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POLICY PAPER 01

Taxing Electronic Money Transfers in Developing Countries – The Case of Ghana

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About ReFinD

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Abstract

Recent decades have seen the proliferation of mobile phones and the strong performance of the electronic transfer industry. The industry has evolved from a niche offering in a small number of markets to a mainstream financial service. With low- and middle-income countries (LMICs) facing enormous challenges in revenue mobilisation due to the high rate of informality, governments have noted the prospects of imposing electronic transfer taxes as an effective and inexpensive way of increasing tax revenues. This paper aims to set the tone for discussions on the immediate effect of Ghana's electronic transfer taxes on transaction volumes and values and agent activity. We compare Ghana's case with other countries in Africa who also imposed electronic transfer taxes.

Introduction

Electronic transactions have become an essential part of everyday life and business. Over the past 10 years, millions of households in low- and middle-income countries (LMICs) have been moved from the unorganized cash economy into a more inclusive digital economy. This transition occurred as a result of the expansion of the electronic transfer industry from a niche offering in a small number of markets to a mainstream financial service (GSM Association, 2022). In Africa, the main vehicle for the transition from cash to an electronic transfer regime is mobile money. Between 2020 and 2021, the mobile money industry recorded massive growth in the volume and value of transactions as well as in the number of registered and active transactions (Table 1).

Meanwhile, Africa faces huge challenges in revenue mobilisation, with the tax-to-GDP ratio consistently falling below Organisation for Economic Cooperation and Development (OECD) averages over the years (OECD, African Tax Administration Forum and African Union Commission, 2018; World Bank, 2022). For instance, between 2015 and 2020, the average tax- to-GDP ratio for Africa was about 15.5% compared to 22.5% in Latin America and the Caribbean and about 33% for OECD countries Indeed, the primary causes of the low levels of tax receipts are the magnitude of informality, which produces a sizable shadow economy that cannot be taxed, as well as the enormous unemployed populations (Bird, 2013).

TABLE 1: Mobile money growth in Africa, 2020-2021

	Registered Accounts		Active Accounts		Transaction Volume		Transaction Value	
	Number (millions) in 2021	***% change***	***Number (millions) in 2021***	***% change***	***Number (millions) in 2021***	***% change***	***US$ (millions) in 2021***	***% change***
Northern Africa	15	13	1	200	77	11	3,700	-5
Western Africa	237	20	58	17	9,300	27	239,300	60
Central Africa	60	19	19	17	2,900	22	50,000	24
Southern Africa	13	8	4	25	335	20	4,900	42
Eastern Africa	296	15	102	8	24,000	22	403,400	31

Source: GSM Association, 2022. Percentage changes are from 2020 to 2021.

Many African governments have been compelled by these circumstances to look for new revenue streams (Wawire, 2017) and it has been argued that electronic transfer taxes have the ability to formalize and tax some portions of unregulated financial flows (Duncombe, 2014). John Maynard Keynes and James Tobin were the first to attempt to propose taxation of electronic transactions, in 1936 and the 1970s respectively. Tobin advocated a unique currency transaction tax to regulate the uncontrollable changes in exchange rates at that time. In September 2011, the European Commission introduced the concept of a European Union-wide tax in the form of a harmonised financial transaction tax. The goals were to ensure that the financial sector contributes to public

finances to recover the costs of the 2008/09 financial crisis in a fair and significant manner, ease member states' commitments to the EU budget, and discourage risky market behaviour.

An electronic transfer tax is Pigouvian in nature[1]. It is a very effective and inexpensive model for increasing tax revenue (Drazenovic, 2017). Additionally, a financial transaction tax is typically simple and affordable to manage because the majority of transactions are completed electronically and the tax can be collected at source (Klutse, 2022). However, because the tax will be required at various intermediary levels in a transaction chain, the effective tax burden may be substantially greater than the headline tax rate. Drazenovic (2017) warns that over time, taxpayers become more adept at avoiding electronic transfer (e-transfer) taxes by resorting to cash payments, multiple cheque endorsements, and offshore bank accounts. Thus, there is a high propensity for electronic tax revenues to decline after implementation. According to Matheson (2011), this threat is often worsened when governments routinely raise tax rates to boost revenue, which frequently leads to an even more pronounced shrinking of the base. However, the extent to which e-transfer taxes can be effectively deployed to yield significant revenue without negatively affecting financial inclusion is yet to be investigated. This chapter aims to gauge the effect of Ghana's e-transfer taxes by comparing other country cases. Using selected case studies, Section 2 discusses the taxation of electronic transfers in Africa and its impact. Section 3 reviews Ghana's recent introduction of e-transfer taxes, its challenges and achievements. The final section provides concluding remarks.

Taxing Electronic Transfers in Africa

African countries that have imposed electronic taxes include: Côte d'Ivoire, Uganda, Tanzania and the Republic of Congo. These countries share common characteristics such as a large informal sector and a large unbanked population[2]. This section discusses their electronic money tax regulation, some specific electronic transfer taxes, and their immediate impact on the respective countries.

2.1 The case of Uganda

Uganda has a population of over 42 million, of which 8.5 million live in the capital and largest city of Kampala. The country had an average GDP growth rate of 5.1% between 2015 and 2019, with a drop of about 2 percentage points during the pandemic. Due to high population growth, however, the per capita real GDP growth rate averaged about 1.1% per year between 2015 and 2019. Over that period, the number of mobile money accounts increased by over 26 million, with an increase in value of about UGX72 million[3]. As of end-December 2021, the number of registered mobile money customers stood at 32.8 million, out of which 22.7 million (or 69.2%) were deemed active. The Ugandan government came to recognise mobile money as the mainstay of its national

[1] In many jurisdictions, Pigouvian taxes are imposed to internalize negative externalities from electronic transfers such as cybersecurity risks, privacy concerns, energy consumption from data centers, or the displacement of workers due to automation.

[2] The inability of banks to serve this group is due to the high cost involved as well as the strict identification document requirements and high minimum balance requirements.

[3] Equivalent to USD19,400

financial inclusion strategy. In addition, mobile money was acknowledged as a form of social safety net as it facilitated the flow of remittances from urban dwellers to vulnerable relatives in rural areas (CSBAG, 2020)[4] as well as facilitating cash transfers into refugee camps (Baah, 2020).

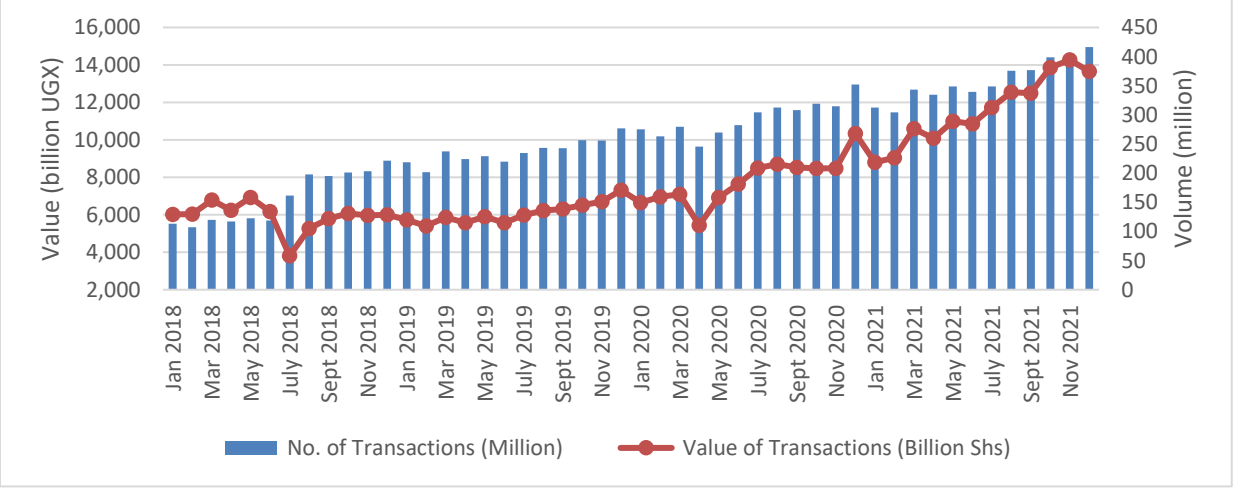
Regulation of electronic money in Uganda

In Uganda, seven electronic money licenses have been granted. The two major mobile network operators (MNOs) – Airtel and MTN – control the majority of the market and they have the distribution infrastructure required to scale up their operations. Mobile money services are separately regulated by the Bank of Uganda (BoU) and the Ugandan Communications Commission (UCC) under a memorandum of understanding. This notwithstanding, the UCC oversees MNO activity in the nation. Since 2017, the National Payments Systems Act has directed that MNO mobile money operations must be split from their parent firm and integrated into a new payment corporation, which is solely subject to BoU regulation[5].

