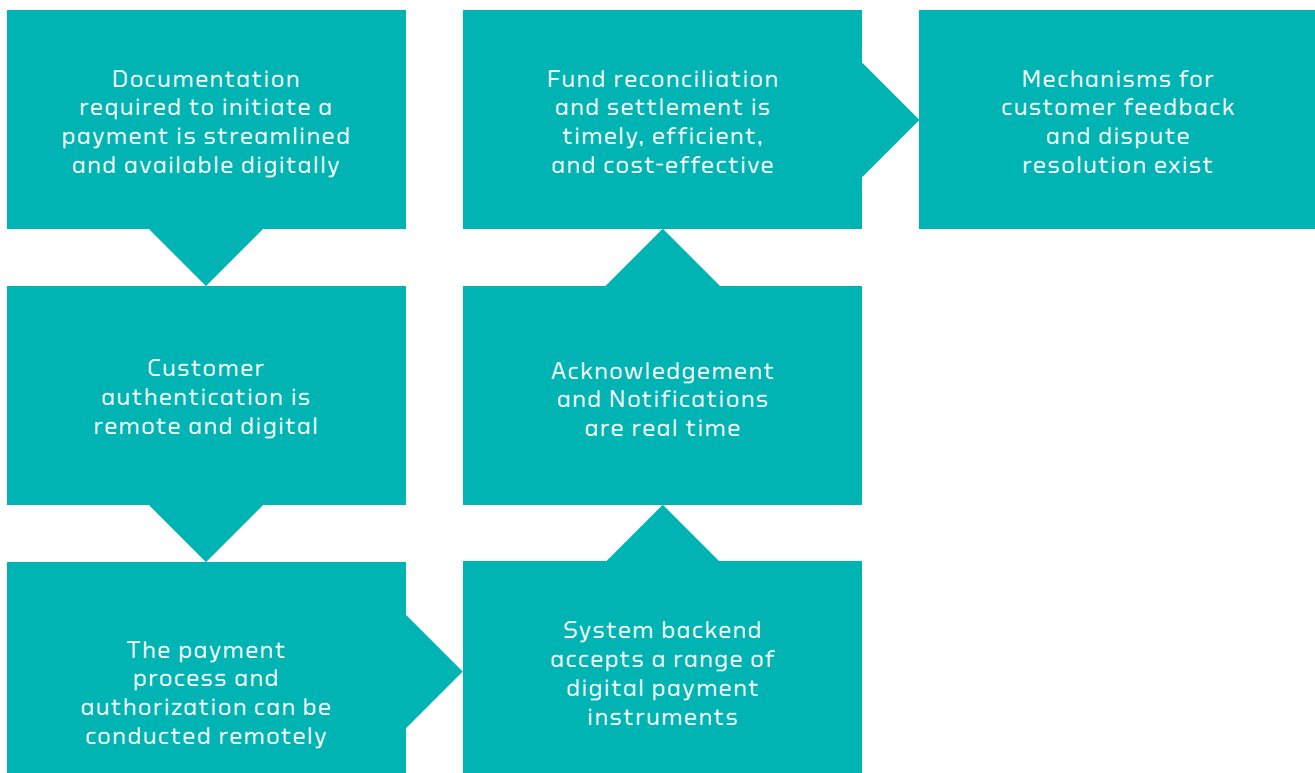
Digital payment considerations for the payee and the payer:

As far as possible, the examples of digital P2G and B2G payments in Tanzania captured in this study attempt to map the payment value chain both from the payee and payer perspectives.

Considerations for a payee accepting digital payments:

For successful digital payments and high payer adoption, a payee will need to consider the seven-step process listed below. *Note: The characteristics described below represent an ideal situation.*

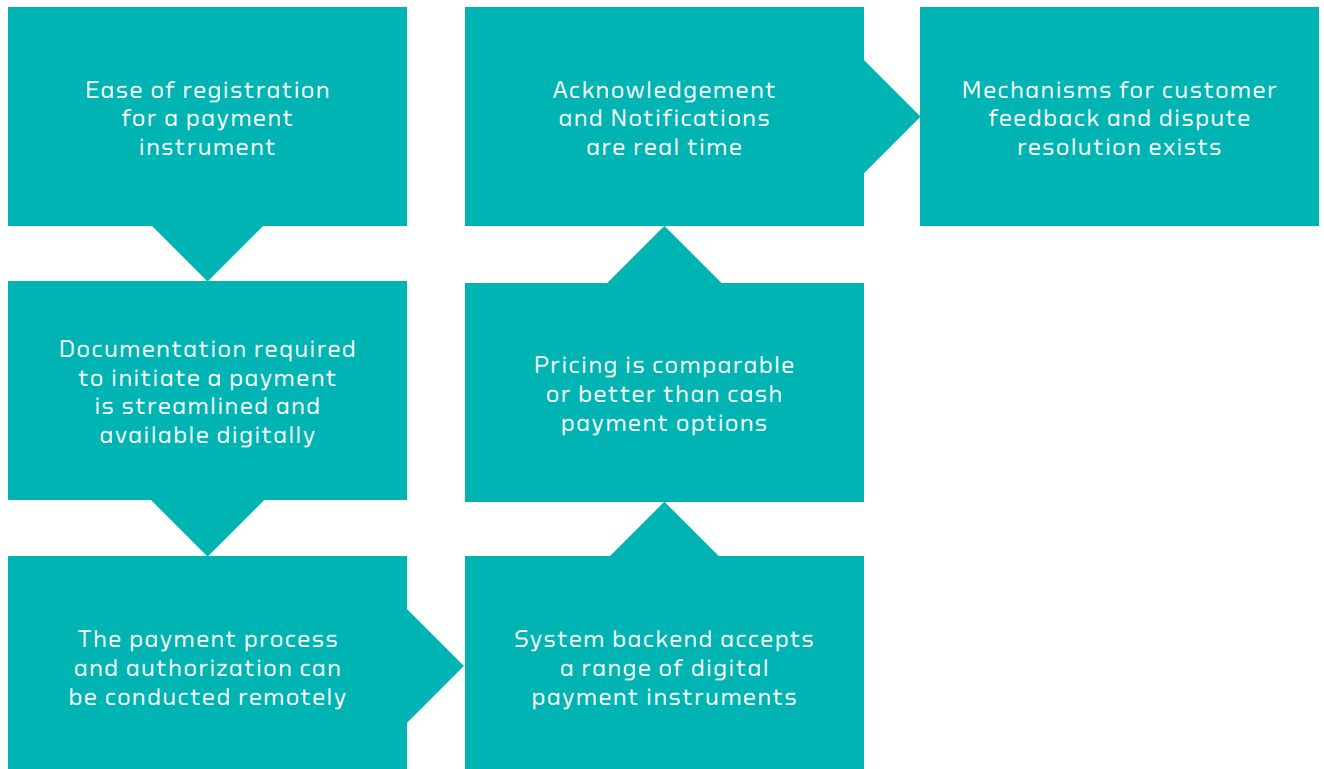
- I. The documentation required to use the service is readily available, can be filled out digitally, is streamlined and not spread across multiple locations.
- II. Customer authentication is remote and digital.
- III. The payment process and authorization for the service can be conducted remotely.
- IV. The payee's backend system accepts a range of digital payment instruments, thus giving the payer the choice to use their preferred payment instrument.
- V. Acknowledgment and notifications are received in real time, thus ensuring service reliability and supporting payer trust.
- VI. Fund reconciliation and settlement is timely, efficient, and cost-effective.
- VII. There is a redress mechanism for payment dispute resolution.



Considerations for a payer:

Payers will also take a range of factors into consideration before deciding to frequently use digital payments. Some of these overlap with the above mentioned considerations for payees. The payment value chain below lists seven features or decision points for a payer. However, depending on the payment use case, payers might be flexible and not require all features in order to adopt digital payments. Key considerations for payers, in an ideal case, include:

- I. Ease of registration to obtain a digital payment instrument;
- II. Remote processing of documents that do not require payers to physically visit payee offices that reduce the remote benefits that come with digital payments;
- III. Payment process and authorization can be conducted remotely and digitally;
- IV. The payee's platform has the ability to accept a range of digital payment instruments;
- V. Pricing, particularly compared to a cash payment;
- VI. Real-time acknowledgment and notification of payment; and
- VII. Awareness and effective options for redressal



3. TANZANIA: THE RIGHT FOUNDATIONS FOR P2G AND B2G PAYMENTS

This chapter examines the key constituents of a well-functioning, country-level inclusive digital payment ecosystem. These include a supportive regulatory environment, enabling market conditions, interoperability of payment instruments, dynamic service providers, and compelling payment use cases. Jointly these factors act as a barometer of a country's readiness to enable, accept, and move quickly toward digital P2G and B2G payments.

1. Enabling Regulatory Environment

In 1996, the Government of Tanzania began the process of modernizing its National Payment System (NPS). The modernization efforts were spearheaded by the Bank of Tanzania and consisted of two initial components:

- I. Formation of a National Payments Systems Council (NPSC) and its four sub-committees – the operations, legal, automation, and standards committees.
- II. A stocktaking phase that ended in 1998²³ aimed at aggregating information on the country's payment infrastructure (the state of automation, existing payment instruments, inter-bank clearance, and settlement systems) and other major factors (social, political, and economic) influencing the country's payment systems.

Subsequent to these efforts, the Bank of Tanzania has enabled and driven a sequence of forward-looking policies set out below.



3.
TANZANIA: THE RIGHT
FOUNDATIONS FOR P2G
AND B2G PAYMENTS

YEAR	KEY POLICIES AND MARKET INTERVENTIONS ²⁴	FINANCIAL SECTOR IMPLICATIONS
1993	Liberalization of financial industry	For nearly 30 years post-independence Tanzania was a centrally planned economy. It had only one state-owned bank dominating the financial sector. In 1993 the industry liberalized, permitting other entrants.
1993	Dar es Salaam Clearing House	Tanzania's first clearing house. It allowed for clearing of paper-based instruments based on multilaterally agreed standards. Previously clearing took place on the basis of bilateral agreements.
1995	Bank of Tanzania Act	Gave the Bank of Tanzania definitive regulatory and supervisory powers.
1996	Launch of National Payment System (NPS) Modernization Project	Aimed at modernizing the country's payment, clearing, and settlement system. Looked at key payment system attributes like de-risking mechanisms, increased customer convenience, affordability, and timeliness of the system.
2002	BoT's Electronic Clearing House (BoTECH)	Facilitated electronic inter-bank settlements other than paper-based instruments. Reduced clearing time for debit instruments from five to two days locally, and from 30 to seven days inter-regionally.
2004	Tanzania Inter-Bank Settlement System (TISS)	Allows for real-time settlement of time-sensitive and high-value payments commonly known as Real Time Gross Settlement (RTGS) payments. The Bank of Tanzania extended this facility to the Tanzania Revenue Authority, allowing high-value tax payments to be directly remitted to the Bank of Tanzania.
2006	Bank of Tanzania Act, 2006 (amended)	Empowered the Bank of Tanzania to administer and regulate non-bank entities in relation to payment services.
2007	Electronic Payment Systems Guideline	Specifically allowed for non-bank financial institutions to offer electronic payment schemes and money transfers. Although it did not accommodate mobile money, it opened the doors for Mobile Network Operators (MNOs) to offer money transfer and payment services. Since the law did not address licensing of MNOs, operators were required by the Bank of Tanzania to apply for "Letters of No Objection" in conjunction with a bank in order to conduct payment services legally.
2008	Launch of Mobile Money	Vodacom and Zantel launch M-Pesa and Z-Pesa (re-launched as Ezy Pesa in 2012) in 2008. The Bank of Tanzania saw the potential of alternative payment instruments improving access to, and adoption of, formal financial services, eventually increasing financial inclusion.

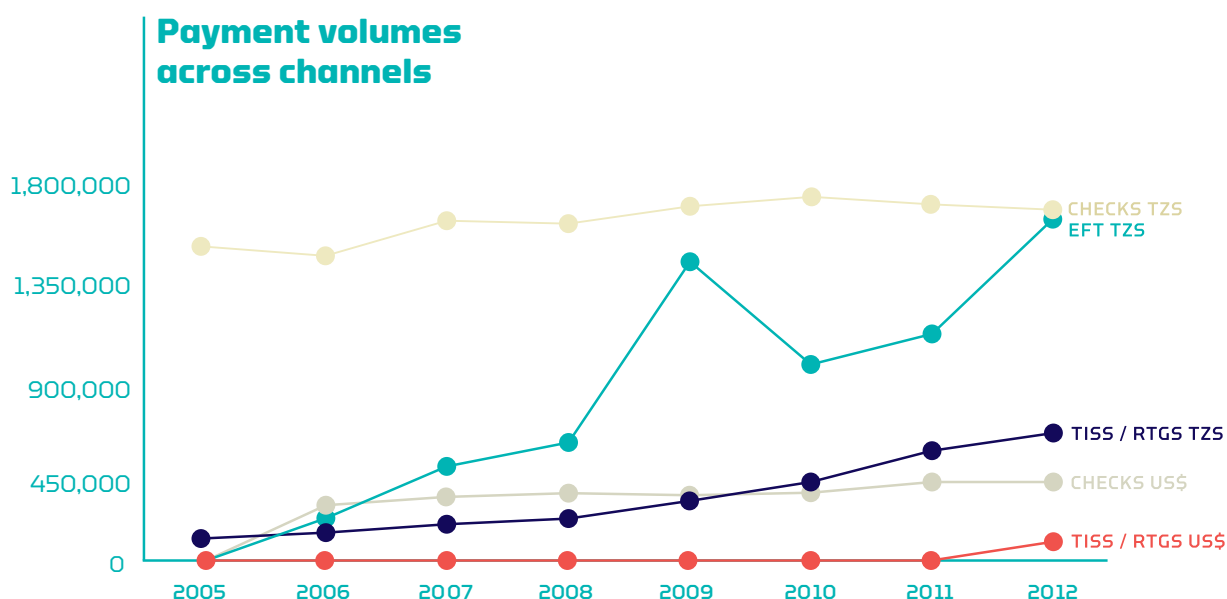
YEAR	KEY POLICIES AND MARKET INTERVENTIONS	FINANCIAL SECTOR IMPLICATIONS
2011	Launch of the Umoja Switch	Tanzania's first domestic private ATM switch, targeted at small banks.
2012	Mobile Financial Services (MFS) Regulation (draft)	Final draft on MFS regulations submitted to the Ministry of Finance.
2013	Guidelines on Agent Banking for Banking Institutions, 2013	Bank of Tanzania permitted licensed banks and financial institutions to appoint retail agents as delivery channels for their banking services.
2013	National Financial Inclusion Framework	Tanzania launched its financial inclusion strategy for 2014-17.
2014	Interoperability Standards ²⁵	Tanzania became the first country in the region, and the fifth in the world, to have interoperable mobile financial services. Standards were industry led and Bank of Tanzania endorsed.
2015	National Payments Systems (NPS) Act 2015 ²⁶ including:	The NPS Act introduced check truncation as a payment instrument.
	Electronic Money Regulations, 2015 Payments Systems Licensing and Approval Regulations, 2015 ²⁷	The Electronic Money Regulations formulated under this act defines the licensing regime for payment systems and e-money issuers. It allows for future MNOs and other third parties to obtain e-money licenses by establishing separate legal entities.
2015	Electronic Transactions Act, 2015 ²⁸	Provides for legal recognition of electronic transactions, e-government services, the use of Information and Communications Technology (ICT) in collection of evidence, admissibility of electronic evidence, and the use of electronic signatures.
2015	Cybercrime Act, 2015 ²⁹	Criminalizes ICT related offences (e.g., illegal access and identity theft), and provides for investigation and use of electronic evidence.
2015	Tanzania Automated Clearing House (TACH)	Launched by the Bank of Tanzania to allow commercial banks to clear checks within hours instead of days. Replaces the inter-bank BoTECH system.
2016	National ATM Switch (pipeline) ³⁰	The national ATM switch that would allow customers of all banks to access cash across all ATM machines in the country, is an effort undertaken by the Tanzanian Bankers Association. The BoT is facilitating and overseeing these developments that will eventually lead to nation-wide ATM interoperability.

