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Mobile Money Taxation and Financial Inclusion Agenda in East Africa: Is it killing the Goose That Laid the Golden Egg?

"The art of designing a good tax regime is like finding a way of extracting the maximum volume of feathers from the goose with the minimum amount of hissing" (Colbert, I7th Century)

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Abstract
This is a critical review paper examining the consequence of mobile money taxation on financial inclusion in the selected East African region countries. The paper involved an in-depth assessment of related literature, and literature was gathered through the Google Scholar and Scopus databases using the "Publish or Perish" search tool. The paper revealed the following; that mobile money taxes questionably discourage both the consumers and service providers, especially considering the multiplicity of taxes facing the telecoms sector; that mobile money-specific taxes may halt consumptions and discourage investment in the mobile sector; that mobile money sector tax affects negatively the spillover effect of mobile money service to other production sectors such as agriculture, healthcare and education; that frequent tax increase could restrict and discourage future investment; that total revenue taxes on operators may discourage more investment on infrastructure and service quality; and taxes on mobile money directly hit poor communities disconnecting them from digital and financial inclusion. These have implications for the attainment of financial inclusion and wider development goals. The paper recommends the governments to consider reducing sector-specific taxation, and minimizing tax-induced obstacles to the affordability of mobile and mobile services, and therefore expanding the tax base with the intention to enhance efficiency. Furthermore, the governments and tax authorities are advised to ensure that mobile money taxes are well designed to ensure that taxation principles are observed, and to make the tax system more conducive and predictable to investment in the mobile sector.

Keywords: Mobile Money, Taxation Principles, Financial Inclusion

1. Introduction

Since their inception to-date, mobile money services have become a preferable formal financial service for many unbanked groups in developing countries. During 2022, more mobile money users held active accounts in Eastern Africa than in any African region, as the region reported 115 million active accounts out of approximately 390 million registered mobile money accounts, Petroc Taylor, (2023). The success of mobile money in East Africa may be attributed to a large population with no or limited access to traditional banking and financial services. For example, in Uganda, there are about 22 million people with mobile money accounts, which is nearly three times as many as those having bank accounts. Mobile money transactions in Uganda in 2022 are estimated to have been in excess of USh 54 trillion (US$ 15.3 billion), which is more than half of the country's GDP as clearly earmarked by Kamulegeya, (2018). Mobile money has become foundational to increasing financial inclusion in Sub-Saharan Africa. East Africa was once the epicenter of mobile money, given the pioneering mobile network operators in

Kenya and Tanzania being the early adopter of mobile money in 2008, and that is why it is very crucial studying this region to realize the impact of recent emergence of mobile money taxation on the exceptionally reported financial inclusion success, World Bank, (2021). Also, the three countries are selected due to their level of engagement in digital technology and their incredible level of financial inclusion. These countries are among the emerging economies where the financial inclusion is believed to be the solution to poverty reduction which is the core agenda, N'dri, L. M., & Kakinaka, M. (2020).

The rapid acceptance and extensive use of mobile services have attracted most Governments in East Africa to take advantage of mobile money growth as a cheaper and easier opportunity to expand their tax base. After all, in developing countries formal economy forms a smaller slice of the population limiting their tax authorities to expand their revenue bases. Although many African countries tax to GDP ratio has been consistently low, the average tax to GDP ratio in Sub-Saharan Africa is 18 percent, while in the ratio vary between 12% and 16.6% (Kenya (16.6%), Uganda (12.3%), and Tanzania (12%), Ibrahim and Jairo, (2023). Mobile money first came into place in East Africa between 2007 and 2009, and many mobile money agents have spiraled up throughout the region acting as a channel for mobile money transaction such as payment of bills, salaries and school fees, purchase of goods and transfer of money to family and friends, Francesco Pasti, (2018). Recently, East Africa has experienced a mobile money revolution.

Mobile phone-enabled financial services have produced a celebrated economic outcome by significantly reducing cashless transactions across entire market segment of the economy, and the need to improve tax revenue collection has motivated Governments in the region to begin focusing on mobile transactions, Ngung'u (2021). This opportunity for growth has led to raising in various taxes in the mobile money space. While increasing taxes and expanding the tax- bases are paramount for economic development, Governments should also weigh up the impact of such decisions because a poorly designed tax policy may have a significant impact on the economy of the country in a long-run. According to Ngung'u (2021), as tax rates are raised beyond the most favorable rates, tax revenue falls and the potential for distortion in the market is inevitable. On the other hand, Delaporte and Bahia, (2020) reveals that taxes on mobile money impose a negative impact on profitability models of the mobile money service providers. Consequently, this may hamper their investment plans which will potentially end up reversing the financial inclusion trend which has proven to be the driving engine of the current business development in East African region.