Mobile money taxation in Uganda

In May 2018, a 1% tax levy was placed on the value of mobile money transactions (transfer, cash-in and cash-out). This was later revised to a 0.5% levy on the value of cash-out transactions. This followed pressures to widen the tax base as Uganda had a tax-to-GDP ratio of 12.7% (BoU, 2019). Also, the country was in an IMF structural support programme that prioritised domestic revenue mobilisation[6] and had been hit by plunging oil prices (IMF, 2019). Figure 1 shows the number and value of mobile money transactions between 2018 and 2019.

Figure 1: Volume and value of mobile money transactions in Uganda, January 2018-November 2021



Source: Bank of Uganda (2022)

[4] Interview with the Civil Society Budget Advocacy Group (CSBAG) on 4 February 2020.
[5] National Payment Systems Bill, 2019.
[6] Domestic revenue mobilisation was low due to high patronage of digital-only communication channels, rising informality, and low capacity in tax administration (World Bank, 2018).

Impact of the tax

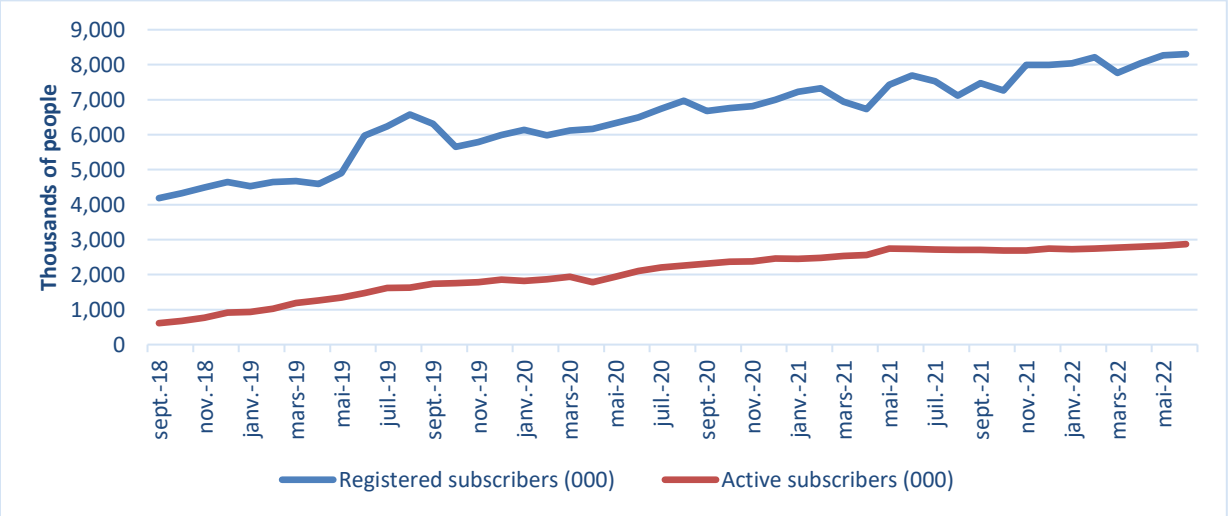
After the 1% tax levy was announced in May 2018, the value of transactions fell from UGX6.9 trillion to UGX3.9 trillion in July 2018. This slump was driven by higher value customers moving to banking and lower value customers choosing to use cash. Person to Person (P2P) transactions fell by about 50%.

The increase in the number of transactions was a result of a social media tax that was imposed at the same time and payable by mobile money. Following a massive public outcry and advocacy against the disproportionate burden of the tax on poor people, the rate was revised to a 0.5% tax on withdrawals. It took a period of over a year for the value of transactions to rise back to pre-tax levels. The average transaction value has also fallen, indicating that banks are now preferred for large-value transactions. Initially, the Uganda Revenue Authority (URA) exceeded the collection target by 37% but the gains were offset by a reduction in telecom sector tax receipts (Uganda Revenue Authority, 2019; *The Independent*, 2020).

2.2 The case of the Republic of Congo

Between 2015 and 2018, the Republic of Congo had an average population of 5.2 million, growing at the rate of 2.36%. The working age population averaged 2.86 million. The country averaged a GDP growth rate of -5.9% over the same period. As of 2021, the GDP growth rate was -2.2% while the population stood at 5.9 million. Over the first 18 months after mobile money was introduced in the Republic of Congo, the number of registered mobile subscribers increased from 4.2 million to 6.1 million while the number of active subscribers nearly tripled from 613,000 to 1.82 million (GSM Association, 2020). At present, there are 8.3 million registered and 2.9 million active subscribers (Figure 2). MTN and Airtel are the two operators that dominate mobile money operations.

Figure 2: Registered and active subscribers in the Republic of Congo, September 2018-May 2022



Source: Agence de régulation des postes et des communications électroniques (2022)

As a result of mobile money, the Republic of Congo recorded a 10-percentage point increase in the adult population with a formal financial account between 2011 and 2017 (Findex, 2017). Nevertheless, women did not benefit from inclusion as much as men, as only 21% of women held financial accounts compared with 31% of men. The situation in the Republic of Congo was far worse than the average of 43% inclusion in the Economic and Monetary Community of Central Africa (CEMAC) region. Findex data, however. revealed some improvement in 2021 as a result of a surge in active mobile money accounts. Over the course of 2019, average monthly values and volumes doubled. Today, mobile money supports a network of 20,000 agents (GSM Association, 2020) and a digitisation agenda is being pursued to foster digital billing, with mobile money included as a key payment platform.

Regulation of electronic money in the Republic of Congo

The Republic of Congo is a member of the Economic and Monetary Community of Central Africa (CEMAC); its mobile money operations are regulated by the Central Bank of Central African States (BEAC), with support from local agencies. These local agencies include the Fund Transfer Regulatory Agency (ARTF)[7] and Agence de régulation des postes et des communications électroniques (ARPCE).[8]

Mobile money taxation in the Republic of Congo

In order to pay for the newly installed digital HUB transaction monitoring system, which was run by ARPCE on behalf of the national tax office, the Direction Générale des Impôts, the government instituted a 1% levy at the end of 2018 on all electronic transactions through the HUB. The fee was to be paid to the ARPCE by the operators and split between the system operator, many regulatory agencies, and the government treasury (which would receive 30%). This tax was confusing as it did not fully clarify to whom the tax was being paid as well as having similarities with the then-existing tax on fund transfers (TFF)[9]. As a result, the new tax generated little to no revenue for most of 2019. In the end, the government clarified in October 2019 that the 1% tax only applied to cash-out transactions. On December 30, 2019, the law was amended to expressly reflect this. It was unclear, though, whether and how the new statute applies to banks.