2015: A big year for digital financial services regulation in Tanzania

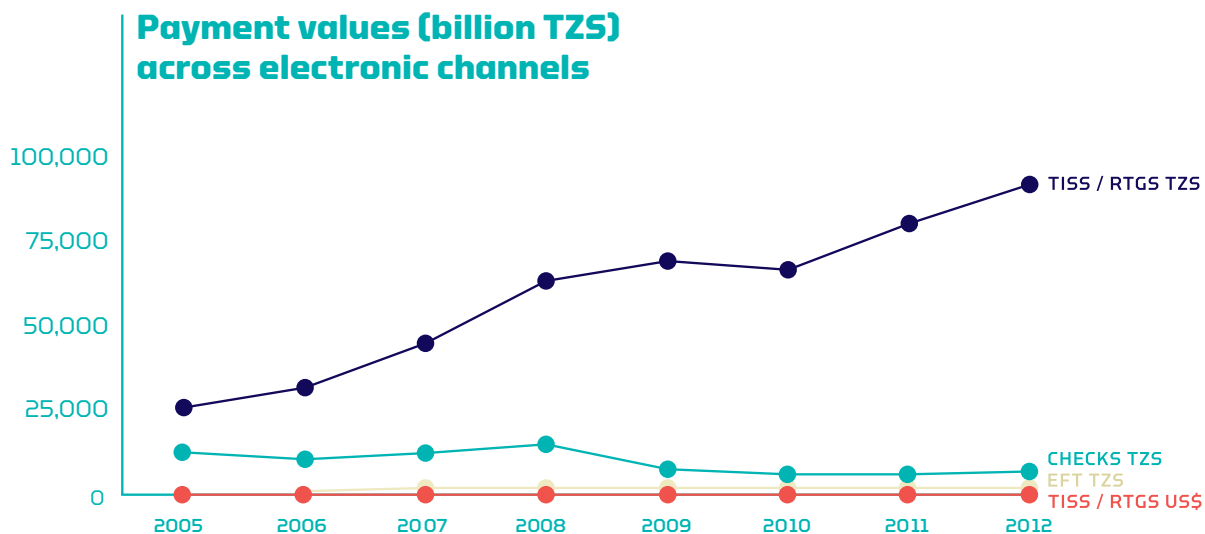
The year 2015 brought substantial achievements for regulators, financial service providers, financial intermediaries, and customers in Tanzania. **Three key laws: The National Payments Systems Act, The Electronic Transactions Act, and the Cybercrime Act were passed by the national parliament.**

The Payment Systems Act 2015 addressed two key ingredients necessary to move Tanzania toward higher digital payment adoption – (a) licensing of payment systems and (b) introduction, licensing, and monitoring of new payment instruments. The Act specifically:

- Provides for licensing and use of electronic money (e-money), interoperability, clearing, and netting standards³¹, thus increasing the legal certainty of mobile money operations. This might also influence the volume of payments flowing through EFTs.³² The Bank of Tanzania now has the regulatory power to impose penalties for violations rather than merely revoking the Letters of No Objection provided to Mobile Network Operators (MNOs), the only enforcement recourse available until the law was passed in 2015.
- Introduces check truncation – another significant milestone. Until early 2015, businesses and individuals in Tanzania still used physical checks that were settled via clearing houses located at the Bank of Tanzania, involving the physical exchange of checks between banks.
- **The previous inter-bank clearing and settlement process was complex and manual. It could take three days for clearing within cities and up to 28 days for remote clearing.** Check Truncation System (CTS) now enables commercial banks in Tanzania to clear checks within a matter of hours. In order to ensure seamless inter-bank settling of electronic checks, the Bank of Tanzania also established the Tanzania Automated Clearing House (TACH) in 2015 that accepts two check settlement windows in a single day.



DATA: TANZANIA INTERBANK SETTLEMENT SYSTEM AND ELECTRONIC INTER-BANK CLEARING HOUSE STATISTICS, BANK OF TANZANIA



When comparing the popularity of payment instruments, it is important to note that large-value payers (i.e., those making payments greater than TZS 10 million or US\$ 4,568) prefer Real Time Gross Settlement (RTGS) payments, a common practice in many countries particularly for large government-to-government (G2G), government-to-business (G2B), and business-to-business (B2B) payments. The rising value of these payments is illustrated in the below graph. **In Tanzania RTGS payments today are cleared within two hours and the Bank of Tanzania has set a very low price ceiling on RTGS payments at a flat price of TZS 10,000 (US\$ 4.75) per payment, irrespective of payment transfer size. This has actively incentivized digital high-value payments.**

The Electronic Transactions Act is another major step forward in ensuring widespread usage of electronic payment instruments. The three key features of this Act that directly impact payment digitization in the near future are set out below.

1. Admissibility of electronic receipts and acknowledgments as legal evidence, expected to encourage more payers to adopt electronic payment instruments and channels for both small and high value payments.
2. Recognition of electronic signatures, allowing for fully automated and remote digital payments between individuals, businesses, and government.
3. Recognition of e-government services, specifically addressing digital payments for government services including the use of electronic records, electronic transactions, and receipts.

The Cybercrime Act, which criminalizes offenses related to ICT and provides for the use of electronic evidence, is expected to have a substantial impact on the adoption of mobile and internet banking, and innovations surrounding e-commerce.

Limitations:

Tanzania has a very proactive regulator that is actively seeking ways to increase digital payments, and to encourage innovations that increase affordability, transparency, and convenience. Interviews with the National Payments Team at the Bank of Tanzania revealed that the regulator is actively thinking about overcoming some immediate shortcomings that hamper payment digitization, e.g., the lack of a uniform national identification system for citizens and physical address or the lack of uniform and clear regulations, etc.

On the operational side, one limitation that the regulator faces is the lack of a Treasury Single Account (TSA). A TSA is a valuable tool for consolidating and managing government cash resources as it provides the central bank and the treasury with a unified view of government revenue inflows and expenditure outflows. While this does not directly impact P2G and B2G payments, it does have implications for government-to-person (G2P) and government-to-business (G2B) payments.

2. Enabling Market Conditions

In East Africa, Tanzania's financial services market stands out. Both the traditional banking and alternative payments (e.g., mobile money) markets feature healthy competition, diversity in product offerings, a certain level of inter-connectedness facilitated by financial intermediaries, and a willingness to innovate. Many of these factors are not present in other markets in the region.

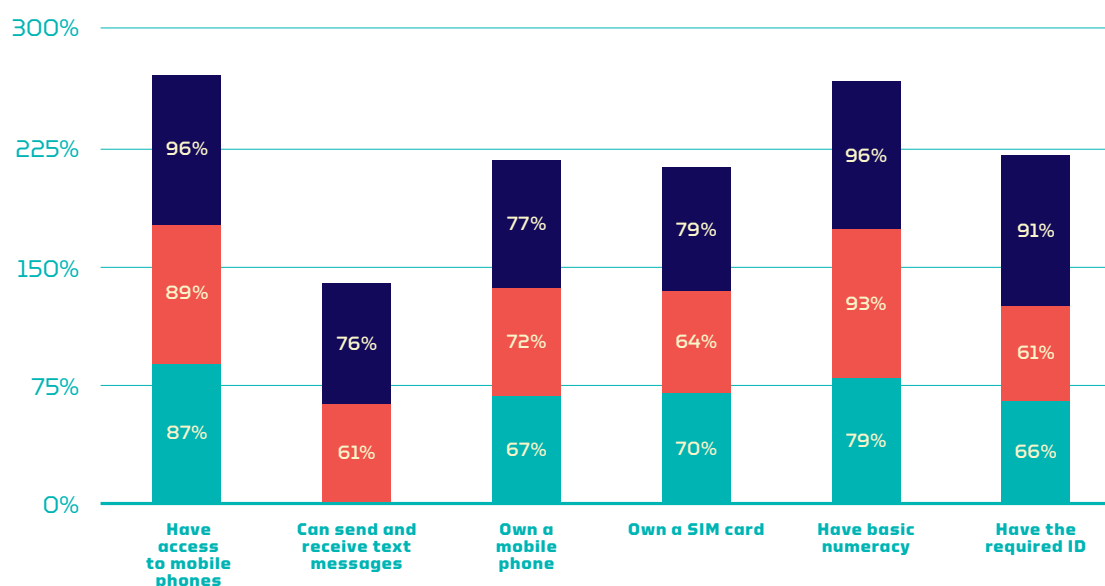
This section explores Tanzania's market readiness, supply side, and demand side characteristics of traditional and non-traditional payment systems, and highlights a new set of emerging financial stakeholders.

I. Market Readiness: key elements essential for digital account ownership

Data from the recently concluded Financial Inclusion Insights (FII) Survey of 2015³³ indicates that a majority of adult Tanzanians have the basic requirements needed to hold a digital financial account. The graph below sets out the relative progress made on six of these basic requirements from 2013 to 2015.

Requirements of a digital account, % adult Tanzanians

2015
2014
2013



II. The Banking Sector

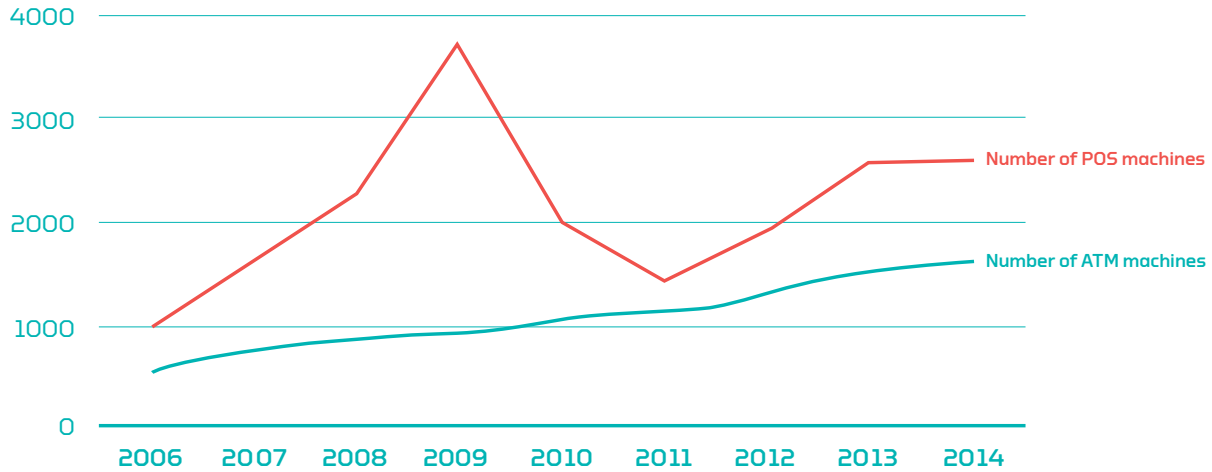
According to the Bank of Tanzania's annual Banking Supervision Report, the banking sector in 2014 consisted of 53 banking institutions, 34 of which were commercial banks.³⁴ Four commercial banks held nearly 50% of the total asset base of the banking sector, namely CRDB Bank PLC, NMB Bank PLC, National Bank of Commerce (NBC), and Standard Chartered Bank.

In terms of supply side infrastructure, in 2014 the sector had a total of 702 branches, 1,610 ATMs, and 2,598 POS machines.³⁵ Unfortunately, for an adult population of 27.2 million (over 15 years of age), this translates to an ATM density of only 5.92 for every 100,000 adults and a POS density of 9.6 per 100,000 adults. As a point of comparison, Kenya's ATM density per 100,000 adults in 2013 was 10.20³⁶ or nearly 1.7 times higher.

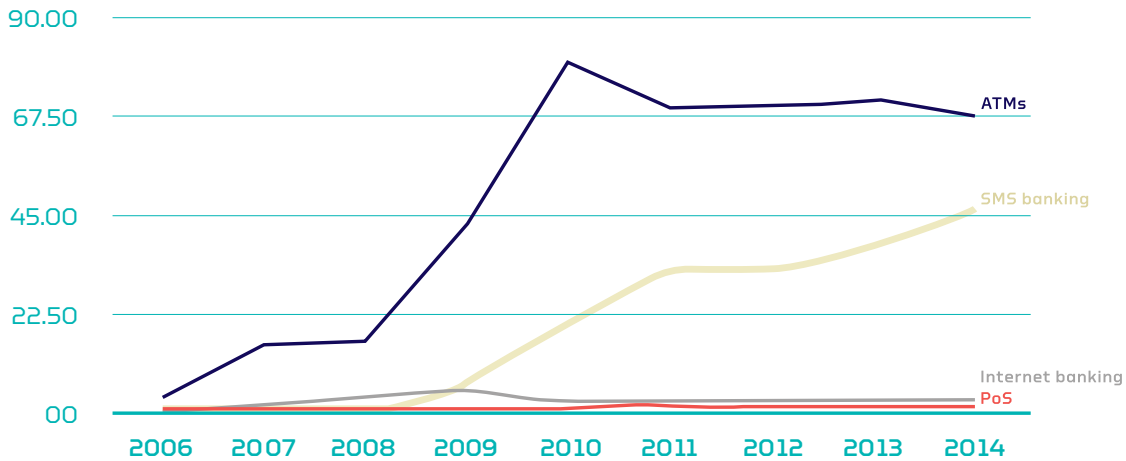
Formal banking penetration is still low. **Only 9% of the adult population holds a bank account** and that number drops to 5% of the adult population in relation to active bank account holders (FII 2015). This is not surprising given that a majority of Tanzania's 702 bank branches are located in the major cities of Arusha, Dar es Salaam, Mbeya, Moshi, and Mwanza, while 70% of the population lives in rural areas of the country (World Bank, 2014).

In recent years, banks are increasingly offering digital payment options like SMS / Mobile banking and internet banking. If the payment transaction volumes across the four banking retail channels (ATM, POS, internet, and SMS banking) are compared, the ATM transaction volumes are the highest – which is not surprising for a cash-heavy economy. However, the second most popular banking channel is SMS or Mobile banking. **In fact, between 2010 and 2014 the volume of payments across this channel grew by 132%.**

Growth of POS and ATM infrastructure



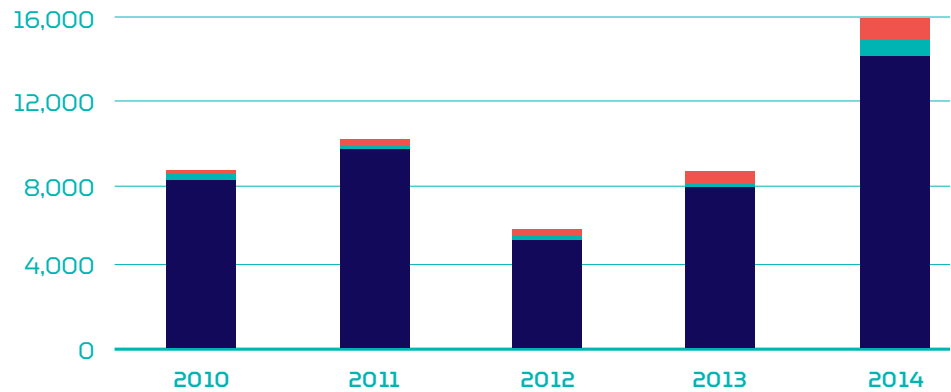
Payment txn. volumes across retail banking channels (in MNs)



The popularity of ATMs, a majority of which are located in urban centers, is also reflected in the payment value data across these banking channels, in recent years.

Between 2013 and 2015 banks increased their digital payment offerings to their account holders. As highlighted in the figures below, there has been a **marked upward trend in the number of bank account holders today that own and have access to digital payment instruments and channels, i.e., ATM or debit cards, internet or mobile access to their bank accounts, and digital money transfer capability.**

Payment transaction values across retail banking channels (TZS billions)

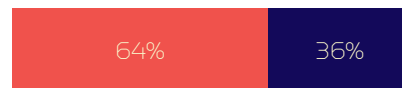


Payment transaction values across retail banking channels (TZS billions).



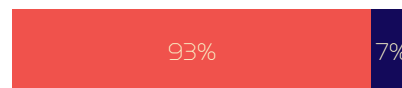
Note: For purposes of the graph below, digital bank account implies a bank account with ATM, debit card facility, and / or internet or mobile access and/ or digital money transfer capability.