Delaporte and Bahia, (2021) report that within the first three months of implementing daily levy on internet in Uganda an immediate drop of 2.5 million online users and a decline of 1.2 million users of tax payers of over-the-top (OTT) media were experienced which, consequently, amounted to tax revenue fall by USD 1.2 million. Furthermore, the introduction of 1% charge for mobile money transactions resulted into the decrease in the transaction value by UGSH 672m within the first two weeks before the decision was reversed later. Similarly, According to Delaporte and Bahia, (2021), a decrease of 1% of total cost of mobile phone ownership in Brazil, Mexico, Bangladesh, South Africa and Malaysia resulted into a corresponding increase in the revenues of the respective countries. Therefore, disproportionate taxation on mobile phone-based transactions may, consequently, reverse the benefits for financial inclusion already achieved and this may generate an incentive for service users to go back to cash transactions era.

Delaporte and Bahia, (2020) suggests that painful mobile money taxes may probably force low and middle-income population in the society reverting back to cash transaction because the mobile money costs may become higher for them. At the same time high-income earners may revert to lump sum transactions through other convenient and affordable forms of money transfer, and this may hurt the economy because most of low-income earners who are now digitally excluded are not even included in the formal banking sector, hence, they will be lost completely. Based on these facts, countries may face a double blow; *first* a loss of revenue on tax escape from mobile money transactions, and *secondly*, significant reduction of the benefits derived from financial inclusion whose effect trickles down to fall in corporate taxes from businesses since financial inclusion basically improves the profitability of companies.

It is clearly evident that mobile service consumers have already registered their frustrations and dissatisfactions in some of the East African countries concerning some mobile taxes introduced by their respective countries. For instance, in 2018 when the Ugandan government introduced a 1% tax on all mobile money transactions (for both money sending and withdrawal) there was an eruption of a public outcry and pressure which forced the government to reverse its decision by reducing the rate to 0.5% and charging this rate for only the withdrawals. A related public outcry occurred in Tanzania in July 2021 when the similar tax on all mobile transaction was introduced by the Government. Such an outcry caused the Government to agree reviewing the decision by reducing the imposed tax on money transfer by 30% and decreasing the charges to transfer money from one MNO to another by 10%, Delaporte and Bahia, (2021).

From the preceding discussions it is apparent that the mobile taxation policies in the East African region may be poorly designed and not in line with the principles and best practice of taxation. Weakly designed tax policy when put in use to mobile and bank transactions can suggestively put at risk economic inclusiveness. Following examples of documented public outcry, the author alleges that there is a possible weakness in the design of the mobile tax policies across the region, and this warrants the study. The paper, therefore, aimed at examining mobile taxation policies in selected East African countries, and their impact on driving financial inclusion agenda. The paper unpacks the role of mobile money and highlights possible negative externalities that may arise from taxation and strikes the balance between taxation of the mobile money transactions and the financial inclusion agenda. The study employs a critical review of the tax systems of the selected countries and assess how the mobile money taxation frustrates the financial inclusion agenda which has already shown a commendable pace in the selected East African countries. The recommendations on the best ways to balance the mobile money taxation and financial inclusion efforts will ultimately be proposed.

This paper contributes to advancing the fintech literature, particularly on mobile money, and while there is inadequate research on the impact of mobile taxation on fintech innovation, the study presents a fresh perspective to augment the extant literature. The article would help inform mobile money tax policy initiatives and amendments by unpacking the likely unintended consequences, such as the likelihood of market distortions, potential tax evasion, and overreliance on cash transactions, thus affecting revenue mobilization and financial inclusion.

2. Related Literature

The significant growth of mobile money usage has been observed in East Africa since around 2002 with Kenya pioneering the digital financial inclusion agenda. The growth of mobile money financial services in the region has permitted millions of people, who were financially excluded, to conduct financial transactions in a relatively affordable, safe, and reliable way, and the transformative power of mobile technology has heightened financial inclusion, Cull *et al*; (2012).

Before studying the nexus between mobile money and financial inclusion it is crucial to map the stakeholders involved in the industry. Theoretically, understanding varying stakeholder needs is important and that despite some differences between African countries there exists sufficient similarities to necessitate Africa-Africa learning, Osabutey, E. L., & Jackson, T. (2024).

Tan, (2022) considers financial inclusion as the delivery of affordable, accessible, reliable, and quality financial services to all population groups, including the vulnerable, such as the poor, low-income earners, girls and women, the youth, and the informal sector, as well as vendors. According to Tan, (2022) digital technologies such as mobile money literally simplifies processing of large volumes of small transactions and deliver a range of financial services in remote areas. The technology has now enabled businesses and individuals invest money, transfer, and receive money, make purchases and payments, check balances, and make savings in the comfort of their homes, even those in inaccessible areas. On the other hand, Senyo, P. K., & Osabutey, E. L. (2020) consider financial inclusion as access to useful and affordable financial products and services such as payment, deposits, insurance and loans by individuals and organizations. According to these authors, while in the traditional financial industry, access to monetary products and services is mostly obtained through banks and other financial firms, in the

contemporary setting, technology is enabling non-financial institutions such as telecommunication firms to provide financial services. In the same vein, mobile money services are now widely considered an integral component of the financial-inclusion program that was initiated in several developing and emerging countries in the last two decades as highlighted by Shaikh *et al.*, (2023).