The impact of the tax

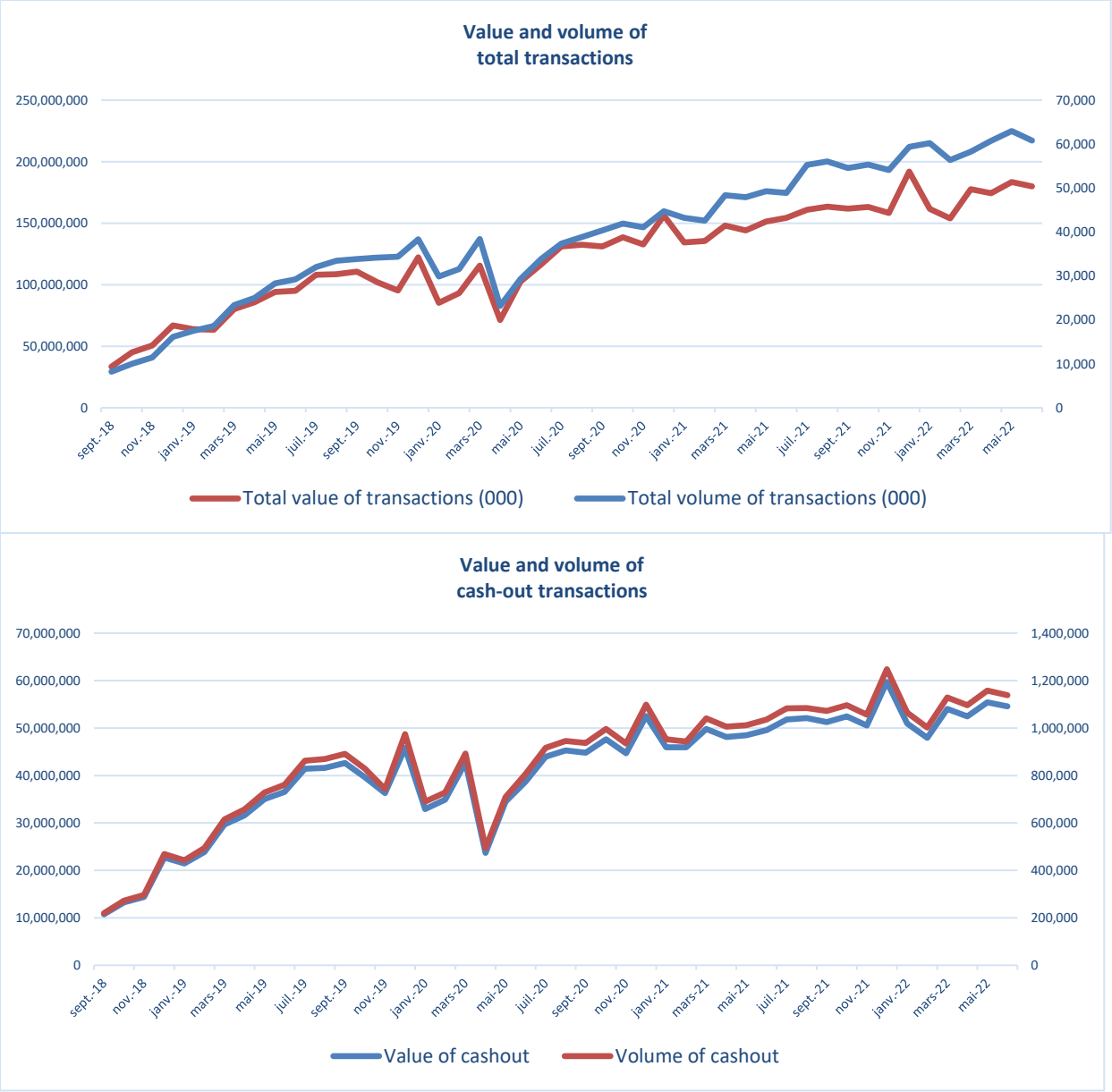
The tax was met with strong agitation spearheaded by consumer associations and the industry but they were unsuccessful. Mobile money businesses experienced unfavourable immediate effects, with both values and volumes declining as of January 2020. The volume of total transactions fell from 38.1 million in December 2019 to 29.9 million in January 2020. Similarly, the value of total transactions fell from FCFA 122 billion (USD 204 million) to FCFA 85 billion (USD 143 million) over the same period. The subsequent four months were marked by some turbulence and a low of 23.1 million in volume and FCFA 71.2 billion (USD 119 million) in value were recorded in April 2020. Cash-out transactions amplified this effect.

[7] ARTF regulates electronic money transfers in the Republic of Congo

[8] ARPCE is a telecoms regulator that is in charge of the Know Your Customer (KYC) aspect of mobile money.

[9] TFF was payable by the banks on foreign currency transactions.

Figure 3: Cash-out and total transactions in the Republic of Congo, September 2018-June 2022



Source: Agence de régulation des postes et des communications électroniques (2022)

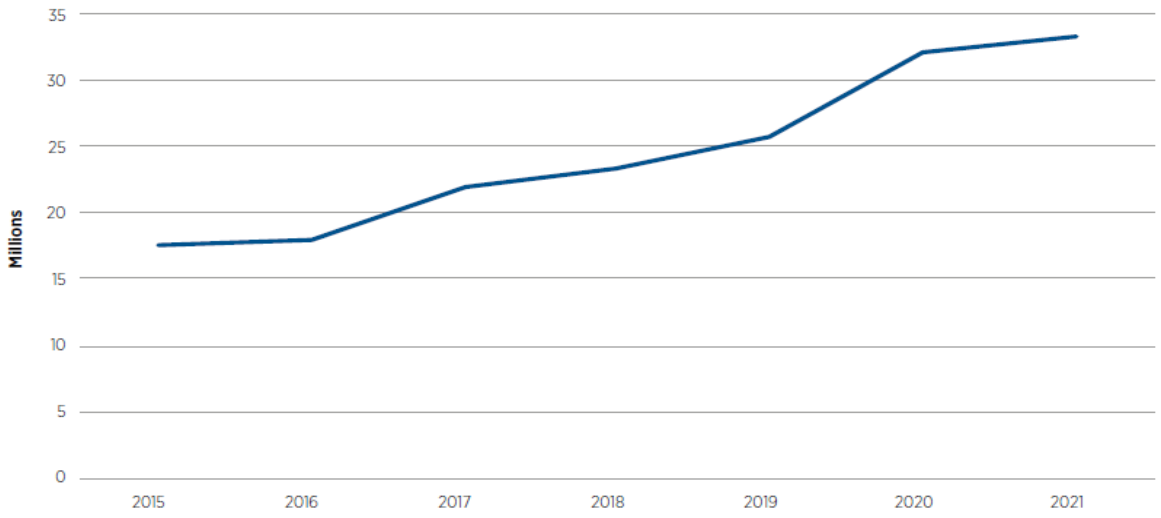
The inconsistent performance, particularly concerning transaction values, was a reflection of the observed shift in customer behaviour. The greater drop in transaction values relative to volumes is consistent with operators reporting larger transaction values emanating from the mobile money system. Operators saw a decline in the number of active agents as well, whose income is mostly dependent on cash-out fees. The period after the slump saw a fast recovery in mobile money transaction volumes and values, followed by a relatively sturdy upward trend.

2.3 The case of Tanzania

Tanzania's current population is 63,903,335. There are 31,929,925 males (representing 50% of the population) and 31,973,409 females (representing 50% of the population). Mobile penetration had reached an estimated 82.7% of the population as of January 2021, making Tanzania the second-largest telecoms market in East Africa behind Kenya. The country's telecoms sector contributed USD859 million to real GDP in 2018, up from USD672 million in 2014, an increase of 28%. This growth was attributed to the increase in mobile usage and the expansion of broadcasting and internet services. The telecoms sector is dominated by Tanzania Telecommunications Corporation (**TTC**) and Zantel. Other players in the markets include Airtel, Halotel, Smile, Tigo, and Vodacom.

The solid telecoms market gave birth to the mobile money market in 2008 when the fintech company, E-Fulusi launched the first mobile wallet in Tanzania, MobiPawa. This was followed by the launch of M-Pesa by Vodacom the same year. Three other MNOs launched their own mobile financial services, Z-Pesa (Zantel), Airtel Money (Airtel) and Tigo Pesa (Tigo). The mobile money sector in Tanzania is however dominated by Vodacom's M-Pesa and Tigo Pesa. In March 2020, mobile money users made 256.96 million transactions using one of the six mobile money services. The total number of mobile money accounts rose from 18 million in 2015 to 33 million in 2021 (see Figure 4 below).

Figure 4: Total number of mobile money accounts, 2015-2021(millions)



Source: GSM Association (2021). Available online at https://www.gsma.com/publicpolicy/wp-content/uploads/2021/12/spec_tanzania_mm_report_02_22-1.pdf

Regulation of electronic money in Tanzania

The success story behind mobile money penetration in Tanzania was a result of a favourable regulatory environment created by the government by amending the Bank of Tanzania Act in 2006 to mandate the central bank to superintend and regulate non-bank entities offering payment services. This was operationalised in 2007 by providing standard operating procedures (SOPs) for electronic payment schemes and allowing mobile network operators (MNOs) to provide payment services. The government also deployed technological innovations by relying on MFS Africa[10], the largest digital payments hub in Africa, to support the Bank of Tanzania's programme of financial inclusion. The government also launched the National Financial Inclusion Framework (NFIF) to identify Mobile Financial Services (MFS) as one of the key technologies for facilitating financial inclusion. This was supported by the Tanzanian Communications Regulatory Authority (TCRA) as the regulatory counterpart of the MNOs that are providing MFS. The central bank and the TCRA collaborate on the oversight of the MFS regulatory framework. It is worth noting that the private sector has played a significant role in facilitating the growth of MFS.

Mobile money taxation in Tanzania

In July 2021, Tanzania introduced a new tax on mobile money transfer and withdrawal transactions. This, however, excluded merchant, business and government payment transactions. The levy was set at a rate of 10 Tanzanian shillings to 10,000 Tanzanian shillings (USD0.4 to USD4.31) per transaction, depending on the amount of money transferred. The introduction of the tax led to a public outcry and it was subsequently cut by 30% to 7 Tanzanian shillings to 7,000 Tanzanian shillings respectively, depending on the amount of money transferred (GSM Association, 2021).