2014



Bank a/c holders, without a digital a/c
Bank a/c holders, with a digital a/c

2015



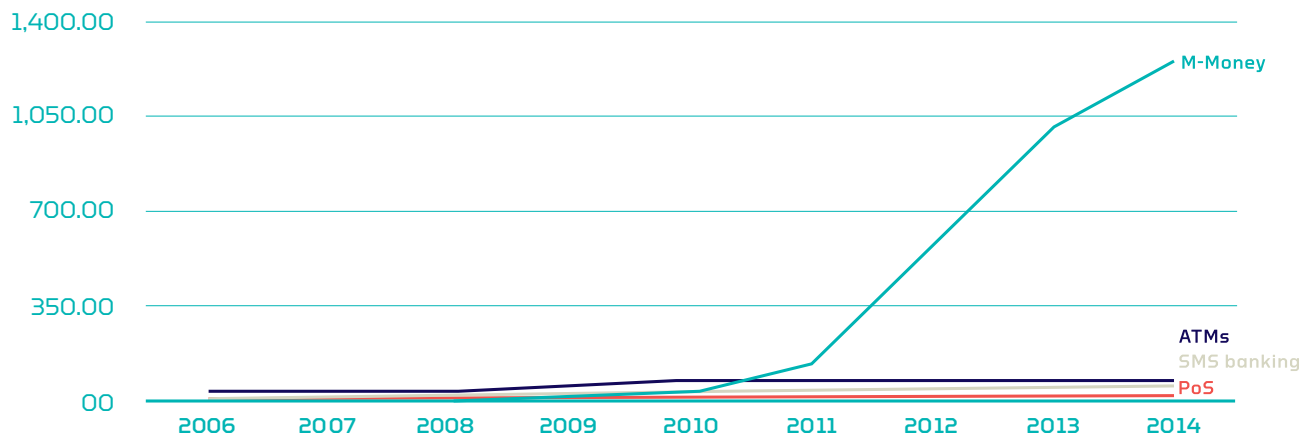
Bank a/c holders, without a digital a/c
Bank a/c holders, with a digital a/c

III. The Mobile Financial Sector

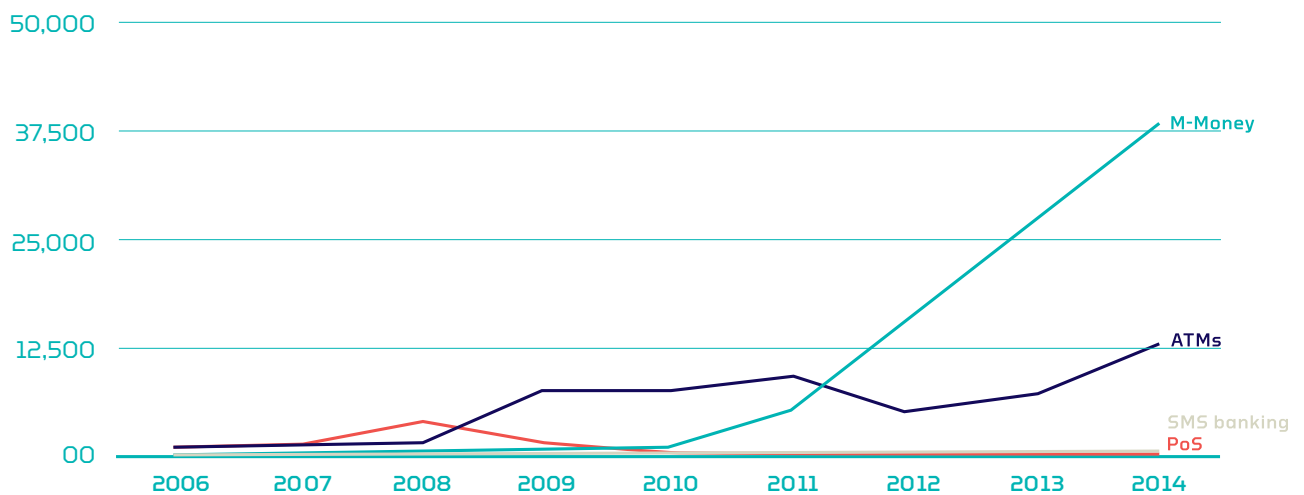
Tanzania has a very rapid uptake of Mobile Financial Services (MFS) since their modest beginning in 2008. According to GSMA, only 1% of the adult population had access to mobile phones in 2008 when Vodacom's M-Pesa and Zantel's Ezy Pesa launched their MFS services in Tanzania. That number had risen to 96% in 2015³⁷. In 2013, 44% of the adult population was registered for financial services on mobile money. By the end of 2015, 61% of adult Tanzanians were registered on mobile money across the six MFS³⁸ operators in the country.

The graphs below provide a high level visual comparison of the payment volumes and values of regular retail banking channels in comparison to mobile money.

Annual payment volumes Banking channels vs. Mobile money



Payment values (TZS billions) across channels Banking vs. Mobile money



As seen in the second graph, after its slow start, mobile money has rapidly overtaken traditional and new retail channels like SMS banking. According to the Bank of Tanzania, **in 2014, an average of US\$ 1.56 billion was transacted via this channel per month in comparison to ATMs which stood a distant second at US\$ 540 million per month.**

In contrast to other markets in the region, Tanzania's MFS market is highly competitive with the top three MNOs fighting for market share. According to the Tanzania Communications Regulatory Authority's Third Quarter Report for 2015,³⁹ Vodacom's M-Pesa continues to dominate with 38% market share, while Tigo-Pesa follows with 33%, and Airtel Money with 22%. However, with Tigo acquiring an 85% stake in the smaller operator Zantel in June 2015, the dynamics of market share may change moving forward.⁴⁰

IV. Payment Aggregators

Tanzania has a thriving payment aggregator industry. Two of the largest payment aggregators in the country are Selcom and Maxcom, followed by Business Connexion, Button Pay, and others. Payment aggregators such as these are facilitating and accelerating payment digitization domestically and across Africa. They integrate with various financial service providers, facilitating the flow of payments within and across mobile networks and banks.⁴¹

In Tanzania, Selcom and Maxcom also have a dense footprint of POS merchants who accept Over-the-Counter (OTC) cash payments, a common practice for larger-value payments since customers often prefer a printed receipt. Collectively these two payment aggregators facilitate a majority of the utility payments in the country – via mobile money, mobile banking, and OTC payments.

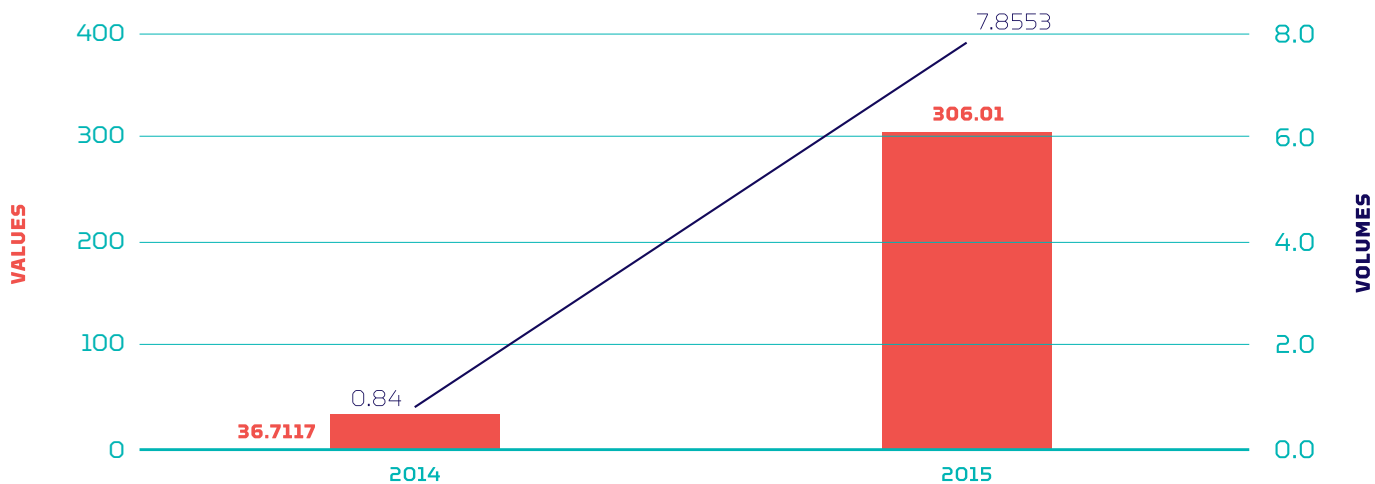
3. Interoperability

I. Mobile Money Interoperability

In 2014, Tanzania became the first country in the region to achieve domestic interoperability. The process was entirely industry led, with three telecom operators –Tigo, Airtel, and Zantel reaching agreement first – directly impacting their mobile money customers (number around 24 million, as of September 2015) who are now able to transfer funds to mobile wallets across these networks. Vodacom and Tigo signed an interoperable wallet exchange agreement in 2015.⁴² By early 2016, Vodacom's M-Pesa wallet became interoperable with wallets of other network providers; thus achieving 100% mobile wallet interoperability in the market.

“Interoperability helped Tanzania achieve its goal of **50%** adults financially included by 2014. By 2015 nearly **61%** of the adult population owned a formal account”

Mobile Money Interoperability transaction volumes (millions) and values (TZS billions)



Volumes

Values

Source: Bank of Tanzania

II. Card Interoperability

The largest domestic banks are partnering with either VISA, MasterCard, or both payment networks to increase reach and financial access for their customers. However, for smaller domestic banks that cater to more rural and economically vulnerable populations, interoperability and increasing their ATM reach across the country has proved a significant challenge. Very few of these smaller banks had the capital base to buy new ATMs, thereby limiting their access footprint. In 2006, this gave rise to the country's first domestic privately owned ATM switch infrastructure called the "Umoja Switch" (run by Bussiness Connexion – BCX).⁴³ Nearly 50% of the registered domestic banks in the country are part of the Umoja network, benefiting from shared infrastructure and the ability to provide customers of all member banks EFT solutions, ATM services, payments options across POS devices, and more. Umoja is also in the process of integrating with other switch providers in the region – namely, KenSwitch (Kenya), InterSwitch (Uganda), and RSwitch (Rwanda). However, it is yet to integrate with VISA or MasterCard, which could increase the universality of card acceptance of its member banks across Tanzania.

TANZANIA SURPASSES FINANCIAL INCLUSION TARGETS FOR 2014

A combination of enabling regulation, infrastructure, diversity of payment providers, and interoperability helped Tanzania achieve its goal of 50% adults financially included by 2014.

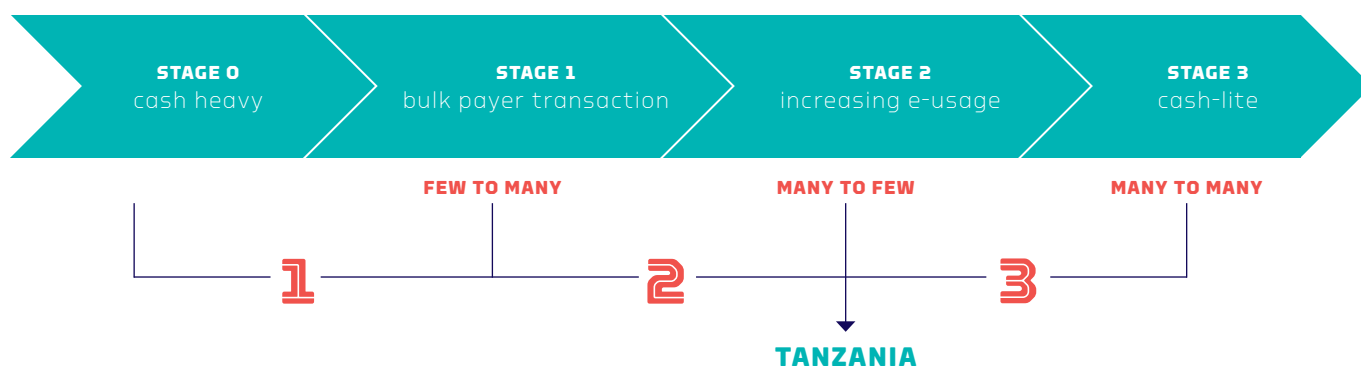
By 2015 nearly 61% of the adult population owned a formal account. Much of this growth has been driven by e-money providers.

The Bank of Tanzania has revised its targets to achieve 80% adult financial inclusion by 2017

4. Payment Use Cases

The above three constituents of a well-functioning, country-level inclusive digital payment ecosystem (regulatory environment, enabling market conditions, and interoperability of payment instruments) provide a supportive environment for compelling digital use cases. The Better Than Cash Alliance in its white paper “The Journey towards Cash-Lite” identifies **three shifts from a cash heavy to a cash-lite economy.**

- The first shift happens when bulk payers in an economy like the government, large employers, or development aid distributors decide to pay electronically, also known as “few to many” payments.
- The second shift takes place as opportunities grow for recipients to spend or transfer money electronically. With increased usage of digital payments, **Tanzania is now experiencing the second shift**, i.e., “many to few” digital payments, the majority of which are P2G, B2G (e.g., utility payments) and P2B payments (e.g., cable TV payments).⁴⁴
- The third shift involves the transition to a cash-lite economy, with “many to many” payments such as individual retail transactions, and ordinarily comes after “many-to-few” payment processes are well established.



4. DIGITAL P2G AND B2G INITIATIVES ARE ALREADY HAVING A MAJOR IMPACT

Payment digitization can deliver higher revenue collection for governments, increased compliance, efficiency gains, higher accountability and transparency, and risk management. For individuals and businesses, the convenience, time savings, and reliability that come with digital payments increase the probability of these constituents continuing to remain active digital users. Thus, connecting them to the formal financial system, which in turn drives new economic opportunities and supports economic growth.

In Tanzania, initiatives where certain payees (namely government-run institutions) have mandated payers to pay digitally through either existing payment instruments or other digital payment mechanisms have become a key channel to encourage first-time users to adopt digital payments. This chapter explores five diverse P2G and B2G examples in Tanzania across the three categories of: mandatory payments, government services, and payments for government benefits. The payment types included are: annual motor vehicle license payments, customs duty payments, national park entrance fees, utilities, and hospital payments.

As mentioned earlier, the list of P2G and B2G payments in this chapter is not comprehensive. Instead the payments have been selected on the basis of relevance to the payee and payer, diversity of payment use case, availability of data and opportunity to learn from the successes, and failures of these initiatives.

“Digital payments help women be more independent. Before, when we just had cash, it was very tough. To transfer money, I had to go to the bank, and they would ask me for a lot of information and require documentation. I had to line up for a long time, more than three hours. It was a big hassle.”

**MS. SHERU HADHA
KAIRAKOO MARKET CUSTOMER**

PAYMENT CATEGORY	NO.	PAYMENT TYPE	PAYER	PAYMENT INSTRUMENT	PAYMENT CHANNEL
Mandatory Payments	1	Tax payment – annual vehicle road license	Individuals	Electronic fund transfer Real Time Gross Settlement (RTGS)	Mobile Phone
	2	Customs fee import payments	Businesses / individuals	Electronic fund transfer Real Time Gross Settlement (RTGS)	Mobile Phone (mobile money and mobile banking), internet banking
Government Services	3	Tourism – conservation areas and game parks	Businesses (tour companies) / Individuals	Closed loop prepaid cards, Visa / MasterCard debit or credit cards	Point-of-sale devices
	4	Utility payments – water	Individuals	Electronic fund transfer	Mobile Phone (mobile money and mobile banking), internet banking
Government Benefits	5	Health – hospital payments	Individuals	Closed loop prepaid cards	Point-of-sale devices

1. 42% of road license fees paid digitally within three weeks of launch of a digital payment option

In September 2013 the Tanzania Revenue Authority (TRA) and Vodacom entered into a partnership on annual motor vehicle license (commonly known as road license) fee collections via M-Pesa. Annual motor vehicle road licenses year-on-year constitute less than 2%⁴⁵ of domestic taxes⁴⁶ collected by the TRA,⁴⁷ yet pose a much heavier administrative burden on the TRA. Before the launch of the mobile money payment option, customers usually waited in long queues at TRA offices to collect and submit forms, and then make payments. This gave rise to middle-men who acted as agents and conducted back-room deals for bulk licenses, and opportunities for fraud, notably by submitting fraudulent receipts and forged documents⁴⁸ – all resulting in heavy revenue leakages for the TRA.

Within the first three weeks of the launch, the revenue authority collected TZS 4.7 billion (or \$US 2.14 million), of which nearly 42.5% was collected via mobile money.⁴⁹

For customers, the mobile money payment option, now offered by all mobile providers, alleviated a huge pain point. By just dialing 15341 and keying in their car registration number, customers are able to pay license fees remotely – something that could previously take at least an entire day.

Customers can also pay at commercial banks or Maxmalipo (merchant service points run by the payment aggregator Maxcom) outlets.

“Last year, I started to pay taxes for my motor vehicle using mobile money. Before, I used to go to the tax office, and it would take me one or two days to make the payments. Often the system would be down and I had to go back. I can now make the payments immediately.”

MADHANI NGAO
25 YEARS OLD

This payment use case also provides an example of how financial intermediaries are contributing to P2G and B2G payment digitization. Maxcom facilitated all mobile money (Vodacom, Tigo, Airtel) integrations with the TRA system. Apart from payment facilitation, they also ensured that the TRA backend system received notifications on successful payments, thus enabling the reconciliation and acknowledgment process to be digitized. Today, after a successful payment completion, customers can walk into any TRA office across the country with the acknowledgment number and receive a print-out of the annual motor vehicle license stickers for their vehicles.

Based on the success of motor vehicle licenses, the TRA is working on extending mobile money payment options to multiple other tax, license, and fee payments (e.g., traffic-related fines and penalties are now being paid digitally).