Mobile money is a key factor in achieving social cohesion, fostering sustainable eco- nomic growth, increasing poverty reduction efforts, and achieving sustainable development goals. Conventionally, financial institutions are entrusted to offer financial products and services, but the emerging technological advances and digitalization has enabled non-financial institutions to provide financial services, a trend generally referred to as FinTech as advocated by Kowalewski & Pisany, (2023). Moreover, financial technology innovations have fueled the accessibility of financial services to those who could not formerly access them, World Bank, (2022). Mobile money is among number of innovations regularly considered vital for financial inclusion, and users may have access to financial services via mobile phones, in an ecosystem that includes banks, regulators, merchants, service providers, and agents, Odoom & Kosiba, (2020). According to Odoom & Kosiba, (2020), mobile money services allow users to complete transactions such as money transfers, bill payments, and loan acquisition.

In an attempt to promote more adoption and usage of mobile phones for financial services, Katz and Berry (2014) proposed tax exemption on mobile money transactions to be implemented, and conclude that tax legislation should exempt providers and users of financial services, especially those who offer digital financial services through mobile money platforms, from taxes to alleviate its effect on financial inclusion.

Glavee-Geo *et al.*, (2020) show that although mobile money was initially introduced to help consumers who hitherto had no access to formal banking services, this form of banking has become increasingly popular among various consumer segments as its usage and adoption has increased multifold largely in emerging and developing countries although introduction of tax on the service is becoming a threat. However, according to Delaporte and Bahia, (2022), tax exemptions from digital financial services are proven to enhance digital and financial inclusion to those who cannot afford the service.

Many African countries, including Ghana, have recently introduced e-levy on the transfer amount of electronic transactions to increase tax income by utilizing rapidly growing digital financial services, According to Ghana Revenue Authority of 2022, such transactions include; mobile money payments made across mobile money wallets with the same mobile money provider, transfer from a wallet from one electronic payment provider to a recipient on another, transfers from bank accounts to mobile money wallets, and transfer from mobile wallets to bank accounts.

Nevertheless, although provision of financial services via mobile money technology is associated with a reduced cost with adequate convenience, no one can strongly claim about the impact of e-levy on mobile money adoption in Africa as alleged by Odoom & Kosiba, (2020); Pobee & Ansong, (2022) who jointly leverage technological and behavioral models to validate or invalidate the factors influencing mobile money adoption neglecting studies on financial factors that could influence adoption.

Of recent, some scholars such as Narteh *et al.*, (2017) and Osei-Assibey, (2015) who are pioneers of financial inclusion agenda, have focused much of their attention on mobile money adoption. Their work has properly introduced this phenomenon in the broad mobile money literature. However, going through some existing literature on mobile money exposes more areas of research that deserve more attention. For example, Osei-Assibey, (2015) extracted the antecedents of mobile money adoption although their focus was exclusively on behavioral and technological drivers of the adoption of the innovation ignoring impact of taxation on the innovation. Furthermore, Narteh *et al.*, (2017) and Osei-Assibey, (2015) centered their study on technology factors, without considering the relationship between taxation and the adoption of mobile money.

In Kenya, according to Central Bank of Kenya report, (2021), the number of mobile phone transaction accounts has been steadily increasing, and the high volume but low average values of mobile phone transactions show that the platform is largely used by low-income earners who mostly transact in small values and are sensitive to

transaction costs. However, mobile phone payments are reported to actually be a very small proportion of total electronic payments, implying that they offer limited scope for significantly expanding the tax base. Instead, increasing the rate of taxation on retail transactions coming from low-income earners, who are sensitive to transaction costs, may result in less tax revenue in the future as these earners revert to cash transactions to avoid taxation

The study by Pobee, *et al.*, (2023), which draws inspiration from the Unified Theory of Acceptance and Use of Technology to assess the enablers of mobile money adoption, brings a new insight into mobile money adoption literature by moderating the relationship between intention to use the innovation and actual use. The authors studied the determinants of mobile money adoption and the moderating effect of taxation (e-levy) on mobile money adoption, and showed that performance expectancy, effort expectancy, social influence, and facilitating conditions significantly influence behavioral intention. According to the authors, behavioral intention shows a significant relationship with the actual use of mobile money, and the moderating effect of taxation is reported to negatively and significantly influence the actual use of mobile money.

3. Approach and Data

3.1 Data collection

This is a critical review article aimed at assessing the consequence of mobile money taxes on financial inclusion in selected East African countries- Kenya, Uganda and Tanzania. The critical review involves an in-depth assessment of related literature, and literature was gathered through the Google Scholar and Scopus databases. To undertake the data collection processes the following procedures were followed.