Impact of the tax

The introduction of mobile money taxation engendered a decline in the patronage of mobile money transactions. According to the GSM Association (2021), the average transaction fee increased from 3% to 369% depending on the transaction value and this has affected patronage significantly. It is also worth noting that in addition to a decline in patronage, users also removed their monies from their mobile money accounts and resorted to substitute payment methods such as cash. Nevertheless, despite the transaction cost increase and the massive reduction in the number of cash-out transactions, the average value per cash-out transaction increased by 7% from TZS72,700 to TZS73,400 between June and July 2021. This suggests that while mobile money users made fewer cash-out transactions to avoid paying the increased fees, they cashed out higher amounts in July than in June (GSM Association, 2021).

Obviously, it is the rural folks in Tanzania who are most affected by the levy since mobile money is the only avenue for them to access financial services. The levy has also affected other services derived from mobile money usage such as savings, loans and insurance (GSM Association, 2021).

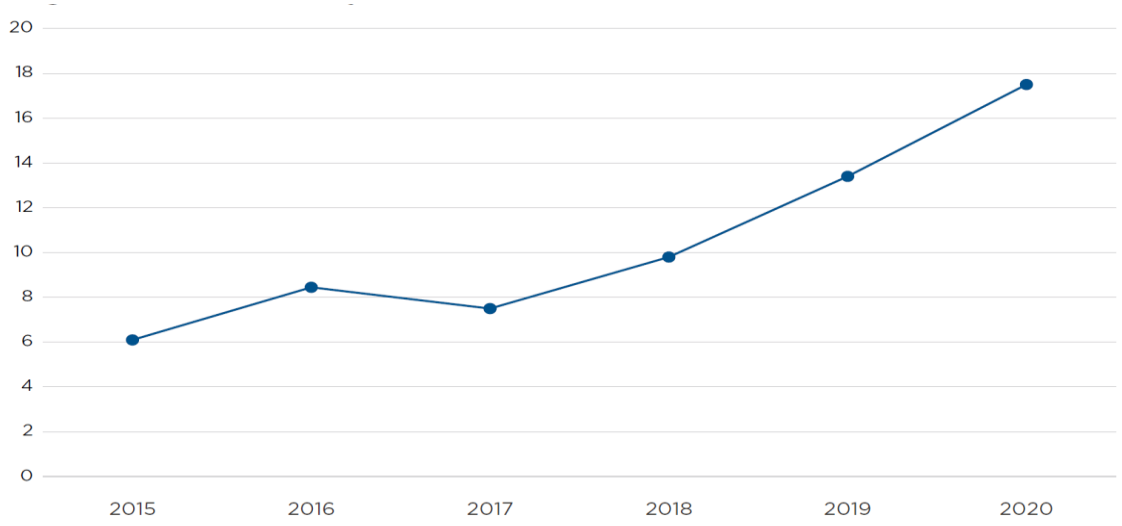
[10] MFS Africa is a pan-African digital payments platform that connects mobile money systems and digital financial service providers across the continent. The headquarters is in Sandton, Johannesburg.

2.4 The case of Côte d'Ivoire

The Ivorian economy relies heavily on agriculture, with smallholder cash-crop production predominating. The country's estimated population was 27,709,154 (in 2022). The male population is 50.9% while females constitute 49.1%. In 2020, Côte d'Ivoire was the world's largest exporter of cocoa beans and had high levels of income for the region. The government in recent years has helped develop a viable telecoms sector which has focused on the delivery of combined services, which permits operators to offer fixed-line and mobile services under a universal services license regime. The main players in the mobile market are Orange Côte d'Ivoire operating alongside MTN Côte d'Ivoire and Moov.

Côte d'Ivoire first introduced mobile money operations in December 2008, leading to intense competition among mobile network operators. There are currently five mobile money operators: CelPaid, Moov, MTN, Orange, and Qash Services. These operators have together registered close to 5 million mobile money accounts, 35% of which are active. By December 2011, the number of registered mobile money accounts was just over 2 million and 22% were active, reaching close to 5 million as of 2014 (Pénicaud, 2014). At the end of 2019, there were 17.5 million registered accounts (see Figure 7 below) making Côte d'Ivoire the country with the highest mobile money penetration rate in the Economic Community of West African States (ECOWAS) (GSM Association, 2020). Out of the five operators listed above, only Orange, MTN and Moov are currently operational today.

Figure 5: Registered mobile money accounts Côte d'Ivoire, 2015-2020 (millions)



Source: GSM Association (2020)

Regulation of electronic money in Côte d'Ivoire

A transition towards digital financial services (DFS) in Côte d'Ivoire began in 2015 when the Central Bank of West African States (BCEAO) announced legislation encouraging non-bank

institutions to issue electronic money. Mobile money nearly single-handedly fueled a 20% rise in financial account ownership nationwide between 2014 and 2017. This exemplifies why an enabling regulatory framework is one of the most crucial elements in digitalization.

Mobile money taxation in Côte d'Ivoire

In 2018, the government sought to enact a 0.5% mobile money transaction tax that did not apply to banking but it was swiftly abandoned in response to the popular uproar. In January 2019, the government enacted a new 7.2% sector-specific tax on the mobile money industry. This applied to mobile money providers' overall revenue rather than the actual transaction value, in contrast to the other mobile money taxes examined in this study. The tax in Côte d'Ivoire is distinct since it is set aside for specific expenses. Out of the 7.2%, 2% goes towards developing rural digital infrastructure, 0.2% toward funding the arts, and 0.25% towards battling industry fraud. The remaining 4.75% is general taxation. As with other countries in the region, there is also a sales tax on mobile money fees (18%).

The impact of the tax

It is estimated that in the first quarter of 2018, there was a 14.78% year-on-year increase in mobile money users before taxation was introduced. In 2018, the sector recorded CFA17 bn (€25.9m) in daily transaction volume, nearly tripling from CFA6 bn (€9m) per day in 2014. There was initial civil society pressure on the government after the 0.5% transaction tax was introduced in 2018. This led to a quick reversal of the tax and it was replaced with the 7.2% tax payable instead by mobile service providers in 2019. The new tax initially began to feed into increased consumer fees, leading to civil society calling for a reversal of the tax. The government, however, insisted to mobile money operators that the tax could not be passed onto consumers in the form of higher fees. The providers would absorb the tax and instead cut back on operational and infrastructural spending to maintain profitability.

2.5 Key Lessons

Electronic transfer taxes in the selected countries above have mostly focussed on mobile money transaction costs that are borne by consumers, with Côte d'Ivoire being the exception (see Table 2 for a summary of the selected cases). The following key lessons are noted:

1. The tax rate is very crucial. It must not be too high or insufficiently low. Moreover, marginal reductions (say 0.5%) can make a difference between stakeholder rejection and acceptance of a tax policy. Indeed, in all the cases examined, the taxes failed to provide the anticipated revenues; readjustment of rates only marginally improved take-up after the initial drop in patronage. An optimal electronic transfer tax rate is essential for good tax performance
2. Different tax policies engender varying immediate responses. This means that country context is crucial. Thus, optimal tax rates may differ from country to country. As such, a country implementing an electronic transfer tax should find an optimal rate with respect to its specific context and local conditions.