2. Port System digitization brings major efficiency gains, and allows for payment integration with multiple financial providers

In 2013, the Tanzanian Government launched the Big Results Now (BRN) initiative – an economic program⁵⁰ aimed at pushing Tanzania from a low-income to a middle-income country by 2025. Transport (both surface and marine) is one of the six priority sectors of focus for the government.⁵¹ In keeping with this goal, the Tanzanian Revenue Authority embarked on a modernization program, with a focus on increasing operational and financial efficiency of the country's ports. The digitization of payments was an integral component of this effort. The Dar es Salaam port, which handles nearly 90%⁵² of the country's export/import traffic clearing on average US\$ 15 billion in merchandise annually⁵³ has been the primary test ground of this initiative.

The port of Dar es Salaam is the second largest in the East African Community after Mombasa, and until 2013 was considered one of the least efficient ports globally.⁵⁴ The impact of systemic inefficiencies at this port was felt not only in the Tanzanian economy but also in six other neighboring land-locked countries⁵⁵ that depend on export and import via the port of Dar es Salaam. According to a World Bank estimate released in 2013, **elimination of systemic inefficiencies at the Dar es Salaam port⁵⁶ could boost Tanzania's GDP by up to US\$ 1.8 billion and \$830 million for the neighboring countries that that port serves.⁵⁷**

The report listed several challenges facing the port, the first of which was the long waiting periods for cargo. In the middle of 2012, ships arriving at the port of Dar es Salaam were required to wait on average for nearly 10 days just to berth and another 10 days to unload. The excessive waiting led to an additional cost of 22% on container imports and 5% on bulk imports, making import of goods extremely expensive for businesses and the economy. Media reports at the time calculated the trade costs between China and

“The government should digitize more payments, particularly those having to do with the police, like the driving license or traffic fines. When I go to the tax office, I always need to pay the officers standing outside, otherwise I need to stand in line for hours and hours. Mobile money brings transparency. It really helps.”

KARIAKOO MARKET CUSTOMER

THE PORT OF DAR ES SALAAM



Brazil were far lower than between Tanzania and China, which is half the distance, primarily due to the inefficiencies of the port of Dar es Salaam.⁵⁸

The second major challenge the port faced was excessive dwell times due to inconsistent customer clearance times and excessive storage.⁵⁹ Customs clearance could range from 87% of goods cleared in 24 hours to only 24% of goods cleared in 24 hours. These inefficiencies also became fertile grounds for rent-seeking behavior, as businesses were often willing to make unofficial payments to reduce wait times at the Dar es Salaam port. To recoup the costs of unofficial payments, businesses would often underreport the weight of cargo and the type of cargo, resulting in revenue losses both for the Tanzania Ports Authority and the Tanzania Revenue Authority. **In 2013, the World Bank estimated the collective loss to the Tanzania Ports Authority and the Tanzania Revenue Authority to be around \$157 million on average annually.⁶⁰ This estimated revenue loss could have financed over 23% of the country's entire health expenditure or 46% of its expenditure in the water sector.⁶¹**

To curb the status quo, and modernize Tanzania's ports, two key initiatives have been undertaken:

I. Tanzania Customs Integrated System (TANCIS)

Launched in July 2014, led by the Tanzania Revenue Authority, and funded by the Government of Tanzania, TANCIS is a technological platform aimed at simplifying cargo procedures, increasing the speed of clearing times of exports and imports, and increasing transparency.

The system, which also integrates with the port authority, allows licensed clearing and forwarding customs agents⁶² to submit all export and import related documentation online, whereas previously agents were required to move from office to office to clear paperwork.

The TANCIS capabilities, including the option of accepting advance payments for cargo clearance, contributed in drastically bringing down cargo wait times, directly reducing costs to businesses and increasing government revenues. Today, the time between document submission and issuance of customs release orders has been reduced from four days to one day. The TANCIS system was designed to reduce export clearance from five days to one, and import clearance from nine days to five. A year after its introduction, in August 2015, TANCIS reported that reduction in import clearance times had surpassed expectations – reducing the nine day clearing time to an average of less than one day.

TANCIS has also increased transparency. The system issues SMS alerts to inform importers of the progress of their clearance request, thus informing them of the progress of their cargo.

The Tanzania Revenue Authority put in place effective steps to on-board, engage, and support clearing and forwarding customs agents. Supported by the Investment Climate Facility (ICF) for awareness generation activities, the Tanzania Revenue Authority invited agents for an interactive workshop to provide training on how to use the TANCIS system, and arranged for frequent visits to agent offices for six months to ensure a smooth transition.

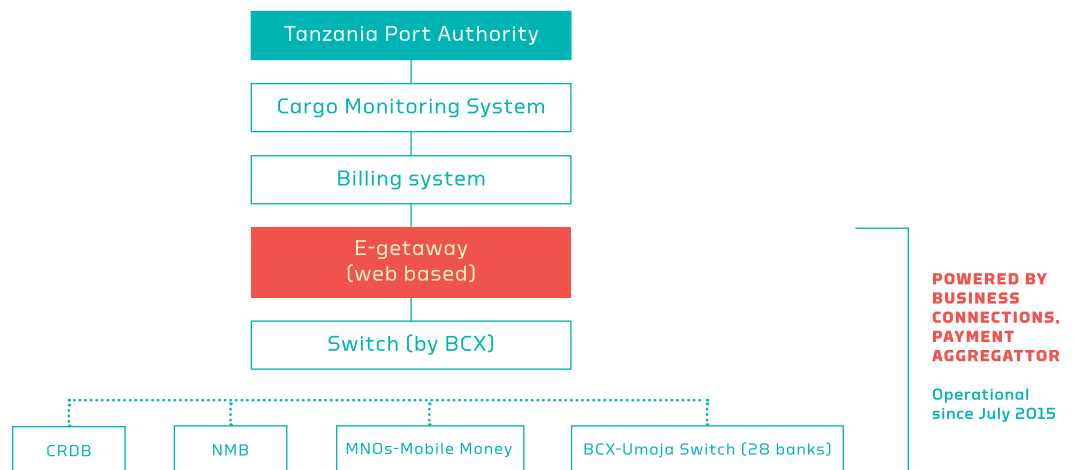
II. Payment Gateway and Digital Payments

A year after the launch of TANCIS, the Tanzania Revenue Authority took its modernization agenda a step further by embracing a fully digital payment system.⁶³ The e-payment system, as illustrated in the below graphic, integrates with all financial service providers. The payment gateway generates a unique Payment Reference Number (PRN) that can then be used to initiate a payment. Users of mobile and internet banking, mobile money, and cards have the option to pay remotely simply by inputting their PRN.

This payment gateway is being facilitated by BCX, the payment aggregator that runs the country’s domestic bank switch – Umoja. There is no cost to payers to use this system. The Tanzania Ports Authority bears the cost of the system – sharing a percentage of revenues that is split among BCX and other financial providers.

“I started using TANCIS, the new e-customs system, nearly two years ago. It’s so much better than the previous system called ASCUDAA++. It used to take me one entire week to clear the goods. I can now make it happen in just one day.”

EMMANUEL
CLEARING AND FORWARDING AGENT
TANCIS USER SINCE 2014



3. National park fee digitization reduces leakage, increases tourism sector revenues by 40% and foreign exchange reserves

Tourism is an extremely important sector for Tanzania. In 2013, the total contribution of the sector (direct and indirect) to GDP was estimated to be 12.7%.⁶⁴ Tanzania is home to 16 national parks, 29 game reserves, and 40 conservation areas, and has seen a rapid rise in the number of international and domestic tourists in recent years, surpassing 1 million tourists per year in 2012. This increase has not only supported increased economic growth and more employment, but has also meant higher foreign exchange earnings for the Government of Tanzania. According to the Bank of Tanzania, the tourism sector was the highest foreign exchange contributor for a second year running in 2015, earning over US\$ 2 billion – an 8% increase from the previous fiscal year.⁶⁵

In 2011, the Ngorongoro Conservation Area Authority (NCAA) – which manages a major tourist attraction including a volcanic crater – decided to go cashless with smart cards (prepaid store value cards) and VISA cards. The NCAA banned cash payments for park entrance fees.⁶⁶ Two years after going cashless, NCAA reported a 40% jump in revenue for the same volume of tourists. Park gate fee revenues went from averaging around TZS 37 billion (US\$ 16 million) to TZS 52 billion (US\$ 23 million)⁶⁷. The NCAA attributed the improvement to the effectiveness of the cashless system in reducing losses occurring due to leakage from the previous cash-based system.

Various parks have now fully adopted digital payment systems and have gone entirely cashless. In December 2015,⁶⁸ the Tanzania National Parks Authority (TANAPA) banned cash payments for park fees from visitors and large tour companies, and for all tourism related services within parks. All national parks in Tanzania are now outfitted with a digital POS (mostly provided by the Cooperative Rural Development Bank, CRDB, and Exim Bank), and can accept VISA, MasterCard and the CRDB bank powered TANAPA prepaid cards. The prepaid cards are available at all CRDB and Exim bank branches.

Tour bus companies that previously carried large amounts of cash have welcomed the shift to digital payments. The TANAPA cards can be easily topped up online or at any CRDB or Exim bank branch. There is no cost to visitors or the tour companies to use these TANAPA smart cards.

TANAPA is currently in the process of developing a new electronic payment gateway system.⁶⁹ The online system will allow tourists to select the national park of interest, choose one or multiple activities and pay electronically. These digital payments will directly hit TANAPA's accounts while the customer will be electronically issued a unique payment reference number – thus ensuring greater efficiency, while increasing customer convenience.⁷⁰

Some tour operators are now lobbying the NCAA (which does not fall under TANAPA supervision) to update its electronic payment gateway system to a system similar to the CRDB system. The NCAA system is considered by some tour operators as dated because it still requires tour operators to directly deposit cash at banks and provide bank slips in order to obtain prepaid smart cards. Also, the POS machines only accept VISA cards – requiring tourists using MasterCard to undergo the same bank-slip based top-up procedure to obtain a smart card.

Cooperative Rural Development Bank steps to digitize payment collection across National Parks

In a strategic effort to increase its competitive edge and boost revenues, the Cooperative Rural Development Bank (CRDB) approached the Tanzania National Park Authority (TANAPA) in 2011 with a proposal to digitize park entrance fees. CRDB developed the park fee payment solution, and integrated it across VISA and MasterCard payment networks. For tourists not on these global networks, CRDB developed the closed-loop TANAPA card that could be topped up by cash.

CRDB made significant investments in the following areas, to ensure the successful uptake and seamless implementation of the solution:

- I. Capital investment in Point-of-Sale (POS) terminals and satellite dishes with two-way communication in 16 national parks.
- II. Capacity building of cashiers and accounts staff on reconciliation and the usage of cards.
- III. Education of tour operators through quarterly seminars, including instruction on how the cards worked, top-up methods, problem-solving, and dispute resolution.
- IV. Customer-awareness through media campaigns and signage in national parks, and installation of VISA and MasterCard acceptance signage.

CRDB on-boarded national parks onto its system in a phased manner, at the rate of four parks per year over four years.

The biggest challenge that CRDB faced during this process was around communications infrastructure. Connectivity was often poor in the national parks, resulting in down times. CRDB eventually moved from working on a lease basis with a private satellite provider to investing in their own communication infrastructure to improve connectivity and reliability of transactions.

According to qualitative interviews with CRDB in early 2016, in addition to customers, around 400 tour operators in the country use TANAPA prepaid cards. CRDB has **ALREADY ISSUED OVER 1 MILLION CARDS**. TANAPA has seen a surge in revenues due to digitization which is split with CRDB under a revenue sharing agreement.

Digital payments: Boosting safety and security in Tanzania's tourism sector

YUSUF AJUMA
TOUR OPERATOR
DAR ES SALAAM

Yusuf is a manager at a travel company that organizes customized safaris for tourists. Currently the company has eight drivers. Each driver typically escorts around five tourists per Safari - a total of 40 tourists at any give time during the peak season. Yusuf manages tourist and operator entry fee payments to the 16 National Parks covered under the Tanzania National Parks Authority and the Ngorongoro Conservation Area Authority, as well as accommodation and safari guide payments.

Park entry fees average around TZS 109,400 (US\$ 50) and are required to be paid in US dollars. Most lodges also price their rooms and other facilities in US dollars. These arrangements require tour operators to send drivers with large amounts of cash, mostly in US dollars as well as smaller amounts in Tanzanian shillings to cover their daily expenses.

Prior to the launch of the TANAPA Cards for park entry fee payments, tour operators faced multiple challenges with cash payments, in particular drivers frequently faced theft of cash. The introduction of the TANAPA Cards (available both in US dollars and Tanzanian shillings) has dramatically improved safety and security for tour operators and drivers.

However, digital payment have not been free of challenges, most significant among them network coverage issues in parks that are remote and far from usual cellular network areas. It is not uncommon for drivers to reach a national park and find that either network connectivity is entirely down, or that payments cannot be processed because of major time-lags in connectivity.

Now that TANAPA has banned cash fee payments to enter parks, drivers and tourists have no option but to wait until network coverage comes back up and payments are successfully authorized.

"I definitely prefer using the TANAPA Card to cash. It's so much safer. Our drivers no longer need to carry around large amounts of cash which can easily get stolen," Yusuf said.



4. New digital payment instruments are acting as a gateway to digital payments

Banks and payment aggregators in Tanzania are increasingly driving P2G, B2G, and P2B. Small-value closed-loop payment instruments have substantial limitations – notably, they are not redeemable in cash – but can nonetheless be an introductory gateway for people who are yet to adopt digital payments or those excluded from the financial system.

Closed-loop hospital payments



CRDB has developed a closed-loop hospital prepaid card to facilitate cashless payments. Called the “Tembo Pre-Paid Hospital Card,” this payment instrument was designed to reduce the burden of cash collection at hospitals. The solution was initially developed in 2014 as a cashless digital payment solution for the Kilimanjaro Christian Medical Center (KCMC), a private hospital. Cash collections had become a liability for the private hospital, where over 50% of payments were made in cash.⁷¹ The hospital was facing revenue losses, increasing costs around cash-management, and frequent instances of cash theft.

Today, CRDB has extended the TemboCard to nearly 10 private, public, and referral hospitals, building a network of hospitals that accept this payment solution. The TemboCard operates as follows:

- Once a hospital agrees to implement cashless payments, CRDB establishes an agent window at the hospital to provide cash-payment patients with a TemboCard.
- The hospital’s cashiers are equipped with CRDB POS machines that accept VISA, MasterCard and TemboCard payments.
- Typically, patients who wish to make cash payments are directed by the hospital staff to the CRDB agent window.
- The CRDB agent has a supply of pre-activated TemboCards.
- Patients are issued a TemboCard for a nominal fee of TZS 1500 (US\$ 0.70).
- Patients can top up the TemboCard in cash or via mobile money.
- After the completion of a consultation or any other medical procedure, hospital cashiers swipe the TemboCard and print out a cash receipt for the patient.
- Patients are encouraged to retain the TemboCard. The card comes with a one-year validity and becomes dormant if not used for at least one hospital payment in a year.

According to qualitative interviews with the information technology team at CRDB headquarters, the hospitals that have adopted this cashless payment method have seen a steep rise in their revenues.

For KCMC, the increase in revenue when compared to the same fiscal period was 66%, resulting from lower leakage, and more efficient cash-management.

Most importantly, these closed-loop payment options have become a gateway to introducing customers to digital payment instruments. CRDB has plans to integrate these closed-loop customers with its formal banking services in the near future.

5. Digital payment instruments have the potential to on-board new users

Bill payments are the most common form of P2G and B2G payments. The uptake and adoption of remote digital bill payments – especially utility payments through ATMs and mobile money – has been the primary driver of digital P2G and B2G payments in Tanzania, helping transition the Tanzanian economy steadily from cash-heavy to cash-lite.

The Dar es Salaam Water and Sewage Authority (DAWASA) is a parastatal entity with a government mandate to provide water and sanitation services. It entered into a 10-year lease agreement with the Dar es Salaam Water and Sanitation Corporation (DAWASCO) to distribute water in the Dar es Salaam region and a few coastal areas. DAWASCO is entirely state owned but semi-autonomous.⁷²

In 2009 DAWASCO was the first utility in Africa to enable bill payments via mobile money.⁷³ Customers could pay water bills at any of the DAWASCO cash collection points, use mobile money, or pay at a bank. However, until 2011 92% of water bills were still paid at DAWASCO cash collection points.