According to Cooper, (2009) before selecting and extracting data, the first step involves searching through the literature where a range of information sources was identified studies that require further analysis were singled out. In this paper the initial literature search started by searching through the databases (Google scholar and SCOPUS) for studies relevant to mobile money, mobile money taxes, and financial inclusion. The two databases were selected because they are among the reputable ones. The Google Scholar database is referred to by Xiao and Watson, (2019) as "a very powerful open access database that archives journal articles as well as 'grey literature' such as conference proceedings, thesis and reports", and Xiao and Watson, (2019) consider SCOPUS as among the reputable indices which publishes high-quality journals. The search started by identifying key words which closely relate to the focus of the study. The search words that were used for the initial scoping search for literature included: *"Mobile money usage and Financial inclusion in East African countries," "Mobile money taxes in East African countries," "Mobile money taxes and financial inclusion in East African countries*. In this review the focus was on only peer-reviewed documents. All titles, key word abstracts and introductions were scanned through for the study outputs extracted from the initial papers. After doing this, using backward snowballing, the selected articles' reference lists were as well scanned through to select those studies whose titles matched the focus of this study, and these were then searched for in SCOPUS database and evaluated for relevance using the keywords, abstract, and introduction, as previously done by Levy and Ellis, (2006). The literature was supplemented by websites such as GSMA (Global System for Mobile Communications, a non-profit industry organization that represents the interests of mobile network operators worldwide) that publishes articles on mobile technology issues. Following this approach, a total of 40 articles were reviewed. Wee and Banister, (2016) recommend between 50 and 100 papers for a comprehensive review. The final number of articles in this paper ultimately amounted to 45, with 5 articles considered after recommendation by the paper reviewer

3.2 Data Analysis

Data was collated, summarized, aggregated, organized from the primary studies derived from Google Scholar using the established key terms as narrated in previous section. The extracted cumulative information was interpreted and thematically discussed and conclusions derived from the data. The analysis was built on the major themes that had been inductively derived from the reviewed literature. The focus of the review was on three fundamental aspects, and these are *mobile money taxes, digital financial inclusion, and best practice principles of*

taxation with a special focus on selected countries. The findings are presented under themes for easier comprehension by readers as advocated by Sebele-Mpofu, (2020). The three countries are selected due to their level of engagement in digital technology and their incredible level of financial inclusion. These countries are among the emerging economies where the financial inclusion is believed to be the solution to poverty reduction which is the core agenda, N'dri, L. M., & Kakinaka, M. (2020). According to the Digital Money Index, (2018) published by CitiGroup, mobile money penetration rate in Tanzania is currently 70% followed by Uganda with the penetration rate between 40% and 72%. Along with Kenya, the three countries are ranked among the top 10 in terms of mobile money penetration with the penetration rate between 40% to 70%. Secondary data was obtained from regulators of respective selected countries using publicly available data and reports shared by revenue authorities and ministries of finance.

4. Findings and Discussions from Literature Reviewed

This section presents the findings of the paper. The summary of key findings is presented in table 1 and the detailed discussions are provided in subsection 4.1

Table 1: Summary of Key Findings

Key Findings	Source	Country
1. Status of Mobile Money Penetration and Financial Inclusion		
▪ Mobile internet penetration-18% against Sub-Saharan Africa average - 26%	Delaporte and Bahia, (2021)	Tanzania
▪ Mobile internet penetration- 27% against Sub-Saharan Africa average - 26%	Delaporte and Bahia, (2021)	Kenya
▪ Mobile internet penetration-23% against Sub-Saharan Africa average - 26%	Delaporte and Bahia, (2021)	Uganda
▪ More mobile money users held active accounts in 3 East African countries than in any African region during 2022, as the region reported 115 million active accounts out of approximately 390 million registered mobile money accounts.	Taylor, (2023)	Kenya, Uganda and Tanzania
2. Mobile money tax across selected countries		
	Ndung'u (2021)	Kenya
▪ Introduction of internet data services and fixed-line telephone services tax of 15% in 2021, a rate increase from 12%.	Ndung'u (2021)	Kenya
▪ Increased excise duties on banks and mobile-phone based transactions to 12%, and a VAT at 16% were also charged in 2021	Ndung'u (2021)	Kenya
▪ Removal of exemption on mobile phones and introduction of a 15% levy on the same in 2021	Ndung'u (2021)	Uganda
▪ A levy of 0.5% is charged in cash withdrawal	Ugandan Excise Duty (Amendment) Act 2018	Uganda
▪ Introduction a 10% excise duty on mobile money transfer and withdrawals in 2021	Delaporte and Bahia, (2022),	Tanzania
▪ Introduction of 18% tax on bank fees and commissions in 2021	Delaporte and Bahia, (2022),	Tanzania
▪ VAT of (18%) and excise duty of 10% is charged on mobile money transfer and withdraw	Delaporte and Bahia, (2022),	Tanzania
▪ Introduction of a levy on cash sending and withdrawal via mobile phone which increased prices between $0.0043 and $4 on mobile money transactions, depending on the amount sent and withdrawn in 2021	Delaporte and Bahia, (2022),	Tanzania
3. Multiplicity of Taxes in the Telecoms Sector		