TABLE 2: Summary from selected case studies

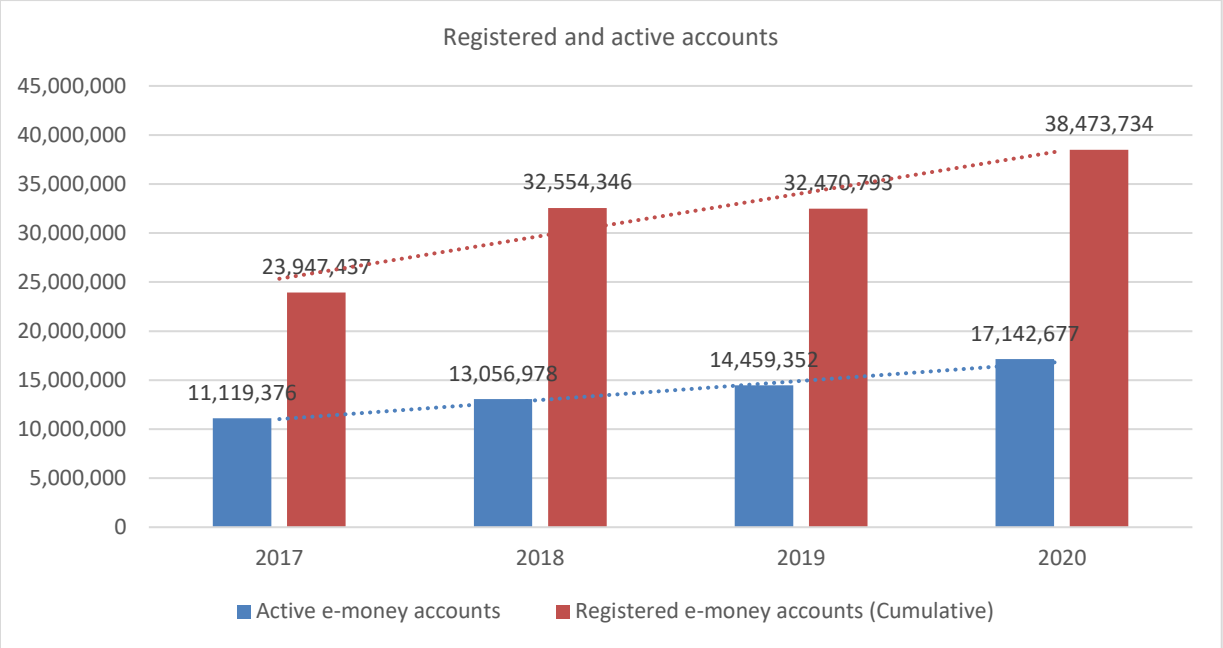
Country	*Proposed rate*	*Coverage*	*Reaction*
Uganda	0.5%	Transfer, Cash-in, Cash-out	• 50% decline in transaction value two months after tax (rate of 1%) announcement. • After adjustment to 0.5%, the value of transactions remained low and people preferred to make large transactions at the banks.
Republic of Congo	1%	All electronic transactions that pass through an electronic transfer HUB	• Not much revenue was realised in 2019. • The value of transactions fell by about a third of pre-tax values. • Cash-out reduced drastically, leading to a fall in the number of active agents.
Tanzania	TZS7- TZS7,000 shillings (USD0.4 -USD4.31)	Mobile money transfers and withdrawals; merchant, business and government payment transactions are exempted	• Led to a 363% increase in the average transaction fee. • Decline in mobile money patronage. • Massive reduction in cash-out transactions. • Rural folks were disproportionately and adversely affected
Côte d'Ivoire	7.20%	Mobile money providers' overall revenue	• Initial shifting of the tax burden • Met public uproar and was curtailed by the government. • No clear impact on transactions and users.

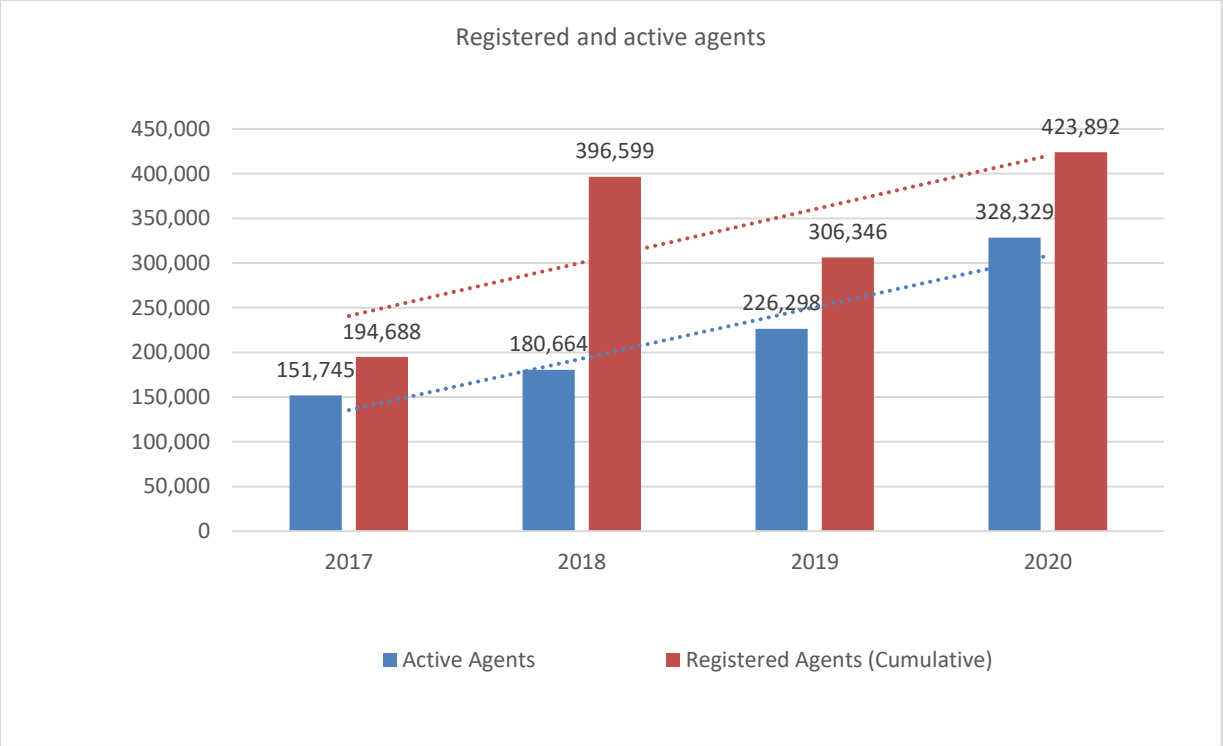
3. When the burden of the tax falls on consumers, the consumers are very sensitive and are quick to reduce their patronage, resulting in an inevitable drop in revenue. This holds true even when initial rates are revised downwards to encourage compliance. The adjustment period before possibly trying to adjust to pre-tax levels depends on the extent of the impact on consumers and their reactions.
4. Consumers of electronic transfer services may resort to finding alternate means of performing the taxed transactions where available. An efficient policy should seek to minimise such loopholes for optimal capture and performance.

Taxing electronic money in Ghana

Ghana is a lower-middle-income country with an average GDP growth rate of 5.2% over the last decade. The nation's population has risen from 6.7 million in 1996 to 31.7 million in 2021, thus, increasing by almost 500%.

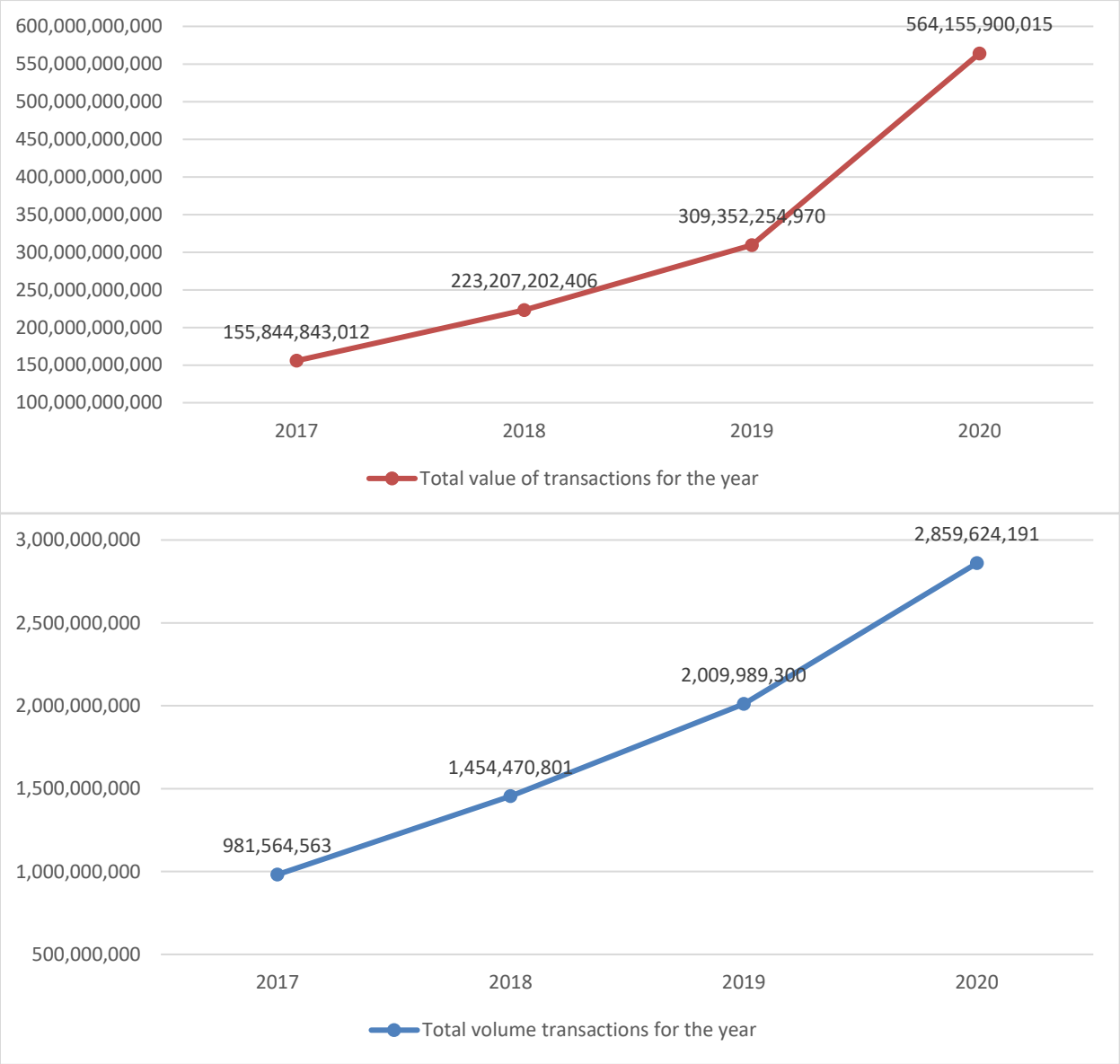
Figure 6: Mobile money accounts and agents in Ghana (registered and active)