In 2012, as a part of its two-phase modernization agenda, DAWASCO shut down its own cash collection points. Customers today have the option to make payments through any of the following channels:

- (i) Mobile Money
- (ii) M-banking facilitated by Selcom
- (iii) Card, over-the-counter cash, and mobile money payments at Selcom and Maxcom pay-points
- (iv) Over-the-counter cash payments at CRDB, NMB, Post Bank, Barclays, Standard Chartered, and Bank of Africa
- (v) Checks – mostly used by other government agencies
- (vi) Tanzania Interbank Settlement System (TISS) or Real Time Gross Settlement (RTGS) ⁷⁴

Eliminating cash collection points and offering customers multiple payment options has benefited DAWASCO substantially, with these benefits amplified further by the rise in popularity of mobile money. **In 2013, DAWASCO reported that water bill payments from M-Pesa alone had increased utilities revenues by TZS 1 billion per month⁷⁵ (slightly over US\$ 45,000 per month, or US\$ 540,000 annually) – a 28% increase.**

Customers benefitted immediately as they were no longer required to spend hours waiting in long queues, and because they received instant acknowledgment of utility payments via mobile money. DAWASCO reports that these benefits have attracted new and dormant customers, increasing DAWASCO's customer base from 25,000 households in 2013 to 148,000 households today.

At the time of publication of this study, DAWASCO reported that it was collecting around TZS 7 billion (US\$ 3 million) in monthly revenue.⁷⁶ A large proportion of these payments are made digitally. Some high-value payers, like government universities and other institutions, still use check payments. However, with the Bank of Tanzania introducing check truncation and eliminating the use of checks, the payment channel, at the very least, will soon become digital. Digital payments have helped DAWASCO gain insights into its cash-flow and have lowered the costs of record-keeping.

DAWASCO is currently in its second phase of modernization which involves overhauling its customer information and payment system to allow for fully automated billing, real-time visibility into payments, and the integration of a payment gateway, expected to launch in 2016. DAWASCO compensates financial service providers by giving them a percentage of the value of payments that flow through their payment systems.



5. P2G AND B2G PAYMENTS IN TANZANIA: FROM PRESENT TO FUTURE

1. Digitization of key taxes

Tax payments are the most common form of P2G and B2G payments globally. **In Tanzania, tax inflows make up nearly 90% of government revenues excluding grants.**⁷⁷ However, with the tax-to-GDP ratio averaging around 12% (post rebasing of the economy)⁷⁸, over the past three years⁷⁹ Tanzania's tax collections have managed to cover only about three-quarters of the government budget. In recent years, Tanzania has experienced lower than expected tax collections,⁸⁰ particularly under Value Added Tax payments, in combination with reduced aid, and substantial outstanding arrears (including the five mandatory social benefit schemes), making tax revenues a critical payment stream for the government.

According to a 2012 report released by the Interfaith Economic Council of Tanzania entitled "The One Billion Dollar Question: How can Tanzania stop losing so much tax revenue," the authors validate an earlier World Bank estimate on tax evasion (underreporting of sales and over inflation of losses) – estimated to be nearly 30%.⁸¹ In other words, there is a 30% shortfall between tax payments owed to the Tanzania Revenue Authority and payments actually received, or a 70% compliance rate.

In fiscal year 2014-15, the Tanzania Revenue Authority (domestic and large tax-payer department) collected approximately \$690 million (1,511 billion TZS) from Value Added Tax (VAT)⁸² and around \$8.13 million (17 billion TZS) in capital gains tax. Assuming a compliance rate of 70% that the two studies mentioned above verified independently, **this case study calculates that the Tanzania Revenue Authority lost nearly US\$ 300 million (or TZS 656.4 billion) to VAT tax evasion in fiscal year 2014-2015 alone.**⁸³

It is important to note that the above-mentioned losses are a broad estimate of potential losses as of 2012. Since then, efforts by the TRA to increase compliance will have narrowed the revenue loss gap. Also, in order to prevent revenue losses from potential loopholes the government of Tanzania on the 19th of December 2014 passed the Value Added Tax Act⁸⁴ which aims to decrease tax evasion loopholes and VAT exemptions – the full impact of which will be realized in fiscal years 2015-16 and beyond.

This study estimates that the
Tanzania Revenue Authority lost nearly

US\$ 300 million

in fiscal year 2014-15 alone to VAT tax evasion

Tanzania's shadow economy is estimated to be **\$19-27 billion** (2014).

Under-reporting and non-formalization by informal businesses could be costing the Tanzanian economy anywhere between \$6 billion to \$9 billion i.e., **nearly the entire governmental budget** of 2015/2016, which was \$10.28 billion.

Digitization of tax payments presents a significant opportunity for Tanzania to make further progress formalizing what is still a highly informal economy, ultimately increasing government revenues. A McKinsey report "Forging a path to payments digitization (2013)" demonstrates that for cash heavy economies (Tanzania included) there is a clear correlation between cash usage and the size of the shadow economy that is neither being taxed nor being monitored. In the case of Tanzania, a study by the Tanzania Revenue Authority in 2011 estimates the shadow economy to be nearly 40% of GDP⁸⁵. In "New Estimates for the Shadow Economies all over the World" published by the International Economic Journal, in 2010, authors Andreas Buehn, Friedrich Schneider, and Claudio Montenegro estimated the size of Tanzania's shadow economy to be around 56.4% of GDP⁸⁶ while other research by Ceyhun Elgin, Oğuz Oztunali, of Bogazici University⁸⁷ in 2012 estimates this to be around 52.2% of GDP.⁸⁸ Using the above range of the size of the shadow economy i.e., from 40% of GDP to 55.2% of GDP – this translates to a shadow economy of anywhere between \$19 billion to \$27 billion, using the GDP for 2014 at \$47 billion.

In 2013, AT Kearney supported by VISA conducted a study on the size of shadow economies in Europe. The study estimated that as a general rule of thumb, two-thirds of the size of a shadow economy is undeclared work and one-third comes from under-reporting and non-formalization – primarily by small businesses and individuals that conduct a lot of cash transactions. If we apply the same under-reporting estimates for Tanzania, the size of under-reporting by the informal economy would be anywhere between \$6 billion to \$9 billion (2014 GDP estimates).

2. Tanzania's steps toward tax modernization and digitization

In 2012, the Tanzania Revenue Authority introduced electronic filing of VAT for large businesses (above a threshold of TZS 100 million or slightly greater than \$46,000), reducing the administrative burden and cost to business of filing VAT returns. According to a detailed user guide published by the TRA, traders with a Tax Identification Number (TIN) could register for e-filing of taxes, submit their returns online, and receive an acknowledgment of tax submission. This process was a major improvement on earlier VAT filing processes. For the government, it reduced the long queues, filing, and reconciliation challenges, increasing customer convenience and hence compliance. For the users – who would typically spend at least one to two days waiting in line to file tax returns, the opportunity to electronically file taxes has helped them save time and costs, and prevent loss of business.

Digital Payments: Making Business Easier

**STORE EMPLOYEES,
KARIAKOO MARKET**

The owner of this store recalls the previous system of VAT payments that involved physically filing VAT payments quarterly, resulting in the loss of nearly one day's worth of business each quarter. Specifically, VAT payment required standing in long queues at TRA offices, followed by VAT payments at a bank after obtaining an assessment slip from the TRA.

This store was an early adopter of e-filing and digital payments. Through e-filing, the business instantly receives an acknowledgment from the TRA and a payment reference number. The business owner can now print the reference number and directly pay at any bank branch convenient to her.

Most banks are now TRA tax collection agents, and are thus linked to the TRA backend system for processing of payments. Once a taxpayer provides their payment reference number, the collection agents are able to verify the taxpayer's tax obligations and directly initiate an EFT from a customer's account or even accept a cash payment. In both the digital and the non-digital case the taxpayer is provided with a physical receipt of payment. Taxpayers whose banks offer internet banking can also initiate payments through their internet banking accounts.



The Tanzania Revenue Authority directly compensates banks that act as collection agents. Banks receive from 0.4% and above of the value transferred, depending on their deposit base and reach. By not requiring banks to remit taxes daily, the TRA also provides a form of indirect compensation, because banks have funds at their disposal for a longer period that can be used for other revenue-generating activities.

3. The Revenue Gateway System

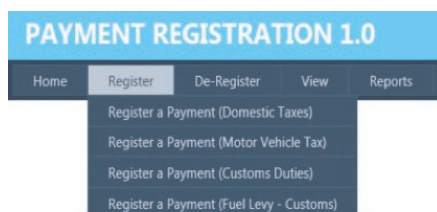
In fiscal year 2013/14, the Tanzania Revenue Authority introduced the Tanzania Revenue Gateway System (RGS). This payment gateway is expected to act as an interface between the TRA, the Bank of Tanzania, all commercial banks, and other financial service providers like mobile network operators. It will give customers the ability to make tax payments digitally and remotely. The RGS became fully operational in June 2015.⁸⁹ The RGS system simplifies the tax payment process for millions of customers, and eliminates the potential of fraud and leakage through an automated and transparent payment process.

The Revenue Gateway System can accept three types of payments:

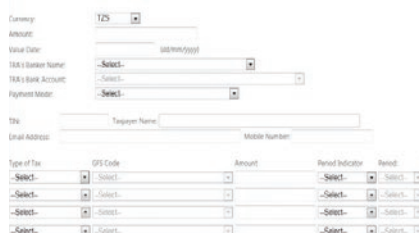
- I. **Large Value OR Tanzania Interbank Settlement System (TISS) payments** Large taxpayers (i.e., those filing tax payments higher than TZS 5 million per month, or US\$ 2,285) can initiate an RTGS via the TISS system. Any tax payment above this amount is directly transferred by commercial banks to the Bank of Tanzania's central collection account.
- II. **Small value or retail tax payments** These payments are made through banks and deposited directly into bank-specific TRA collection accounts. Most tax payments that are below TZS 5 million (US\$ 2,285) are collected and held in TRA accounts with designated commercial banks that act as TRA agents. In these types of payments, banks are required to remit taxes collected three times a week to the Bank of Tanzania.
- III. **Mobile money payments** The RGS can accept mobile money payments. The payments are collected in pooled TRA accounts of MNO partner banks and remitted to the Bank of Tanzania three times a week.

Below are images of how tax payments are initiated via the new Revenue Gateway, the various payment options that are available, and payment acknowledgments.

1. Taxpayers can select the type of tax payment they would like to initiate.



2. Taxpayers enter payment details.



3. Taxpayers receive a payment reference number. Taxpayers can then quote this control number while initiating transactions remotely via internet banking, mobile-banking, mobile money, or in person at a bank branch.





4. Electronic Fiscal Devices

In 2010 the Tanzania Revenue Authority made it mandatory for all tax-registered traders to start using Electronic Fiscal Devices (EFDs) in order to issue electronic receipts to customers. An EFD is typically connected to the TRA's network either through a SIM card or a computer network and is used to monitor business transactions. Electronic Fiscal Devices are a compliance tool used by revenue authorities world-wide. Every sale is electronically recorded when customer receipts are issued, giving the TRA a clear view into the tax liabilities of every VAT-registered trader (noting only traders with over TZS 100 million or US\$ 46,000 in annual turnover are required to be VAT registered in Tanzania).

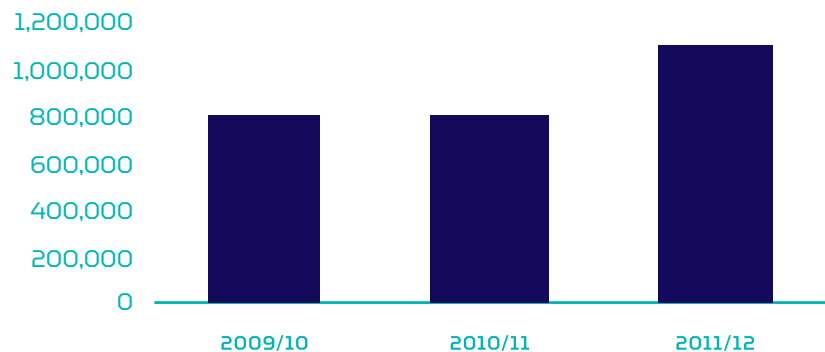
However, since their introduction EFDs have met with significant resistance. In the first phase of implementation (2009-12) many large value traders protested against the usage of these devices, although over this three-year period, nearly 90% of the large value traders had adopted the usage of EFDs.⁹⁰

Even so, key issues of tax avoidance remain. Notably, not all sales are recorded, as the demand for printed receipts are customer-driven. If customers did not ask for electronic receipts, traders were sometimes willing to offer lower prices since doing so gave them the option to **not record sales** on fiscal devices, thus enabling them to report and pay lower taxes.

Despite inconsistent usage of EFDs, according to media reports, the TRA witnessed a 40% jump in revenues between fiscal years 2009/10 and 2011/12, which the TRA attributed to the introduction of EFDs.⁹¹

A second phase of the EFD rollout in 2013 required **smaller traders** with over TZS 14 million or approximately US\$ 6,400 in revenue annually to start using EFDs. This requirement was met with intense resistance, protest rallies, and large market places like Kariakoo in Dar es Salaam shut down by businesses to draw attention to their opposition to EFDs and apply pressure for the policy to be reversed.

VAT Revenue Growth in MN TZS



The key issues raised by traders – which also provide insights into the implementation of digital B2G revenue collection, were as follows:

a. Traders resisted bearing the capital costs of new taxation technology and hardware

Many traders objected strongly to bearing the cost of an EFD, which was between TZS 600,000 and TZS 1 million (US\$ 274 - US\$ 460). The TRA did not require traders to pay this cost up front. Rather, traders had the option of paying down the cost of the EFD by deducting the cost of the device per month from their VAT obligations.

Additionally, when EFDs were introduced, traders were apprehensive about a device they did not know how to use, maintain, and if needed, replace, and so objected particularly to bearing the cost of device maintenance.

b. Traders feared using EFDs would subject them to paying higher taxes, and put them at a competitive disadvantage

EFDs have the potential to simplify VAT payments for traders by automatically generating a record of the value of goods sold and the total amount of VAT they owe. However, many traders interviewed for this case study viewed EFDs as a tool of “over-taxation,” and expressed fears that EFDs would formalize their entire business, requiring them to pay higher taxes and potentially also back-taxes. This points to a need – frequently observed in many countries on pathways to digital payments – to clearly communicate the benefits of moving to digital forms of payments, and allay fears that micro and small businesses in particular have about joining the formal economy.

Some traders interviewed for this case study noted they might more willingly adopt EFDs if all other businesses were required to adopt them, with this requirement fully enforced, to ensure fair competition.

Toward the end of 2015, the Tanzania Traders’ Associations reached an agreement with the newly elected federal government agreeing to the use of EFDs from January 2016. In this agreement, the Government of Tanzania agreed to negotiate on subsidizing EFDs for all traders, reflecting their concerns about bearing the cost of acquiring and maintaining the devices.⁹²

Digital payments: Moving Tanzania in the right direction

ABDUL HASHIM
BOOKSHOP MANAGER
KARIAKOO MARKET
DAR ES SALAAM

Hashim is a manager at one of Kariakoo Market's oldest bookstores. Kariakoo is Dar es Salaam's most extensive market, covering several city blocks, and is densely populated with micro, small, and medium businesses.

Hashim's bookstore has purchased and uses an electronic fiscal device, at a cost of TZS 800,000 (US\$ 365.6). "This cost is fine with us. We paid TZS 800,000 plus maintenance. But some other businesses in Kariakoo complained because it was too expensive. They could not afford it," Hashim said.

Another revenue stream for the bookstore is as a Selcom and Maxcom agent using a point-of-sale device to receive payments. Specifically, many people come to the store to make electricity and water bill payments via these aggregator POS machines. Maxcom also offers annual motor vehicle license permit payments, but Hashim said very few customers know about this capability.

Hashim thinks that service providers need to do more in the areas of agent training and support. Hashim said he received very brief training on how to use the POS devices when the store decided to become a Selcom and Maxcom agent, but wishes this training had been more rigorous.

Even so, Hashim is very optimistic about the role of digital payments in Tanzania's future: "Going digital is moving our country in the right direction. Digital payments are helping people here at Kariakoo. We don't need to go to the government offices and stand in line for hours at the bank to pay for our electricity and water bills. My customers can just come here and get it done quickly."



“ To pay for my children’s education, I still need to pay at the bank, not through mobile phone, because the headmaster wants to see the paper receipt. With mobile money it would be much more convenient.”

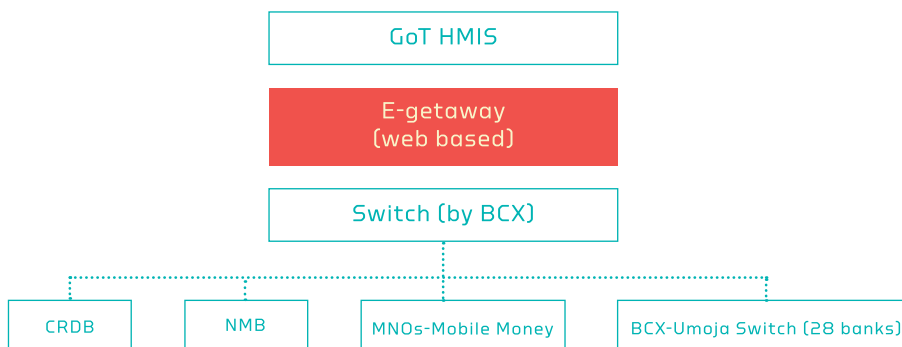
MR. RIDIHWANI DIMAS MSUYA
MOBILE MONEY AGENT AT
KARIAKOO MARKET,
DAR ES SALAAM

5. Digitization of health and education sectors

A range of digital payment options already exist in the health, education, and transport sectors in Tanzania, however stakeholders (particularly among aggregators and MNOs) are expecting new digital payment options to emerge in these sectors in the period ahead, according to interviews conducted for this case study.