○ Mobile money taxes discourage both the consumers and service providers, especially considering the multiplicity of taxes facing the telecoms sector. ○ The burden is accompanied with other charges such as internet taxes and other digital service taxes in the form of corporate income taxes and VAT on digital taxes	Delaporte and Bahia, (2022),	Kenya, Uganda and Tanzania
4. Immediate impact of Mobile Money Levies		
▪ A reduction of 21% in total transaction volumes and 29% in total value of transaction in 2022	TCRA, (2021)	Tanzania
▪ The number of person-to-person (P2P) dropped by 38% in 2022	Delaporte and Bahia, (2022),	Tanzania
▪ Cash-out transactions dropped by 25% in 2022	Delaporte and Bahia, (2022),	Tanzania
▪ The tax's impact is estimated to be equivalent to a 30% reduction in P2P and 60% in cash-out transactions in March 2023	Delaporte and Bahia, (2023),	Tanzania
▪ Rising trend among business owners who have discontinued their mobile merchant payment accounts to cash transactions following increased compliance checks by the tax authority.	KRA, (2022)	Kenya
▪ Following stringent measures taken by Kenya Revenue Authority businesses, previously using *Lipa Na M-PESA-a mobile money payment platform-started* requesting cash payments contrary to previous habit of transacting via mobile money	KRA, (2022)	Kenya
▪ Introduction of a 10 percent excise duty on mobile money transaction fees in 2021 and a levy of 0.5% charged in cash withdrawal resulted in; ✓ a drastic decrease in average transaction value Moreover, high-income users, who were more likely to engage in higher-value transactions, and have other options for transacting, migrating away from mobile money transaction. ✓ Hampering the formalization of the economy and digitization initiatives. ✓ Migration of many users to agent banking, where no comparable taxes are applied to withdrawals	UNCDF, (2021)	Uganda
5. Mobile Money Taxes in the Selected Countries contradicts with Principles of a Good Tax System		
▪ *Mobile money tax in selected countries is discriminatory and regressive in nature* ✓ Applies to only mobile money transactions, and not to similar transactions through bank account. ✓ Likewise, it does not apply to other alternative money transfer services such as Western Union or MoneyGram. ✓ It is also a form of double and in some cases triple taxation as the money being subjected to the mobile money tax was already taxed at the time of being earned.	Delaporte and Bahia, (2021)	Kenya, Uganda and Tanzania

▪ *Tax changes uncertainty and unpredictability in Selected Countries* ✓ Taxes proposed on mobile money transactions have been marked by frequent and unpredictable changes to the tax regime: mobile money transaction taxes have been imposed, amended, or withdrawn ✓ Uncertainty and lack of transparency over taxation systems can have a direct impact on the operations of the tax authority, increasing enforcement costs, as well as discouraging investment. ✓ Consequently, given the badly designed tax policy, two outcomes have resulted: policy reversal as seen in Uganda in 2018 and Tanzania in 2021, and unintended negative consequences of the tax policy reversal not only has an impact on tax certainty and confidence for the whole tax system, it can also highlight weakness in government decision making.	Delaporte and Bahia, (2021)	Kenya, Uganda and Tanzania
▪ *Mobile money tax in selected countries contradicts with the principle of neutrality and equity* ✓ East Africa, the telecom sector is taxed heavily as compared to most other sectors of economy, which is not compliant with principles of equity and neutrality. ✓ The tax appears to be penalizing users who opt to use mobile money services as opposed to the traditional commercial banking services. ✓ It also appears to be designed to discourage users from using mobile money services. This is because if you were to deposit, make a payment, withdraw or transfer money using your bank account, this tax would not apply to you	Pushkareva, (2021)	Kenya, Uganda and Tanzania
▪ *Complexity and Inconvenience of Mobile Money Tax* ✓ The mobile industry is the highest taxed in East Africa ✓ In Uganda, mobile money users have recently had to contend with a 1% tax levied by government starting in July 2018. ✓ Uganda already taxes fees charged from mobile money transactions by both agents and mobile money providers at 10%. ✓ In Kenya, mobile money users have started paying higher transaction fees following the increase in mobile money excise tax from 10% to 12%.	Muthiora & Raithatha, (2017)	Kenya, Uganda and Tanzania

✓ In Tanzania, there is a 10% excise duty for sending and withdrawing money through mobile money transfer. ✓ The corporate tax burden on mobile operators (28%) in Kenya is above the SSA average (20%). This can be explained, in part, by a high corporate tax rate (30%) which is above the average headline rate in Africa (27.1%). ✓ While mobile operators in Tanzania and Uganda can deduct the cost of telecommunication and spectrum license fees for corporate tax purposes, Kenyan operators do not have this tax deduction. This increases the costs of Kenyan mobile operators who already incur high levels of upfront and ongoing investments in network equipment and infrastructure.		