Source: Bank of Ghana (2022)

Figure 7: Value and volume of mobile money transactions in Ghana, 2017-2020



Source: Bank of Ghana (2022)

About 67% of Ghana's population is deemed to be of working age. Mobile money has seen very strong growth in recent times. For instance, the number of registered mobile money accounts increased from 23.9 million in 2017 to 32.5 million in 2019 and 38.5 million in 2020, while the number of active accounts (which recorded at least 1 transaction within 90 days before the survey) increased from 11.1 million in 2017 to 14.5 million in 2019 and 17.1 million in 2020. In addition, the number of active agents (who performed at least one transaction within the 30 days prior to the survey) increased from 151,746 in 2017 to 226,298 and 328,329 in 2019 and 2020, respectively.

Between 2019 and 2020, the volume of mobile money transactions increased by 85 million while the total value of transactions increased from GH¢309.4 billion to GH¢564.2 billion. The average balance per account holder increased from GH¢112 to GH¢179.5. Mobile money has played an instrumental role in financial inclusion. The 2017 Global Findex Report noted that mobile money boosted Ghana's financial inclusion from 41% to 58% between 2014 and 2017 (Demirgüç-Kunt et al., 2020). The following section discusses the effects of Ghana's electronic levy on mobile money operations.

Regulation of electronic money in Ghana

There are currently five electric money issuers and 21 payment service providers in Ghana. However, MTN remains the dominant provider. The digitalisation of the interbank payment ecosystem is legally founded in the Payment Systems Act, 2003 (Act 662). The implementation of Act 662 saw the establishment of the Ghana Interbank Settlement (GIS) system, which has improved the efficiency[11] of interbank payments and liquidity management and hence, reduced settlement and credit risks (BoG, 2021). Reflecting Kenya's experience of harnessing mobile telephony to broaden access to financial services, Ghana introduced the Branchless Banking Guideline in 2008 to regulate bank partnerships with telecommunication firms to provide financial services, leveraging the widespread use of mobile phones.

Between 2009 and 2012, MTN mobile money, Airtel Money and Tigo Cash were launched in a bank-led framework. To address some operational lapses that discouraged patronage in the bank-led model, the Agent Guidelines and Electronic Money Issuers Guidelines were issued in 2015, thus ushering in the MNO-led model. These guidelines allowed non-bank entities such as telecommunication firms to be licensed by the Bank of Ghana to issue electronic money. The guidelines also provided the framework to improve customer due diligence and know-your-customer (KYC) requirements for customers and merchants. In addition, the Data Protection Act, 2012 (Act 843) was implemented to regulate the management of customer data and prevent breaches. The Payment Systems and Services Act, 2019 (Act 987) was introduced to accommodate the growing fintech industry and its role in facilitating electronic payments. Other innovations in the mobile money space include a three-tier merchant account onboarding scheme, the advent of a universal QR code as an alternative to point-of-sale (POS) devices and interoperable merchant payments.

The impact of electronic money taxation in Ghana

The introduction of an electronic transaction levy (or e-levy) of 1.75%[12] on electronic transactions above GH¢100 (US$16 at the time) per day, to take effect on February 1, 2022, was announced by the Minister of Finance on November 17, 2021, during the presentation of the 2022 Budget Statement and Economic Policy to Parliament. The aims included widening the tax base and increasing domestic tax collection. Mobile money transfers, bank transfers, merchant payments, and inward remittances were all to be subject to the charge (MoF, 2022 Budget Highlights).

[11] The system made payments seamless by introducing the electronic cheque clearing and the automated clearing house platform. Moreover, the system led to a reduction in cheque-clearing time from eight to two working days and provided options for same-day clearing of cheques.
[12] Note that this rate is exclusive of all charges imposed by the telcos.

Debates on the subject frequently resulted in disputes in Parliament, with the levy's detractors asserting that it would reduce total economic activity and disproportionately harm low-income individuals who do not have access to formal banks and rely extensively on mobile money transfers (Klutse, 2022). Subsequently, the rate was reduced from 1.75% to 1.5% after the public outcry. In March, the Electronic Transfer Levy Act, 2022 (Act 1075) was finally passed by Parliament and assented to by the President. The following exemptions were noted in the Act:

1. Transfers between accounts owned by the same person.
2. Transfers to pay taxes, fees and charges on government-designated platforms.
3. Cumulative transfers adding up to GH¢100 made by one person within one day.
4. Specified merchant payments.
5. Transfers between master-agent, agent and principal accounts.
6. Electronic clearing of cheques.

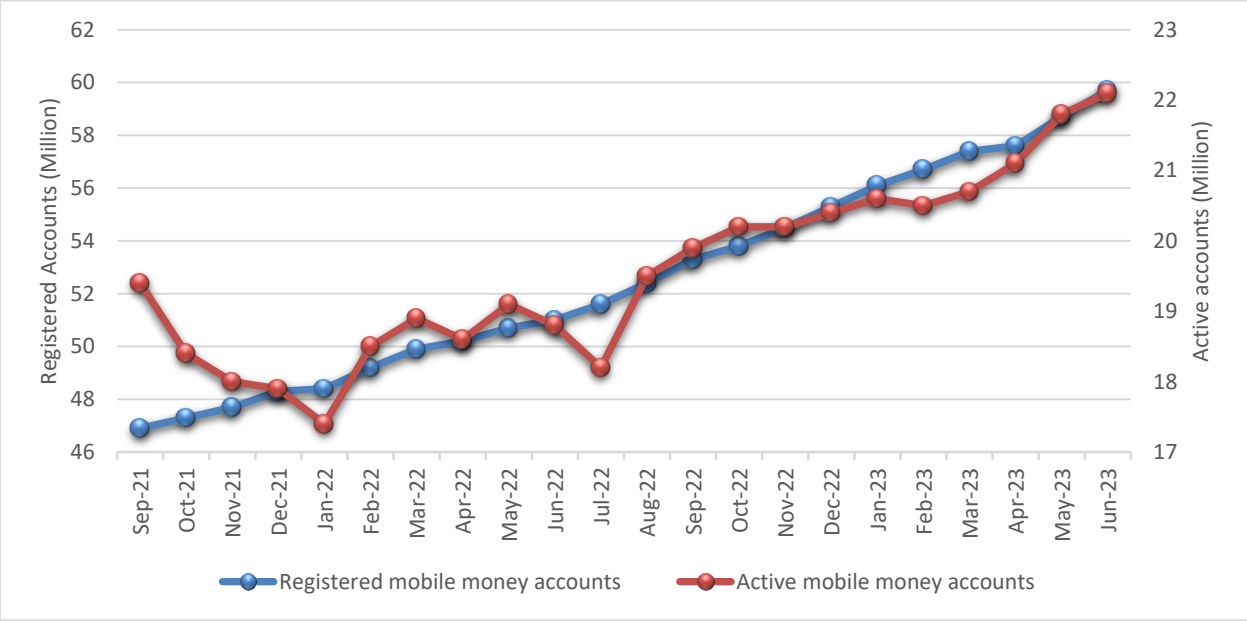
The government began charging the 1.5% e-levy on mobile money transfers and bank transfers exceeding GH¢100 on May 1, 2022. The fee was to be collected from mobile money providers, banks, payment service providers, special deposit-taking institutions, and other specified financial institutions. The charged business would debit the user's wallet or bank account after adding the levy to the amount being transferred. E-levy collection and its accounting are handled by the Ghana Revenue Authority (GRA). A review of this policy was proposed by the Minister for Finance in November 2022 when presenting the 2023 Budget Statement. The review entailed the reduction of the headline rate from 1.5% to 1%, coupled with the scrapping of the daily threshold. The implication is that all monies transferred electronically would be eligible for e-levy deduction and the threshold of cumulative transfers higher than Gh¢100 would be removed. The minister also proposed to increase the VAT rate by 2.5% in support of the digitisation and roads agenda.
To gauge the initial effect of the e-levy, the following section compares the trends in mobile money accounts, agent activity and registration, volume and value of mobile money transactions as well as indicators for alternative payment options (cheques cleared, Ghana Interbank Payment and Settlement Systems (GhIPSS) instant pay and online banking) between September 2021 and June 2022. The three periods under discussion are: Period 1 (November 2021-February 2022) when the e-levy was first announced; Period 2 (March 2022-July 2022, which spans the passage of the Electronic Transfer Levy Act and implementation of the e-levy policy; Period 3 (November 2022-February 2023), which spans the announcement of the review and implementation of the review.