In the case of education, several private educational institutions provide the flexibility of paying digitally, including with mobile money. However, the bulk of the private and public⁹³ school fee payments are non-digital. Aggregators and banks in the country are working toward acquiring schools as clients, helping them digitize their databases and school-fee payments, also providing them with electronic platforms that integrate with multiple financial service providers.

The public health sector in the next two years is expected to develop the ability to accept a range of digital payment instruments. The Kibaha Education Center (KEC) – a Prime Minister’s Office of Regional Administration and Local Government (PMORLGA) affiliated institution, Mzumbe University, and the payment aggregator Business Connexion have created a partnership to roll out cashless hospital payments. Each of the three institutions brings different capabilities to this partnership. KEC has developed the backend hospital management information solution. Mzumbe provides capacity-building of staff, training them to use electronic systems for record keeping, payment collections, and reconciliations. Business Connexion provides the payment gateway that can accept payments from POS machines, mobile money, m-banking, and card payments.



Digital payments: Making a Difference for Tanzanian Women in Business

FLORENCE EDWARD KESSY
GROCERY STORE OWNER
AND MOBILE MONEY AGENT

Women are active participants of Tanzania's micro, small, and medium business sectors, making up 54% of owners and managers, according to the most recent Financial Sector Deepening Trust's (FSDT) Medium Small and Micro Enterprise Survey.

Florence is a grocery store owner who bought a TRA Electronic Fiscal Device, and is one of the early adopters of digital payments. She is also a Tigo, Vodacom, and Maxmalipo mobile money agent.

Florence appreciates the flexibility and convenience of digital payments. In fact, she has been paying her annual motor vehicle license fees and utility bills to the government via mobile money since the time digital payment became possible for these services.

Florence would like to be able to make tax payments to the TRA and business license payments to local government digitally, as the current process for making these payments is extremely inefficient and time-consuming; the entire process costs her a day of lost revenue.

As an immediate step, Florence would like to be able to make small payments like branding, business license, and others to the local government via mobile money. According to Florence, "it would be useful if we could pay the local government via mobile money. It would save me time and would be much simpler to use."



“ I would like to pay for my daughter’s school fee through mobile money, but it’s not possible. It would be much easier and more secure. We still use cash to pay for both school and hospital. I would also like to be able to pay taxes to my local government digitally. I pay for my water and electricity bills through my mobile wallet and it’s much more convenient.”

MS. FLORENCE KESSY
GROCERY STORE OWNER
AND MOBILE MONEY AGENT

“ The best thing the government can do is to ban cash for payments like fees for public schools and hospitals.”

MS SAKINA ALI
MOBILE MONEY AGENT

How do payments work? The hospital cashier creates invoices for every patient. Each invoice comes with a unique invoice number. Patients who want to pay via mobile money or mobile banking can simply initiate a transaction on their mobile device, and enter the invoice number. Upon completion of a successful payment, the cashier is able to view a receipt of payment. This solution also helps patients facing cash shortfalls at a hospital, as they can share their invoice number with family members who have the option of either remotely initiating a payment transaction via mobile money or m-banking.

This solution is currently in a pilot phase. Business Connexion plans to expand the solution to around 27 private and public hospitals in the country. This is an open loop system, meaning that patients and their families can choose the digital payment instrument of their choice to make a payment.

6. Digitization of Local Government Payments

The success of digital revenue collections by the Tanzania Revenue Authority (for example, for annual motor license fees) and by utility companies (for water and electricity) has motivated many local government authorities to use mobile money as a means of payment collection. Currently, there are over 163 local government councils in Tanzania who collect more than 40 local government fees from businesses and individuals.⁹⁴

According to a report published by the Prime Minister’s Office for Regional Administration and Local Government in 2013 – “A Study on LGA’s own source revenue collection,”⁹⁵ most of these local councils collect less than 10% of their total revenue through fees, and depend on federal government funding for the remainder of their revenue. Various types of financial service providers are currently working with local councils helping them digitize their payment collection methods. Dayone Softcom Technologies is one such example. Dayone is working on the design and development of a local government revenue collection information system (LGRCIS) as part of the Tanzania Strategic Cities Project (funded by the World Bank)⁹⁶ for 15 local governments. They also link existing revenue collection systems to other financial providers.⁹⁷

6. KEY LESSONS AND NEW OPPORTUNITIES

1. An overarching integrated payments strategy including interconnectedness of payment instruments, can further accelerate digital payments in Tanzania

Tanzania's financial services market is dynamic and highly competitive. Various players have launched or are in the process of launching different types of digital payment solutions. While some leverage existing interoperable payment systems, others are closed loop, preventing the movement of user funds across systems, thereby limiting the utility of those systems. In order to increase the utility and therefore adoption of digital payments solutions, there is a need to ensure greater connectivity and interoperability between payment instruments and across payment systems.

This presents an opportunity for the private sector and public policymakers, particularly in the central bank, to collaborate more closely to develop solutions that increase customer bases and further drive financial inclusion. More broadly, the efficiency and rates of adoption and continued usage of digital payments could be further improved by an overarching digital payments strategy, presenting another opportunity for further collaboration between the government, private sector, and development partners.

While progress toward digitization and financial inclusion in Tanzania has been impressive, there is recognition of the need to more closely integrate the digitization strategies and capabilities across various government agencies, particularly key agencies including the Tanzania Revenue Authority, Business Registration and Licensing Agency,⁹⁸ and the Prime Minister's office of Regional and Local Government (PMORLGA). For example: The TRA issues Tax Identification Numbers (TINs) while the Local Government office issues trading licenses, often in the absence of a TIN, as the two agencies are yet to have integrated systems. This substantially limits the visibility the TRA has into the number of new businesses that are trading every month. This in turn tends to encourage the growth of Tanzania's informal or shadow economy.

The Financial Sector Deepening Trust of Tanzania in 2010 conducted a baseline survey of micro, small, and medium enterprises (MSMEs). The study estimated that there were nearly 3.1 million MSMEs in the country contributing to nearly 27% of GDP or \$12.9 billion in 2014 terms.

The direct loss of revenue to the government from micro, small, & medium businesses in Tanzania, each year is around **us\$ 144 million**. Closer integration of digitization strategies and capabilities across government agencies is a key way to prevent these losses.

This study estimates the Tanzania Revenue Authority **lost nearly US\$ 300 million** in fiscal year 2014-15 alone to non-compliance of VAT payments and another **US\$ 177 million** to the large number of informal businesses outside of the financial and tax system.

The study estimated that 68% of MSMEs were outside the financial system with an average monthly income of TZS 442,00 (\$ 203) or TZS 5.3 million (\$ 2,436) annually. Just on the basis of this baseline, and using the lowest VAT payable for this annual turnover (TZS 150,000 or US\$ 68 for “incomplete records”), the direct loss of annual revenue from this informal segment of the economy is close to TZS 316 billion (US\$ 144 million) at the very least. In fact, this yearly loss is capable of funding over 30% of the agricultural budget expenditure for the country.⁹⁹

As both the TRA and various Local Governments are undergoing large-scale digitization programs to build on Tanzania’s digitization and financial inclusion successes to date, there is scope to improve digitization outcomes, and substantially increase government revenues, by ensuring further integration of the digitization strategies and capabilities of the two agencies, and across other relevant government agencies.

2. Seamless digital payments require a robust backend infrastructure

The key to a seamless flow of payment information and integration across instruments is a robust technology backend that is capable of real-time validation, acknowledgment, and periodic reconciliation. Multiple government agencies including the Tanzania Revenue Authority, local government councils, and others are looking to improve collections through digital payments. However, the success of these efforts will depend on whether their backend technology and infrastructure can provide users with real-time information on the amount owed, payment flexibility, and instant confirmations. Familiarity and trust are key factors in shifting usage patterns, so technical integrations that are unreliable (e.g., inconsistent payment confirmations or frequent system downtime) will immediately decrease customer trust.

Emmanuel is the clearing and forwarding agent mentioned in the earlier chapter of this case study. Emmanuel’s firm has a bank account; however, the firm does not use that account to make direct digital payments for import duties on the aforementioned TANCIS system. Instead, Emmanuel submits all documents online onto the TANCIS system, prints the amount due and the acknowledgment number, goes to a bank to withdraw the amount payable in cash, and then pays in cash at the bank and gets a bank slip as acknowledgment in return. If the amount is large, the bank then automatically conducts an RTGS on behalf of the company.

Emmanuel knows that he can pay online through internet banking or via mobile money, however his firm does not use this option because payment acknowledgment is not reflected in the system in real time. In order to prevent the uncertainty surrounding the acceptance of payment, Emmanuel prefers to go to the bank physically and receive a written acknowledgment. Emmanuel’s firm does not see mobile money as a viable option, since wallet sizes are limited to around US\$ 1,500 - US\$ 1,700 or TZS 3.2-3.7 million, and most import duties for large containers are substantially over this limit.

3. User experience can impact the rate of customer adoption of digital payments

Many businesses interviewed for this case study reported having varied experiences with respect to frontline staff of government agencies and their knowledge of digital payment options available. While some businesses were aware they were entitled to pay for some select services digitally, they noted that frontline staff of government agencies were often not familiar with these payment options.¹⁰⁰ In order to ensure that digital payment policies are effectively implemented resulting in high adoption rates, governments should actively consider providing clear and consistent training to staff at government agencies.

4. Consumer awareness of digital payments options requires collective effort by the public and private sector

Customer awareness of digital tax payment options in Tanzania is still low. Among the 23 micro, small, and medium businesses interviewed for this study, only two were aware that they could file and submit their VAT online. Similarly, less than half were aware that they could pay their vehicle road license fees digitally. While Tanzania is making promising strides when it comes to acceptance of digital payments for various government payments, there remains work to do in terms of lifting user awareness, presenting an opportunity for government to play a leading role.

Interestingly, among all the businesses interviewed, none said that their bank had urged them to use a digital means to pay dues to the TRA. This points to a significant role that financial service providers can play to encourage individuals and businesses to adopt digital payments. However, it is important to note that awareness is only a first step, and must be accompanied by viable pricing structures that make it more cost-effective to make payments to government digitally, as opposed to withdrawing cash from ATMs.



5. Without digital tax assessment capabilities, digital payments provide only marginal benefits

Micro, small, and medium businesses that are required to pay corporate income tax are required to go through a tax assessment process. Businesses submit their sales records or receipt books to the Tanzania Revenue Authority, and based on that information the TRA assesses their tax liability. This process requires business owners or representatives to physically travel to a TRA office to submit these documents and obtain a paper copy of their tax liability. Once an assessment has been completed, the business is provided with a paper copy of its tax liability. Since most business owners or representatives must travel to the TRA offices anyway for their assessment, the convenience that arises out of the ability to pay remotely through digital payments is marginal.

Additionally, a majority of businesses interviewed for this case study did not know that they could instruct their bank to transfer their income tax due from their bank account. Instead, most business owners or representatives withdraw cash from the ATM and pay their tax liability in cash at the bank.

6. Public and private sectors must work together to deliver a systemic shift away from paper receipts and acknowledgments

Mobile money account holders interviewed for this case study were largely comfortable making small value payments through their phone. However, for all large value payments or time-sensitive payments (like school fees or taxes) they tended to prefer non-remote payments, either through payment agents, by paying in cash at a bank or by instructing a bank to transfer funds from their accounts. Users usually wanted a hard copy receipt of large value payments, partly because they were unclear on the legal recourse provided by SMS notifications as evidence of payment. Accordingly, a systemic shift is needed around physical acknowledgments of payment in which digital forms of payment acknowledgment are recognized as legal proof of payment.

It is worth noting that many users also preferred hard copy receipts of taxes, utility bills paid, and other payments, as they could also serve as various forms of identification or evidence of liquidity. For example, evidence of taxes paid over a period of years is often a prerequisite for a small business applying for a loan. Similarly, utility bills paid often serve as residential proof.

“ I'd like to think that Tanzania will be a cashless society soon. Making payments digitally is so much easier and more secure than cash.”

MR. RIDIHWANI DIMAS MSUYA
MOBILE MONEY AGENT
AT KARIAKOO MARKET



ANNEXES

Piga *150*00#

Piga *150*00#

M-PESA
TIGO-PESA
VOCHA ZIPO

Niuliziwa Ma

PRINCES MURO &
LUCKY STAR
BOOKING
DAR-SCDSH
... MBEYI
DAR-KAHAMABU
... NZEGA-TABURA
DAR-MUSOMA-DAR-GEITA
DAR-MOSHI-ARUSHA
NAIROBI
DAR-LUSAKA
... IRINGA
DAR-KYELA
... MORO

Acronyms

ANA	Agent Network Accelerator
B2G	Business-to-government
BOT	Bank of Tanzania
BOTECH	BoT Electronic Clearing house
BTCA	Better Than Cash Alliance
CGAP	Consultative Group to Assist the Poor
CICO	Cash-In and Cash-Out
CRDB	Cooperative Rural Development Bank
DAWASA	Dar es Salaam Water and Sewage Authority
DAWASCO	Dar es Salaam Water and Sanitation Corporation
DFS	Digital Financial Services
EFD	Electronic Fiscal Devices
EFT	Electronic Fund Transfer
E-MONEY	Electronic Money
FII	Financial Inclusion Insights
FSDT	Financial Sector Deepening Trust Tanzania
FSDU	Financial Sector Deepening Trust Uganda
GDP	Gross Domestic Product
GOT	Government of Tanzania
GSMA	GSM Association
ICF	Investment Climate Facility
ICT	Information, Communication and Technology
IMF	International Monetary Fund
KCCA	Kampala Capital City Authority
KES	Kenyan Shilling
KRA	Kenya Revenue Authority
MENET	Ministry of National and Technical Education
MFS	Mobile Financial Services

MNO	Mobile Network Operator
MSME	Medium, Small, and Micro Enterprises
NSSF	National Social Security Fund
NWSC	National Water and Sewage Corporation
OTC	Over-the-Counter
P2G	Person-to-Government
PHILHEALTH	Philippine Health Insurance Corp
PMORLGA	Prime Minister's office of Regional and Local Government
POS	Point of Sale
PRN	Personal Reference Number
RRA	Rwanda Revenue Authority
RTGS	Real Time Gross Settlement
SIM	Subscriber Identity Module
SMS	Short Messaging Service
SSS	Social Security System
TANAPA	Tanzania National Parks Authority
TANCIS	Tanzania Customs Integrated System
TCRA	Tanzania Communications Regulatory Authority
TIN	Tax Identification Number
TISS	Tanzania Inter-Bank Settlement System
TPA	Tanzania Ports Authority
TRA	Tanzania Revenue Authority
TZS	Tanzania Shilling
UGX	Uganda Shilling
URA	Uganda Revenue Authority
USD	US Dollar
VAT	Value Added Tax
WB	World Bank

P2G Regional Landscape

This section provides a snapshot of various relevant Person-to-Government and Business-to-Government payment flows in the region and beyond.

A majority of the P2G and B2G examples below are from countries that are in the early stages of their transition from cash-heavy to cash-lite economies. They face multiple challenges, including but not limited to: a lack of payment infrastructures, low levels of consumer education and protection, unreliable financial products, and insecure networks. Despite these hurdles, many of these countries through government leadership, public-private partnerships, and innovation have helped steer their economies toward greater digitization and financial inclusion.

All examples below follow our definition of P2G and B2G payments, as set out in this case study. Examples cover both banking and mobile money payment channels. Payment instruments include Electronic Fund Transfers,¹⁰¹ direct debit payments, card payments (debit and credit), and mobile money payments.

These examples are intended to provide insights into key questions relating to P2G and B2G digitization, including:

- (a) Which cash-heavy countries are adopting digital P2G and B2G payments and what types?
- (b) What pain points have those countries encountered and resolved?
- (c) Who or what were the key drivers of digitization initiatives in these countries?

The role of Information and Communication and Technology (ICT) in payment digitization

Information and Communication Technology (ICT) forms the rails on which modern day payment infrastructures are built. Effective ICT can facilitate the spread of digital payments domestically and internationally, and can help governments increase the efficiency and scope of e-payment infrastructure. ICT-enabled digital payment platforms play a pivotal role in processing and managing information and electronic payment flows between various entities. Governments of various countries covered in this section have already moved or are in the process of migrating toward digital platforms that process, accept, and acknowledge digital payments. By doing so, governments are having substantial success in increasing end-user payment transparency, speed, security, and convenience, while simultaneously reducing their dependence on expensive and inefficient cash handling systems.