6. Specific Consequence of Mobile Money Taxation on Financial Inclusion in East Africa

Tax Element	**Consequence of Financial Inclusion**	**Source**
Excise tax on beer	In Kenya, rich beer drinkers switched to other alcoholic beverages when the tax on beer was increased beyond the optimal tax rate. While the rich consumers had options to advance to alternative beverages, the poor consumers reduced a drinking habits and created a market for illicit alcoholic beverages without government controls. In so doing mobile money taxes force low-income earners to revert back to cash transaction due to their inability to cater the transaction expenses associated with the transaction, while high-income earners may opt lump sum transactions through alternative forms of money transfer.	Ndung'u, (2020)
Mobile money usage levy	The imposition of taxes on mobile money implies that the cost of utilities such as water and electricity swiftly rise. Where physical payments may be unfeasible or unbearable, predominantly in the rural settings, there stands to be significant drop-outs in the use of these services, to the detriment of both consumers and service providers. Therefore, the increase in the costs of utilities by introducing mobile money tax, which leads to the loss of the rural clientele base, can reduce the usage of mobile money, thus affecting both financial and social inclusion	Shinyekwa, (2018), Shapshak, (2021),
Mobile money usage levy	in Kenya, between July 2019 and October 2020, when the National Transport Safety Authority payment was digitized, government revenue increased from USD 1.1 million to USD 2 million although one had to pay more because of the mobile transaction tax, and this is probably because the people had no option to pay transport. On the other hand, person-to-person remittances reduced from 30 million to 18 million, reflecting a 38% reduction in usage in 2021 after increasing mobile money tax. As mobile money transactions became more expensive due to the new levy, many Tanzanians, looking to avoid additional costs, immediately reduced their usage of mobile money in favor of alternative payment methods such as cash.	Muthiora and Raitthatha, (2020), Tan, (2022)

Sources: Summary from Literature

4.1 Discussions

4.1.1 Status of Mobile Money Penetration and Financial Inclusion

Mobile money was introduced in East Africa between 2007 and 2009, and many mobile money agents have spread over in all parts of the region, taking an important role in facilitating for transactions such as payment of bills, salaries and school fees, purchase of goods and transfer of money to family and friends, Mbiti and Weil, (2023). Since then mobile money transactions have significantly improved the accessibility of financial services across the region, especially to the previously financially excluded population. Data from selected East African countries' central banks and communications authorities show the impact of mobile money, with millions of active mobile money subscribers each conducting between 12 and 15 transactions per month as revealed in Table 1. According to Delaporte and Bahia, (2021), on average, the mobile broadband usage gap defined as the percentage of the population covered by mobile broadband networks but not using mobile internet stood at 48% in East Africa. While 34% of the Tanzanian population is not covered by mobile broadband services the average coverage gap converges to 25% across Sub-Saharan Africa.

According to Petroc Taylor, (2023), more mobile money users held active accounts in East Africa than in any African region during 2022, as the region reported 115 million active accounts out of approximately 390 million registered mobile money accounts. The mobile operators maintain their leading position amidst competition with traditional banks and fintech startups. According to McKinsey, (2017) M-Pesa, Airtel Money and MTN Money, are among the most successful MNOs offering digital financial services in East Africa. These platforms have over three times as many customers as largest bank-led initiatives. The strength of distributional networks is MNO's main advantage.

Based on Delaporte and Bahia, (2021) on the GSMA report, the penetration of mobile internet (18%) in Tanzania is low compared to Kenya (27%), Uganda (23%) and the Sub-Saharan Africa average of (26%). While the coverage gap (34%) in Tanzania has narrowed in recent years, it is still larger than in Kenya (4%), Uganda (15%) and the Sub-Saharan Africa average of (25%). By providing connectivity, the mobile sector enables life-enhancing benefits such as financial services via mobile money, access to educational resources and access to connected businesses. However, affordability is one of the key barriers to connectivity across the regions, something which endangers the digital financial inclusion agenda. Emerging markets are a hive of activity for mobile money. Most of the underserved population in East Africa, and, elsewhere across Africa, use mobile money services due to their convenience, simplicity, and ease of use. The use of mobile money by previously unbanked population has properly closed the gap left open by traditional banking as earmarked by Onuoha and Gillward, (2022). This amounts to significant expansion of financial inclusion. Considering revenue mobilization, leaving out money exchanging hands through mobile transactions untaxed would have a considerable effect on unexploited tax revenues, consequently affecting the propensity of the governments in the region to deliver on their revenue collection objectives. It is therefore apparent that mobile money taxes provide an opportunity to broaden the tax base by taxing this huge informal economic activity.