The e-levy was supposed to be effective from January 2022 following its announcement in November 2021. Figure 8 shows the number of registered and active accounts over the period under review. In Period 1, the number of active mobile money accounts remained on a downward trend in September and October 2021 and hit an all-time low in January 2022, after which it rebounded in February 2022. Period 2 shows that the number of registered mobile money accounts increased from 50.2 million in April 2022 to 50.7 million in May and 51 million in June 2022.

The number of active accounts also increased, from 18.6 million in April 2022 to 19.1 million in May 2022. The two months following the actual implementation of the e-levy policy were marked

by a reduction in the number of active mobile money accounts from 19.1 million in May to 18.8 million in June and 18.1 million in July. Thus, over 1 million mobile money accounts were inactive after e-levy implementation. Following the review, the number of registered and active accounts and agents remained on an upward trend in January 2023 while the number of active accounts dropped by 100,000 by February 2023.

Figure 8: Registered and active mobile money accounts in Ghana (September 2021-June 2023)

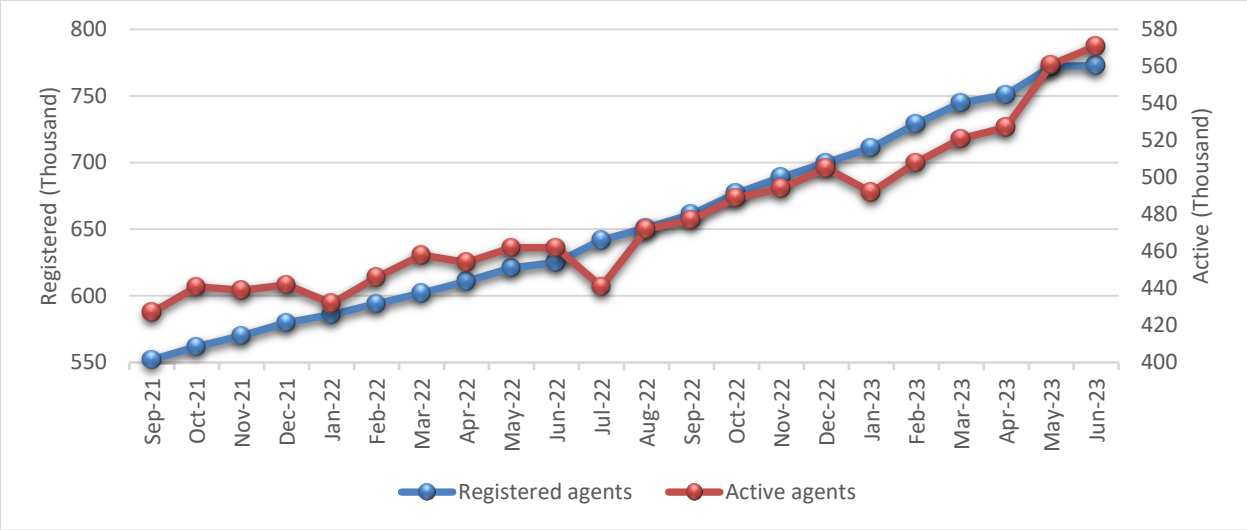


Source: Bank of Ghana (2023)

The number of active accounts also increased, from 18.6 million in April 2022 to 19.1 million in May 2022. The two months following the actual implementation of the e-levy policy were marked by a reduction in the number of active mobile money accounts from 19.1 million in May to 18.8 million in June and 18.1 million in July. Thus, over 1 million mobile money accounts were inactive after e-levy implementation. Following the review, the number of registered and active accounts and agents remained on an upward trend in January 2023 while the number of active accounts dropped by 100,000 by February 2023.

Figure 9 presents the number of registered and active mobile money agents in Ghana between September 2021 and February 2023. While the number of registered agents remained on an upward trend, the number of active agents revealed some interesting dynamics. October 2021 had 441,000 active agents, representing an increase of 14,000. In November when the e-levy policy was announced, however, the number dropped to 439,000 and rebounded to 442,000 in December 2021. In January 2022, when the e-levy was implemented, the number of active agents dropped by 10,000, after which a recovery was noted in February and March 2022. In April, after the Electronic Transfer Levy Act had been passed, the number of active agents fell by 4,000.

Figure 9: Registered and active mobile money agents in Ghana (September 2021-June 2023)

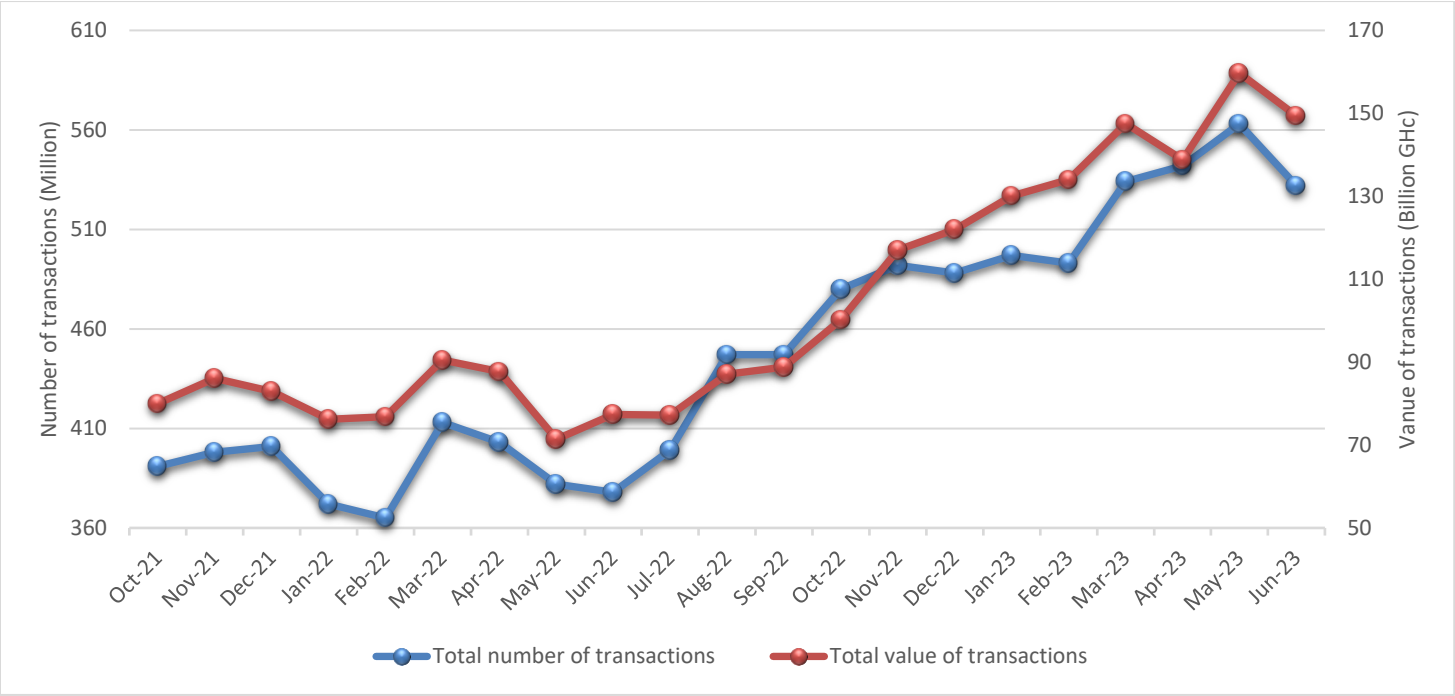


Source: Bank of Ghana (2023)

Implementation of the e-levy in May 2022 seemed to have no immediate effect on the number of agents. July 2022, however, saw the number of active agents fall by a whopping 21,000, followed by a quick recovery and an uptrend between August and December 2022. When the headline rate was reduced to 1% in January 2023, the number of agents fell by 13,000 from the 505,000 recorded in December 2022, but recovered strongly with a 16,000 increase in February 2023.