Kenyan tax payments

Kenya is the undoubted leader in East Africa in terms of innovative payment solutions, particularly mobile money (M-Pesa) – the remittance and payment solution via mobile phone that demonstrated countries could achieve rapid adoption of digital payments solutions. At the same time Kenya suffers from high levels of tax evasion; according to a recent report released by Tax Justice,¹⁰² Kenya loses close to US\$ 6.26 billion dollars to tax evasion annually.

Below are two examples of how Kenya is looking at digitizing taxes to help address these challenges and provide a safer, more efficient, and more transparent model of tax payment.

(a) iTax To address challenges including a backlog of rebates that require manual reconciliation, and increasing shortfalls in tax collections, the Kenya Revenue Authority (KRA) in 2013 moved to an online tax web portal – called “iTax.” The KRA now requires all tax filing and submissions be made online. Large and medium sized companies are required to pay online. Payment is accepted via mobile money or EFT from any of the 25 banks that are connected to the site through a payment gateway. iTax aims to be a one-stop solution for all business and personal tax filing and payments.

Driven by the Treasury Department, the motivations to digitize P2G and B2G tax payments in Kenya include:

- **Increasing government revenues:** using the new iTax system, the Kenyan Treasury through the KRA aims to:¹⁰³
 - a. Double collections over the next three years;
 - b. Double the number of companies registered under the electronic filing system from 2 million to 4 million by fiscal year 2017/18.
- **Making cost savings and efficiency gains:** Kenya’s legacy tax management system required manual reconciliation and issuance of rebates, resulting in a huge backlog, which as of 2011 stood at approximately KES 29 billion (or US\$ 290 million) in 2011.¹⁰⁴ Through iTax the KRA aims to streamline the process of working through this backlog, and is targeting an 80% overall user satisfaction.
- **Boosting external investment:** Kenya is aiming to increase its global business competitiveness profile¹⁰⁵ to attract foreign direct investments by offering a more efficient means of assessing and paying taxes. Prior to the iTax system, the complexities and bureaucracy surrounding tax payments not only severely impacted compliance but also deterred foreign investors. In fact, a 2013 World Bank – PWC report on the ease of paying taxes,¹⁰⁶ ranked Kenya 70 places behind its neighbor Uganda. The Kenyan Tax Commissioner at the time attributed Uganda’s superior ranking to the tax reforms and digitization efforts the country undertook in 2009.¹⁰⁷

(b) KRA M-Service With 68% of the Kenyan adult population registered for mobile money, in October 2014 the KRA decided to expand its channels of digital payment collections to include the acceptance of taxes, fines, and customs payments via its mobile-based platform – KRA M-Service. Using this channel, a taxpayer can generate a Payment Reference Number (PRN)

or a tax e-slip / invoice number by dialing a short code, and can make payments of up to KES 70,000 or US\$ 684 per day. The KRA partnered with two of the larger mobile money providers – Safaricom and Airtel – to develop and deliver this service. Customers bear a small convenience fee of KES 5 (US\$ 0.05) to use the KRA M-Service.

Uganda tax payments

In 2009, the Uganda Revenue Authority (URA) launched its “e-Tax” platform. E-Tax is a web portal that provides information, calculates taxes, enables online tax filing, and generates automatic tax payment reference numbers, called Personal Reference Numbers, for all types of government taxes, fees, and duties levied on both residents and businesses. A year after its launch, E-tax accounted for nearly 80% of tax revenues collected by the URA.¹⁰⁸

The system dramatically improved convenience, cost, and security for taxpayers, with online remote filing now taking around 10 minutes, compared to the previous manual process which typically took at least two days. The URA encouraged all banks to link into its web portal, enabling EFT payments.

While digital, the system falls short of being truly remote, as the taxpayer is required to print the electronic acknowledgment generated by the E-tax system, sign it and manually drop it at a URA office to confirm payment. Electronic signatures or e-confirmations by taxpayers, though legally acceptable since 2011,¹⁰⁹ are still not being accepted by all banks.

At the local level, the Kampala Capital City Authority (KCCA) automated its local tax collection¹¹⁰ by launching E-Citie in 2014.¹¹¹ Its main objectives were to lower the cost of local tax collections, reduce mismanagement of funds, and increase revenues. The KCCA credited the online filing and payment system with a 167% jump in revenue in a single year (from UGX 28 billion or US\$ 8.3 million over the past four years on average)¹¹² to nearly UGX 75 billion or US\$ 22 million in fiscal year 2014/15¹¹³. To further ease the process of making payments, the KCCA partnered with MTN Money – a large mobile money operator in the country – enabling individuals and businesses to pay for licenses, fees, and other fines via mobile money.¹¹⁴

Rwanda tax payments

The Rwanda Revenue Authority (RRA) accepts individual and business taxes including all forms of income tax, VAT, excise, and motor-vehicle taxes via its e-Tax service. Individuals or businesses with a Tax Identification Number or login can register online, file, and submit taxes and pay via a bank transfer or over the counter at any commercial bank.

To expand its tax base, reduce tax-evasion, and increase its revenues – particularly from small and medium businesses that comprise 90% of all businesses in the country – the Government of Rwanda mandated the use of Electronic Billing Machines (EBM) in 2012. These billing machines record and digitally print customer invoices for goods sold.¹¹⁵ In a study entitled “Incidence and Impact of Electronic Billing Machines for VAT in Rwanda”¹¹⁶ (Murray, 2014), the authors compare quarterly EBM adoption rates for

SMEs in Rwanda from 2012 to 2014. The study found that during this period adoption rates grew rapidly to 77.8% of taxpaying firms using the device, increasing the average VAT payments by SMEs to around 6.5%.

Traditionally these businesses would then be expected to pay their annual taxes at designated tax payment centers. In keeping with its commitment to the Better Than Cash Alliance,¹¹⁷ the Government of Rwanda is now encouraging firms to pay online,¹¹⁸ via mobile money, or via designated third-party platforms like MobiCash.¹¹⁹

Kenya, Uganda, and Rwanda government services payments

In many developing nations, public service delivery suffers from insufficient information, opaque payment flows, and unclear timelines. In order to overcome these challenge, Kenya, Uganda, and Rwanda have recently instituted e-citizen web portals, or as they define “Government to Citizen” and “Government to Business” service portals. Kenya’s E-Citizen, Uganda’s e-citizen and Rwanda’s Irembo¹²⁰ platforms all aim to accomplish one common payment goal – digitization of all non-tax payment to governments, and to act as one-stop solutions for various types of government services. All three portals have been recently launched and at the very least aim to include the most common government services in the coming months.

While digitization of e-citizen services has been government-led in Kenya and Uganda, Rwanda has adopted a public-private partnership model. The Government of Rwanda signed a 25-year public-private partnership with the firm Rwanda Online Limited. One of the key mandates of the company is to ensure that the Irembo platform accepts all forms of digital payment.

Cote D’Ivoire’s school fee payments

School fee payments to governments are another key P2G payment flow. Many countries studied during this exercise offer free universal primary education in public schools. However, where school fees exist, very few if any countries that are in the early stages of digitization have as yet digitized the process entirely. Cote d’Ivoire however stands out as an exception.

In 2014, 99% of Cote d’Ivoire’s secondary school pupils (both public and private) paid their registration fees or enrollment fees digitally. Based on the success of this initiative, Cote d’Ivoire has demonstrated several key lessons that other governments and policymakers can learn from in their path to greater digitization of payments:

- (a) Effective public-private partnerships can be instrumental in digitizing P2G payment flows.
- (b) Governments can reap very substantial benefits from the cost-savings and increased revenue flows that emerge from digitization, directly improving their capacity to deliver services.
- (c) Users benefit substantially from higher transparency and streamlined processes, freeing up substantial amounts of time to devote to more productive or personally rewarding activities.
- (d) Government leadership and commitment is crucial in the journey toward being “cash-lite” and increasing deepening financial inclusion.

Traditionally school fee payments in Cote d'Ivoire suffered from high levels of fraud, leakage, and theft including armed robbery at local collection points, resulting in substantial revenue losses for the government. To overcome these challenges, the Ministry of National and Technical Education (MENET) began the process of digitizing school fee registrations in 2011. However, given that the country has an internet penetration rate of only 2.6%, MENET alternatives to electronic banking may be necessary.

The process began with MENET overhauling its student database, improving the quality of information, and providing each student with a unique student ID. MENET then piloted the initiative in the capital city Abidjan with CelPaid, an online payment provider, and MTN Mobile Money. Over the next three years, the Government of Cote d'Ivoire entered into partnerships with three telecom providers and one online payment service provider, and integrated the MENET database with the four payment providers. By 2014, MENET was collecting 99% of its school registration fees digitally – 94% of which were via mobile money and 6% online.

It is important to note that MENET absorbed the majority of transaction costs, thus increasing payer incentives to make digital payments. However, the success of this one payment model stands as an effective example of policy design and implementation that other ministries in Cote d'Ivoire and policymakers in other countries could potentially follow.

Uganda's water utility payments

Uganda's National Water and Sewage Corporation (NWSC) adopted a real-time e-bill payment system called e-Water in 2011. NWSC officials print out water bills in real time by physically visiting customers' residences, taking a water reading with a handheld device and printing out a bill immediately based on the meter reading. Customers have the option to pay via any mobile money wallet, pay through online banking (i.e., EFT), or make a deposit at a local bank branch. The utility also accepts over-the-counter payments at specified locations. Upon payment, customers receive an SMS acknowledgment of their payment. When this service was launched, the Managing Director of NWSC noted that the initiative was expected to save around UGX 1 Billion (around US\$ 384,000) in annual expenses.¹²¹

Uganda's National Social Security Fund payments

In 2010 Uganda's National Social Security Fund (NSSF), a quasi-government entity that covers private sector workers in the formal sector,¹²² went through a major restructuring process whereby it increased its ability to accept payments from employers via electronic payments from most commercial banks, and digitized its account opening, management, and tracking system. NSSF's digital platform now allows employees to track whether their employers have paid their portion of the mandated social contribution payments.¹²³ When introduced for the first time, this transparent tracking feature significantly increased compliance rates among employer contributions.

Interviewees

ORGANIZATION	INDIVIDUALS INTERVIEWED AND PARTICIPATED AS PART OF THE WORKSHOP	
Access Bank	Ophoro Lekey	Chief Information Officer
BCX	Seronga Wangwe	Managing Director
Bill & Melinda Gates Foundation	Dr. William Lyakurwa	Advisor
BoT	Lucy Shahidi	Director, NPS
	James Masoy	Manager, NPS
	George Ben Sije	Assistant Manager, NPS
	Dr. Joseph Masawe (Retd.)	Retired
CGAP	Stefan Stachen	Digital Financial Services, Regulatory Expert
COSTECH / DTBI	George Mulamula	CEO
CRDB	Elyas Mtenga	Director, ICT
	Ralph Ligallama	ICT
DAWASCO	Kiula Kingu	IT Manager
FSDT	Innocent Ephraim	Digital Finance, Head
	Sosthenes Kewe	Executive Director
	Irene Mlola	Operations Director
IFC	Martin Warioba	Advisor
IMF	Muyangwa Muyangwa Charles	Revenue Policy and Administration Advisor
	Alain Vandepute	Advisor East Afritac
	Amitabh Tripathi	Public Financial Management
Maxcom	Juma Rajabu	Managing Director
MOFP	Farida Lawrence Makao	
	Neema Msola	
NIDA	Mohammed Kahmis	
	Edson Guyai	
NMB	Manzi Rwegasira	Sr. Manager Strategy and Special Projects
PORALG	Aziz Makaburi	
	Ngwanashigi Guguga	
Selcom	Samir Hirji	Executive Director
	Farnaz Gulamhussein	Business Analyst
SSRA	David Nghambi	
TASAF	Omari Malilo	Conditional Cash Transfer Manager
TRA	Mary Maganga's team	
	John Eugen	
UNCDF - Local Finance Initiative	Malimu Museru	Investment Officer

Methodology

The study is a combination of extensive secondary research on Tanzania's payment system, qualitative interviews with government officials, industry stakeholders, consumers (businesses and individuals), and the author's own analyses based on publicly available data. The key quantitative data sources included Tanzania's central bank – the Bank of Tanzania (BoT), and the Tanzania Revenue Authority (TRA). These were further supplemented by data from periodic demand surveys on access to financial services and products like Finscope Tanzania,¹²⁴ access and usage of digital financial services conducted by Financial Inclusions Insights and included in their 2015 report,¹²⁵ the World Bank's Findex surveys on key financial inclusion indicators,¹²⁶ the Agent Network Accelerator supply side survey by Helix institute,¹²⁷ and the Financial Sector Deepening Trust's (FSDT) Medium Small and Micro Enterprise Surveys.

The methodology used in this case study is as follows:

- I. Hypotheses: An initial set of hypotheses were developed both for the payer (individuals and businesses) and the payee (government). Listed in Annex IV: Study Hypotheses, the hypotheses were categorized under three buckets: the benefits of digitization to the payer and the payee; potential accelerators of P2G and B2G digitization; and barriers to digitization. The examples of digital P2G and B2G payments in Tanzania listed in the case study validate some of these hypotheses.
- II. Definition and Framework Workshop: CGAP, Karandaaz, and BTCA conducted a two-day brainstorming workshop to agree on the definitional aspects of P2G and B2G payments.
- III. Qualitative Interviews: A total of 37 qualitative interviews were conducted over the duration of the study. Of these, 14 were expert interviews with the Bank of Tanzania, the Tanzania Revenue Authority, financial intermediaries, and market facilitators, while the remaining 23 were with businesses (formal and informal) and individual users.
- IV. Sharing of workshop findings: BTCA conducted a half-day workshop with 19 governments, donor, and industry representatives on April 6th, 2016 in Dar es Salaam. Comments and feedback from the workshop have been incorporated into the study.
- V. Finally, the report drew its structure from the existing BTCA toolkits.

The criteria that influenced the selection of P2G and B2G examples in this study were relevance, diversity of payment use case, opportunity to learn from the successes and failures of these initiatives, and the availability of data from primary or secondary sources to support information gathered during qualitative interviews. The choice of P2G and B2G examples in this study therefore do not aim to be comprehensive.

Study Hypotheses

Hypotheses on benefits of P2G and B2G digitization

a. Government:

- a. Digitization of P2G and B2G payments can lead to **efficiency gains and cost-savings** as it lowers overhead costs associated with manual cash-management¹²⁸ & processes, reduces opportunities for fraud and mismanagement of cash, and eliminates the time and direct costs associated with manual reconciliation of payments.
- b. Digitization of P2G and B2G payments can lead to an **increase in government revenues** as it reduces opportunities for leakage, incentives higher payment compliance by increasing payment convenience and reducing “payment hardships,” and enables real-time validation of citizen and business dues. Thus, informing government policy on collection gaps, exemptions, and rebates.
- c. The adoption of **alternative digital payment channels like mobile money can positively supplement government collections** as these payment instruments have wider reach and usage compared to traditional bank accounts, and are more convenient and affordable to use.

b. Users:

- a. Digitization of P2G and B2G payments can lead to lowered opportunity cost for the user, **higher transparency – increasing trust in the system, and provide recourse options for both the payer and payee**. Digitization creates an accountable payment trail, and can acknowledge the payment amount made and received. In case of any disputes, this digital payment trail can protect payers against fraud or any other issues external to them. *Note: This might require a more qualitative assessment. It is possible that users, based on their level of digital comfort, might prefer paying an “agent” whom they trust than initiating a digital transaction themselves.*
- b. **Financial Inclusion:** Digital payments can be the first entry point into the financial system for individuals and businesses. Governments can enforce the acceptance of digital only payments (e.g., Kenya’s iTax), requiring individuals and businesses to open and use accounts.

Hypotheses on accelerators or drivers of P2G and B2G digitization

The mere digitization of payment instruments and channels of collections alone is insufficient to result in substantial collection gains:

- a. Streamlining information, simplification, standardization, and where possible consolidation of various payments to the government can dramatically improve compliance. For example: The World Bank's ease of doing business report assesses the ease of paying taxes and it reports that a regular business in Tanzania has to pay 49 different taxes, fees, and levies every year – resulting in a minimum of 179 hours or a minimum of 7.4 days spent on tax payments annually.
- b. Having the necessary payment infrastructure that enables the easy acceptance of various payment instruments and is interoperable across multiple payment channels has the potential to increase digital payments.
- c. Cost to the payer is another key variable that impacts adoption. Reducing or eliminating digital payment transaction cost to the end user, for government payments, can positively influence uptake.
- d. Enabling risk-based and easier opening of digital accounts has the potential to include the informal or rural economy and increase government inflows.
- e. Well-structured incentives, like ease of gaining credit based on digital tax history, or discounts have the potential of encouraging payments.
- f. Public-Private partnerships can also supplement P2G and B2G payments (e.g., Cote d'Ivoire's digital education payments).