According to Muthiora, (2015), mobile money is an enabler of financial inclusion and the development of the digital ecosystem. Despite these positive implications, mobile money taxes could reduce the gains. Muthiora, (2015) submits that the introduction of mobile money technology after 2000 improved substantially the access to financial services in Kenya, and that the use of mobile money for different activities has increased the use of mobile money to purchase airtime and to transfer money to over 55% and 45% respectively. Demirgüç-Kunt, *et al;* (2018) consider digital transformation, the increased use of digital financial platforms, and the rollout of mobile money platforms in Kenya, Uganda and Tanzania as the drivers of financial inclusion. According to Demirgüç-Kunt, *et al;* (2018) the use of banking services and mobile money services increases transparency, reduces corruption, and leaves an audit trail, which also enhances accountability and tax revenue generation.

In Kenya, the use of M-Pesa mobile money platform impacted lives of communities differently including positive gains in savings, household consumption, and poverty reduction levels. The platform transformed significantly money transfer service by easing the process of sending and receiving money through business-to-business (B2B) and business-to-customer (B2C) services as well as between individuals, Demirgüç-Kunt and Singer, (2017) According to Demirgüç-Kunt and Singer, (2017) apart from growth of business and access to financing by SMEs financial inclusion enhances access to credit, savings, and insurance to large population in the society, which

definitely improve economic growth, productivity, and taxable income in the economy. Table 2 below shows rapid growth of financial inclusion and the contribution of mobile money to financial access.

Table 2: Mobile money statistics as at December 2021.

	Kenya	Uganda	Tanzania
Active subscribers (millions)	32.46	22.52	**23.96**
MM agents	264,390	235,790	**560,063**
Transactions per active subscriber per month	**13 transactions per month (Safaricom, 2021)**	**15 transactions per month (*Uganda Communications Commission (2021)***	**12 transactions per month *(Bank of Tanzania (2021)***

Sources: Communications Authority of Kenya, Uganda Communications Commission

4.1.2. Dynamics of Mobile Money Taxation

4.1.2.1 Mobile Money and Tax Revenue Mobilization

East African countries have progressively embarked on mobile money taxes to collect revenue from both the informal and formal sectors as the usage of mobile money has cut across all social divides. Individuals, small businesses, and large corporations all use it. The growth of mobile money usage in East Africa has heavily attracted and influenced revenue authorities across the region to introduce mobile money taxes. Several factors have been put forward to motivate the introduction of mobile money taxes in East Africa, including the pervasiveness of the issue of informality, low tax-to-GDP ratios in most East African countries, and the need to widen the tax base and reduce budget deficits, Munoz et al., (2022). The mobile money services are associated with three types of taxation: general taxation such as Value Added Tax (VAT), mobile sector specific taxation which includes excise duties on airtime usage and direct mobile money tax on transfer fees charged by telecommunication companies. Muthiora & Raithatha, (2017) consider the mobile industry among the highest taxed in East Africa, and that the member countries started taxing mobile money transactions since 2013.

According to Ndung'u (2021), most recently, Kenya introduced a new 15% tax on internet data services and fixed-line telephone services to expand the tax base; increased excise duties on banks and mobile-phone based transactions to 12%, and had a VAT at 16%. To make the matter worse the country removed and lifted the exemption on mobile phones and introduced a 15% levy on the same in 20213. In the similar year Uganda introduced a 10 percent excise duty on mobile money transaction fees. On the other hand, the levy on cash withdrawal stands at 0.5% as clearly stipulated in Ugandan Excise Duty (Amendment) Act 2018. When this was happening, Uganda was already taxing fees charged from mobile money transactions by both agents and mobile money providers at 10%. On the other hand, Tanzania also introduced a 10% excise duty on mobile money transfers and withdrawals, and an 18% tax on bank fees and commissions. On top of that Tanzania introduced a new levy on mobile money transfer and withdrawal transactions, excluding merchant, business and government payment transactions in 2021. This levy, additionally, applies to existing VAT (18%) and excise duty on mobile money transfer and withdrawal fees (10%). Moreover, during the same year Tanzania introduced a levy on cash sending and withdrawal via mobile phone which increased prices between $0.0043 and $4 on mobile money transactions, depending on the amount sent and withdrawn.

In their report on the Mobile Tax Policy and Digital Development Delaporte and Bahia, (2022), show that Kenya and Tanzania have the highest proportion of tax at 26%, followed by Uganda at 24%. The report revealed that taxes on consumers and mobile operators are directly affecting the affordability of mobile devices and services and reducing state revenues. It is apparent from the report that taxes presently make up 21% of the cost of a basic internet-enabled handset on average, and that taxes such as the excise duty, have in turn slowed the uptake of mobile devices and related services. For instance, the excise duty levied on mobile services in Kenya has consistently shown an upward trajectory, resulting in Kenya's tax rates ranking among the highest in the Sub-Saharan African (SSA) region. According to Delaporte and Bahia, (2022), in Kenya, the excise duty on mobile

services is one of the highest in Sub-Saharan Africa, having increased from 10% to 20% in the last five years, and the increase contributed to higher prices, decreased usage, and eventually lower-than-expected revenues for the government.