Figure 10 presents the total number of transactions and the total value of transactions in Ghana between September 2021 and February 2023. In Period 1, the total value of transactions fell from November 2021 to February 2022. Similarly, the total number of transactions fell from December 2021 to February 2022. Period 2 began with a strong recovery in both the value and volume of transactions by March 2022, which also coincided with the passing of the Electronic Transfer Levy Act. Between March and April 2022, the total number of transactions fell by 10 million while the total value fell by GH¢2.8 billion. Similarly, the total number of transactions fell by 21 million while the total value fell by GH¢16.3 billion between April and May 2022. After the implementation of e-levy in May, the total value immediately assumed a largely upward trend in June 2022 while there was further reduction in the total number of transactions in June, followed by a period of recovery between July and November 2022. A look at Period 3 shows that after reviewing the headline rate downwards by 0.5% and removing the GH¢100 threshold, both the volume and value of mobile money transactions increased from the figures recorded in December 2022.

Figure 10: Volume and Value of mobile money transactions in Ghana (September 2021-June 2023)



Source: Bank of Ghana (2023)

TABLE 3: Percentage changes in selected alternate payment systems

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
GHIPPS Instant Pay Total Transaction Value	*-24.84*	*-7.29*	*4.28*	*19.86*	*18.85*	*-36.1*	*2.86*	*15.62*	*12.74*	*5.89*	*8.25*	*-0.31*	*32.82*	*-3.38*	*-8.03*	*-8.08*	*18.56*
GHIPPS Instant Pay Total Transaction Volume	*-23.33*	*-14.05*	*-7.53*	*15.22*	*17.78*	*-3*	*3.29*	*6.87*	*25.68*	*4.52*	*7.89*	*-6.48*	*10.95*	*1.93*	*-3.67*	*-0.81*	*3.16*
Internet Banking Total Transaction Value	*-3.39*	*-5.08*	*8.93*	*13.11*	*1.45*	*-1.43*	*-14.49*	*13.56*	*2.99*	*-2.82*	*-8.7*	*-6.35*	*16.95*	*-10.14*	*8.06*	*5.97*	*5.63*
Internet Banking Total number of transactions	*-18.93*	*-19.23*	*-3.8*	*-21.68*	*52.61*	*-7.58*	*-7.39*	*8.35*	*1.96*	*17.97*	*-10.64*	*-4.04*	*17.88*	*-0.68*	*22.57*	*-11.90*	*1.26*
Cheques cleared Total transaction value	*-14.81*	*-14.81*	*4.35*	*29.76*	*-16.06*	*10.93*	*-1.48*	*-1*	*19.19*	*-3.62*	*-5.64*	*-3.19*	*10.29*	*-20.15*	*18.22*	*-8.70*	*3.03*
Cheques cleared Total number of transactions	*-15.67*	*-15.67*	*3.67*	*17.7*	*-15.23*	*9.09*	*-0.2*	*-4.68*	*11.32*	*-2.24*	*-9.56*	*3.22*	*10.69*	*-18.31*	*23.65*	*-9.36*	*1.32*

Source: Bank of Ghana (2023)

Looking at some of the main alternative means of transferring money in Ghana – namely, the GHIPPS instant pay, online banking, and cheques cleared – helps in understanding the trends in mobile transactions, mobile money accounts, and the number of agents. Table 3 presents the proportionate changes in indicators of alternative means of payments. In Period 1, after the announcement of the e-levy, there was immediate improvement in the growth rate of GHIPPS instant pay transactions, in terms of value and volume while the performance of Cheques cleared remained unchanged. By the end of January 2022, massive growth was recorded in all alternate payment systems. After the Electronic Transfer Levy Act was passed in March 2022 (Period 2), the growth spurt appeared to be heightened as the volume and value of GHIPPS instant pay transactions and cheques cleared as well as the value of internet banking transactions increased massively.

It should be recalled that there was a drop in active mobile money accounts and active agents (Figures 8 and 9) two months after the implementation of the e-levy. Concurrently, there was very strong growth in the volumes and values of all three alternate payment systems under consideration. The implementation of the e-levy in May 2022 (Period 2) saw 2.86% growth in the transaction value recorded for the GHIPPS instant pay, which had contracted -63% in the previous month. Similarly, the volume of GHIPPS transactions grew at a rate of 3.3% compared with -3% in April 2022. Internet banking also became less popular after the e-levy was implemented, with its transaction value shrinking by 14.5% compared with a 1.4% shrinkage in April 2022.

Interestingly, after the revision of the e-levy rate to 1% in November 2022 (Period 3), there appeared to be a drop in internet banking and cheques cleared the following month (December 2022). In January 2023 (when the revision was implemented) there was a reduction in the value and volume of GHIPPS instant pay transactions, while the other alternate payment systems did slightly better. In February 2023, however, there was a surge in the volumes and values of all three alternate payment systems under consideration. This could suggest that the revision of the E-levy rate had only a short-lived impact.

3.1 Immediate challenges and achievements

The immediate term following the enforcement of the e-levy was characterised by some glaring challenges. For instance, there were mechanical challenges on the first day of implementation, where some mobile money customers discovered that they were paying the e-levy on transfers even below the required minimum of GH100. In the end, those who fell victim to the technical hitches had to be compensated[13]. Furthermore, the policy threatened to affect price levels as

[13] See www.businessghana.com. Over 120,000 persons reimbursed after wrongful E-levy deductions – GRA

traders decided to raise their pricing by including all fees for mobile money transactions in the cost of their goods. In terms of equity and discrimination, it has been noticed that persons who receive their salary through a bank account are not charged the e-levy but those who receive their salaries through mobile money are charged.

So far, the e-levy has been implemented and the country has, thus, an additional stream of revenue mobilisation. To a large extent, the tax base has been broadened to include many people who were hitherto not captured. However, the realised amount has been over 90% short of the target. Indeed, compared to the programmed GH¢1.4 billion return on the levy for the first half of the year, the actual outturn was only GH¢93 million (MoF, 2022). This could be an indication that people have resorted to cash transactions or sending money through the agents, thus, avoiding person-to-person transactions. It is important to note that even the GH¢93 million outturn came at a cost of financial exclusion, as the poor and vulnerable were most likely to seek alternate forms of payment due to the disproportional burden that fell on them. It is also very plausible that some agents or merchants in rural areas overcharge their clients[14]. Hence, for rural dwellers, switching to making payments through agents may not be a haven.

The impact of the e-levy on the informal sector is another concern. It was assumed that the e-levy would provide a realistic way of taxing the higher earners in the informal sector. This would be true if those high earners used mobile money more than the informal low earners. However, a survey by Anyidoho, Gallien and Rogan (2022) found that informal workers in the lowest quintile recorded the second-highest average monthly mobile money transactions. This indicates that the burden of tax may be falling harder on the poor informal sector workers.

Conclusion

It is clear that electronic transfers have gained recognition and acceptance given the volume of transactions and the number of users. As developing countries strive to raise revenue due to their low tax-to-GDP ratios, it is also important not to impose taxes that will erode the significant gains in financial inclusion that have been made over the past decade. It is worth noting that Ghana's e-levy is different from the other taxes imposed on electronic transactions in the other country cases discussed above. For instance, in the Republic of Congo, the 1% tax applied only to cash-out transactions, with no equivalent bank VAT. In Tanzania, the levy was set at a rate of TZS10 to TZS10,000 (USD0.4 to USD4.31) per transaction. In Côte d'Ivoire, a 0.5% transaction tax triggered

[14] Information gathered by ISSER indicate that overcharging is the norm in rural parts and the northern parts of Ghana, due to the near-monopoly structure and the cost incurred by the agent whenever he/she had to come to town and procure certain logistics and materials for business.

public uproar and was replaced by a 7.2% sector-specific tax applied to mobile money providers' overall revenue. In Uganda, a 1% tax on all electronic transactions was revised to a 0.5% levy on the value of cash-out transactions.

Ghana's e-levy is one such form of taxation that aims to broaden the tax net, thereby, increasing the tax-to-GDP ratio from the current low level to acceptable levels. Compared with the 1% tax on all transactions in Uganda and the 0.5% tax on all cash-out transactions in the Republic of Congo, Ghana's e-levy mainly affects person-to-person and person-to-business transactions.

Initial figures showed that Ghanaians might be trading off the comfort of person-to-person transactions for an alternative means of performing transactions, although with a reduced level of convenience. This brings into question whether the e-levy rate is optimal or prohibitive. In general, a functional tax system should not have loopholes, as consumers are very sensitive to tax rates, albeit marginal, and would swiftly consider alternative payment options that enable them to avoid the said tax. Intending to set the tone for discussions on the impact of electronic transfer taxes in Ghana, this chapter also suggests the need for further examination of the effects of the e-levy on individual welfare as well as the performance of firms in Ghana. Further studies should also focus on innovations that would best address the loopholes in Ghana's electronic transfer tax and the estimation of an optimal rate for electronic transfer tax.

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