Hypotheses on barriers to P2G and B2G digitization

- With respect to taxes in particular, businesses or individuals might be hesitant to adopt digitization if they have been under-reporting tax dues or if they view digitization as a way to be “over-taxed.”
- Mobile money providers (alternative digital channels) might not be willing to lower payer-to-government transaction costs as it might undermine their business model.
- Many individuals might not qualify for digital payment channels (like mobile wallets), or might not be digitally literate to file and submit taxes and eventually pay electronically.

Endnotes

1. \$300 million through better compliance of VAT payments and at least another \$177 million by formalizing the informal economy (Author estimates, detailed in Chapter 5 of this study).
2. See chapter 4 for details
3. See chapter 4 for details
4. World Bank, 2013 estimate
<http://www.worldbank.org/en/news/press-release/2013/05/21/tanzania-could-boost-its-economy-by-reforming-the-port-of-dar-es-salaam-world-bank>
5. Direct and indirect, WB 2013
6. http://www.ippmedia.com/frontend/index.php/oi.poc/javascript/page_home.js?l=68700
7. <http://allafrica.com/stories/201206041185.html>
8. Chapter 5, point 4.
9. These subsidies are still under negotiation. The exact value and applicability of subsidies may vary depending on individual businesses' size and other attributes.
10. <http://data.worldbank.org/country/tanzania>
11. <http://datatopics.worldbank.org/financialinclusion/country/tanzania>
12. Findex, WB, 2014; <http://datatopics.worldbank.org/financialinclusion/country/tanzania>
13. Findex data WB; <http://datatopics.worldbank.org/financialinclusion/country/tanzania>
14. Financial inclusion insights, third wave, December 2015
15. <http://www.tcra.go.tz/images/documents/telecommunication/CommStatsDec15.pdf>
16. <http://data.worldbank.org/indicator/IT.NET.USER.P2>
17. http://nbs.go.tz/nbs/takwimu/census2012/Basic_Demographic_and_Socio-Economic_Profile_PopularVersion-KeyFindings_2012_PHC_EnglishVersion.pdf
18. <http://data.worldbank.org/country/tanzania>; Tanzania with a nominal GDP US\$ 46.2 billion in 2015, is a low income country compared to, for example, Kenya which is considered a lower-middle income country with a nominal GDP of US\$ 63 billion, World Bank data on individual countries.
19. This section was produced in collaboration with CGAP and Karandaz Pakistan, which is currently conducting a global mapping of digital P2G payments.
20. The Better Than Cash Alliance is currently developing a working paper on definition and measurement challenges relating to digital payments, including the lack of a clear consensus definition of the term "digital payments."
21. <http://www.gsma.com/mobilefordevelopment/programme/mobile-money/paying-taxes-through-mobile-money-initial-insights-into-p2g-and-b2g-payments/>
22. An organization having some political authority and serving the state indirectly.
23. <https://www.bot-tz.org/PaymentSystem/NPSoverview.asp>
24. <https://www.bot-tz.org/PaymentSystem/paymentSystem.asp>
25. http://www.ifc.org/wps/wcm/connect/8d518d004799ebf1bb8fff299ede9589/IFC+Tanzania+Case+study+10_03_2015.pdf?MOD=AJPERES
26. <https://www.bot-tz.org/PaymentSystem/NPS%20Act%202015.pdf>
27. <https://www.bot-tz.org/PaymentSystem/GN-THE%20PAYMENT%20SYSTEMS%20LICENSING%20AND%20APPROVAL%20REGULATIONS%202015.pdf>
28. <https://www.bot-tz.org/PaymentSystem/GN-THE%20ELECTRONIC%20MONEY%20REGULATIONS%202015.pdf>
29. <http://www.mst.go.tz/index.php/78-news/122-the-cybercrimes-and-electronic-transactions-bill-2015>
30. <http://allafrica.com/stories/201208010477.html>
31. A settlement method between two or more parties.
32. As highlighted in the P2G framework in the earlier chapter a mobile money payment is essentially an EFT between two wallets.
33. Not yet public. Will be made public by Intermedia and the Gates Foundation in 2016.
34. The remaining institutions include 12 community banks, four other financial institutions, and three deposit-taking microfinance companies. Banking Supervision Report 2014
35. Bank of Tanzania Annual Supervision Report 2014| <https://www.bot-tz.org/BankingSupervision/BankingSupervision.asp>
36. <http://data.worldbank.org/indicator/FB.ATM.TOTL.P5>
37. Financial Inclusion Insights Survey December 2015, third survey wave.
38. Vodacom's M-Pesa, Tigo's Tigo-Pesa, Airtel's Airtel Money, Zantel's Ezy Pesa, Smart Money, Viettel's (locally known as) Halotel's mobile money.
39. <http://www.tcra.go.tz/images/documents/telecommunication/telcomStatsSept15.pdf>
40. <http://www.thecitizen.co.tz/News/Tigo-finally-acquires-Zantel/-/1840340/2742156/-/1xedsaz/-/index.html>
41. For further details on the contribution of aggregators to payment digitization in the region, see <http://www.cgap.org/blog/aggregators-secret-sauce-digital-financial-expansion>
42. <http://www.developingtelecoms.com/tech/end-user-services/mobile-financial-services/5732-millicom-and-vodacom-bring-mobile-money-interoperability-to-tanzania.html>
43. <http://www.umojaswitch.co.tz/>
44. Financial Inclusion Insights Survey 2015, <http://finclusion.org/datacenter>
45. Motor vehicle taxes as a percentage of total domestic revenue was 1.6% for fiscal year 2014-15 and 1.7% for 2015-16 (as per TRA feedback to author)
46. Excluding customs duties

Endnotes

47. Author's analysis based on TRA's annual statistics: <http://www.tra.go.tz/index.php/tax-collection-statistics>
48. <http://www.ippmedia.com/frontend/?l=58907>
49. <http://www.adlip.com/africa/tanzania-tra-vodacom-partner-on-tax-collection/>
50. This program was based in part on the Malaysian economic growth model. Malaysia – which was previously a low income country at the time of its independence in 1957 – is expected to become a developed country by the year 2020. <http://www.pmoralg.go.tz/quick-menu/brn/>
51. <http://www.pmoralg.go.tz/quick-menu/brn/>
52. http://siteresources.worldbank.org/INTAFRREGTOPTRADE/Resources/PN35_Dar_port_reform_Feb_2013.pdf
53. <http://www.worldbank.org/en/news/press-release/2013/05/21/tanzania-could-boost-its-economy-by-reforming-the-port-of-dar-es-salaam-world-bank>
54. http://siteresources.worldbank.org/INTAFRREGTOPTRADE/Resources/PN35_Dar_port_reform_Feb_2013.pdf
55. Uganda, Rwanda, Burundi, Zambia, Zimbabwe and Malawi
56. Image Source: CCTV Africa
57. <http://www.worldbank.org/en/news/press-release/2013/05/21/tanzania-could-boost-its-economy-by-reforming-the-port-of-dar-es-salaam-world-bank>
58. <http://www.bloomberg.com/news/articles/2013-06-25/tanzania-to-upgrade-dar-es-salaam-port-to-compete-with-mombasa>
59. http://siteresources.worldbank.org/INTAFRREGTOPTRADE/Resources/PN35_Dar_port_reform_Feb_2013.pdf
60. http://siteresources.worldbank.org/INTAFRREGTOPTRADE/Resources/PN35_Dar_port_reform_Feb_2013.pdf
61. http://www.mof.go.tz/mofdocs/budget/Citizens%20Budget/CITIZENS%20BUDGET_%20Final_English_2013_14.pdf
62. <http://www.tra.go.tz/index.php/clearing-forwarding-agents>
63. <http://www.cio.co.ke/news/main-stories/tanzania's-ports-authority-move-to-electronic-payment-system-next-week>
64. https://en.wikipedia.org/wiki/Tourism_in_Tanzania In 2014 the direct contribution of tourism to GDP was 5.1% <https://www.wttc.org/-/media/files/reports/economic%20impact%20research/countries%202015/tanzania2015.pdf>. The World Tourism and Travel Council, the authority that accounts for social and economic contributions of travel and tourism estimates a much higher indirect contribution of the sector to Tanzania's GDP.
65. <http://www.busiweek.com/index1.php?Ctp=2&pl=4286&pLv=3&srl=57&spl=23>
66. http://www.ippmedia.com/frontend/index.php/oi.poc/javascript/page_home.js?l=68700
67. <http://allafrica.com/stories/201206041185.html>
68. <http://www.dailynews.co.tz/index.php/home-news/45511-tanapabans-cash-transactions-for-services-in-parks>
69. Information provided by Shaaban Njama, Manager Finance and Revenue, TANAPA
70. http://www.ippmedia.com/frontend/index.php/ci=nod=16&icurrypilot.com/javascript/page_home.js?l=68438
71. http://www.ippmedia.com/frontend/index.php/oi.poc/hlan3ne.htmlodmanor.co.za/javascript/page_home.js?l=65516
72. <http://www.diva-portal.org/smash/get/diva2:185316/FULLTEXT01.pdf>
73. <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/03/Mobile-Water-Payment-Innovations-in-Urban-Africa.pdf>
74. The military is the only government entity that currently uses this method. This is because monthly bill payments from the military are above TZS 10 million (US\$ 4750), and Bank of Tanzania regulations require payments greater than this amount to be paid via RTGS.
75. <http://www.thecitizen.co.tz/News/Dawasco-hails-M-Pesa-billing-/1840392/1910782/-/7emg2u/-/index.html>
76. <http://www.dailynews.co.tz/index.php/home-news/45387-dar-set-to-introduce-prepaid-water-billing>
77. World Bank, July 2015, 'Why Tanzanians Should Pay Taxes'; <http://www.worldbank.org/content/dam/Worldbank/document/Africa/Tanzania/Report/tanzania-economic-update-why-should-tanzanians-pay-taxes-the-unavoidable-need-to-finance-economic-development.pdf>
78. Rebasing of the Tanzanian GDP took place in 2015, leading to a reduction in the tax-GDP ratio. For example, prior to rebasing the Tax-GDP ratio ranged between 15.2% for fiscal year 2012-13 to 17.9% for fiscal year 2014-15.
79. <http://blogs.worldbank.org/african/is-tanzania-raising-enough-tax-revenue>
80. Also highlighted in a letter from the Governor of the Bank of Tanzania to the IMF. <https://www.imf.org/external/np/loi/2015/tza/121814.pdf>
81. <http://siteresources.worldbank.org/EXTAFRSMUAFTPS/Resources/ICA001.pdf>
82. This figure does not account for stamp duty, departure, and motor vehicle charges. Author analysis
83. Author's own analyses
84. <http://www.tra.go.tz/tax%20laws/THE%20VALUE%20ADDED%20TAX%20ACT,%202014.pdf>
85. http://www.tzdp.org.tz/fileadmin/_migrated/content_uploads/TRA_Informal_Sector_Presumptive_Income_Tax_Report_draft_Jan11.pdf
86. http://www2.lawrence.edu/fast/finklerm/IEJ_NewEstimates_ShadEc_World.pdf
87. http://www.econ.boun.edu.tr/public_html/RePEc/pdf/201205.pdf

88. Neither study considers the illegal aspects of the shadow economy. The former study clearly defines shadow economy as: all market-based legal production of goods and services that are deliberately concealed from public authorities to avoid payment of income, value added, or other taxes; to avoid payment of social security contributions; having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc.; and complying with certain administrative procedures, such as completing statistical questionnaires or administrative forms.
89. <http://www.thecitizen.co.tz/Business/New+e+tax+payment+to+ease+remission+of+dues/-/1840414/1895818/-/3uvdgez/-/index.html>
90. <http://allafrica.com/stories/201201201203.html> and qualitative interviews with the TRA.
91. http://www.businesstimes.co.tz/index.php?option=com_content&id=2256:tra-electronic-fiscal-devices-already-making-a-difference&Itemid=57
92. At the time of publication of this case study these negotiations were ongoing.
93. Tanzania has universal primary education; so public school tuition fees are free. Parents only pay the enrolment fees.
94. <http://www.mof.go.tz/mofdocs/revenue/revlocal.htm>
95. <http://www.pmoralg.go.tz/noticeboard/tangazo-1033-20150505-Major-Own-Source-Revenue-Collection/Final-Report-Major-Own-Source-Revenue-Collection.pdf>
96. <http://www.worldbank.org/projects/P111153/tanzania-strategic-cities-project?lang=en>
97. <http://dayone.co.tz/index.php/projects#development-of-revenue-collection-point-of-sale-platform>
98. <http://www.brela.go.tz/index.php/about/introduction>
99. http://www.mof.go.tz/mofdocs/budget/Citizens%20Budget/CITIZENS%20BUDGET%202015_2016%20_ENGLISH.pdf
100. The Better Than Cash Alliance 'Responsible Digital Payments Guidelines' identify eight good practices for engaging with clients who are sending or receiving digital payments and who have previously been financially excluded or underserved <https://www.betterthancash.org/tools-research/case-studies/responsible-digital-payments-guidelines>
101. EFTs include direct debit, wire transfers, direct deposits, ATM withdrawals, and online bill pay services among intra and inter bank accounts over a computerized network. Transactions are processed through an automated clearing house.
102. <http://www.businessdailyafrica.com/Kenya-loses-over-Sh600bn-in-tax-evasion-annually/-/539552/2725658/-/uspc11/-/index.html>
103. <http://www.treasury.go.ke/news-updates/262-kra-tips-itax-to-double-revenue-in-three-years>
104. <http://www.businessdailyafrica.com/KRA-set-to-make-online-filing-of-taxes-mandatory/-/539546/1914998/-/6bamu0/-/index.html>
105. <http://www.doingbusiness.org/rankings>
106. <https://www.pwc.com/gx/en/paying-taxes/assets/pwc-paying-taxes-2013-full-report.pdf>
107. <http://www.rich.co.ke/media/docs/037NSX2207.pdf>
108. <http://www.balancingact-africa.com/news/en/issue-no-525/web-and-mobile-data/uganda-achieves-80-p/en>
109. <http://www.nita.go.ug/sites/default/files/Electronic-Signatures-Act.pdf>
110. Includes: property taxes, rent taxes, local business licenses, tax payments by commuter taxis, hotel taxes, and other penalties and fines
111. <https://ecitie.kcca.go.ug/portal/>
112. US\$1 = UGX 3400
113. <http://www.newvision.co.ug/news/672203-kcca-revenue-collection-doubles.html>
114. <http://www.ntv.co.ug/news/local/14/aug/2015/kcca-introduces-mobile-money-payment-service-8099#sthash.vs613hro.dpbs>
115. If the device does not work, the merchant is expected to report it to the TRA and repair the device in 48 hours. Hand receipts are acceptable only during this period but have to be entered into the device once it is repaired. Handwritten receipts can also be issued during power outages but once power is restored, all receipts need to be entered into the device.
116. <http://www.law.georgetown.edu/faculty/symposia-lectures/tax-law-public-finance/upload/Eissa-Incidence-and-Impact.pdf>
117. <https://www.betterthancash.org/news/media-releases/rwanda-to-accelerate-digital-payments-by-joining-the-better-than-cash-alliance>
118. <http://www.newtimes.co.rw/section/article/2015-03-03/186506/>
119. <http://www.newtimes.co.rw/section/article/2015-09-10/192410/>
120. <http://www.hope-mag.com/index.php?com=news&option=read&ca=6&a=2150>
121. <http://www.africa-uganda-business-travel-guide.com/uganda-national-water-launches-an-ewater-payment-system.html>
122. Public sector workers are covered by government retirement funds.
123. <http://allafrica.com/stories/201508311505.html>
124. <http://www.fsdt.or.tz/finscope/en/key-findings>
125. <http://finclusion.org/country-pages/tanzania-country-page/>
126. <http://microdata.worldbank.org/index.php/catalog/2503>
127. http://www.helix-institute.com/sites/default/files/Publications/Agent%20Network%20Accelerator_Tanzania%20Country%20Report%202013_0.pdf
128. Staff, administrative costs, security for cash-in-transit

The Better Than Cash Alliance Case Study Series

Our case study series seeks to highlight specific examples of shifts from cash to digital payments by government agencies, companies and development partners. Each case study aims to provide insights for a wide audience on the factors that have helped or hindered the digitization process, and also present key results and benefits of the transition away from cash. We hope that readers will be able to adapt the lessons from these cases to their own contexts and local conditions.

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The Better Than Cash Alliance is a partnership of governments, companies, and international organizations that accelerates the transition from cash to digital payments in order to reduce poverty and drive inclusive growth. Based at the United Nations, the Alliance has over 50 members, works closely with other global organizations, and is an implementing partner for the G20 Global Partnership for Financial Inclusion.