In all the three countries the introduction of the mobile levies faced stiff resistance from various stakeholders. For instance, in 2018 Uganda introduced a 1% tax on all withdrawals transaction before it was reduced to 0.5% following an outcry from public. According to a study by the UNCDF, the lowest income groups in Uganda were unduly affected by the introduction of withdrawal tax compared to higher income groups who could access alternative means of payment. UNCDF, (2021) reflects a drastic decrease in average transaction value after the tax was introduced. Moreover, high-income users, who were more likely to engage in higher-value transactions, and have other options for transacting, seem to have migrated away from mobile money transaction. The report further argued that the tax hampered the formalization of the economy and digitisation initiatives. It is further noted from UNCDF report that the introduction of the tax led to migration of many users to agent banking, where no comparable taxes are applied to withdrawals. Unfortunately, individuals with lower incomes are believed to have less access to agent banking, indicating that the burden of this tax falls disproportionately on the poor.

Like in Uganda, in 2021 the Tanzania government's proposal to impose a tax on mobile money transactions invited a similar outcry from the public, which finally resulted in the reduction of the levy in a similar fashion with Uganda. It is apparent that, in Tanzania, mobile-based transactions are indeed more heavily taxed as stipulated in Tanzania's National Payment Systems (Electronic Money Transaction Levy) Regulations 2022. The said regulation lay down the scope of electronic mobile money. According to Tanzania's National Payment Systems (Electronic Money Transaction Levy) Regulations 2022 the scope of electronic mobile money includes *"the transfer of electronic money from a user's mobile money account to a user's bank account, a user's bank account to a user's bank account, or a user's bank account to a user's mobile money account".* This extension to electronic money accessed by banking applications apparently sought to level the playing field between banks and telecoms. Earlier before passing this regulation, non-mobile based transfers transacted through banks were exempted, as were bank-to-mobile money wallet transfers. The summary of the information on mobile money taxes for the selected East Africa countries is provided in Table 3 below.

Table 3: Transaction of Mobile Money and Telecom Services in Selected EA Countries

	Transaction of Mobile Money			***Telecom Services***	
Country	***VAT***	***Excise Duties***	***Specific Taxes of Actual Value of Transfer of Mobile Money***	***VAT***	***Excise Duties***
Tanzania	18%	10%	USD 0.0043-USD 4 on Electronic money transfer and withdrawal	18%	17%
Kenya	0%	12%	Nil	16%	20%
Uganda	0%	15%	0.5% on withdrawal	18%	12%

Sources: Various Literatures

4.1.2.3. Multiplicity of Taxes in the Telecoms Sector

Mobile money taxes questionably discourage both the consumers and service providers, especially considering the multiplicity of taxes facing the telecoms sector. The burden is accompanied with other charges such as internet taxes and other digital service taxes in the form of corporate income taxes and VAT on digital taxes that have been recently introduced in East African countries. This, therefore, raises concerns about the current design or structure of mobile money tax frameworks. Delaporte and Bahia, (2022) suggest that African tax systems are poorly formulated due to capacity weaknesses, lack of in-depth and appropriate evaluation, and research, and more so due to the political economy factors that drive tax policy. Table 4 provides a summary of the different taxes charged on the telecoms sector in the selected East African countries to give insight into the true nature of the tax burden arising from the sector-specific taxes in addition to other general taxes such as VAT and corporate income tax.

Table 4. Taxes on the telecoms sector in selected countries.

Country	*Tax Corporate*	*VAT*	*Tax on Phone, airtime*	*Tax on MNOs' Revenue*	*Tax on MM transactions*
Kenya	30%	16%	10%	-	**12%**
Uganda	30%	18%	12%	10%	**0.5%**
Tanzania	**30%**	**18%**	**17%**	**-**	**10%**

Sources: Various Literatures

4.1.2.4. Immediate impact of Mobile Money Levies

Implementing the aforementioned levies, in Table 3, had a severe and immediate impact on mobile money transaction volumes and the growth of mobile money subscribers before and after the introduction of the fees in the three selected countries. For instance, in Tanzania, according to TCCRA, (2022)-a communication regulatory authority in Tanzania, from March to September 2021 a reduction of 21% in total transaction volumes and 29% in total value of transaction was observed. When the tax came into force in July 2021, transaction volumes and values decreased by 8 and 12%, respectively. In August, the reduction in transaction volumes and values was more significant. From July to August, transaction volumes and values decreased by 17 and 28% respectively, while these percentages are estimated at 23 and 37% from June (when the tax announcement was first made) to August 2021. The reduction in transaction values and volumes became progressively acute as the value of transactions increased. The decrease in volume was more significant for high-value transactions, which decreased by an average of 42% in September compared to June. Medium-value transactions declined by an average of 30%, whereas lower-value transactions decreased by an average of 21%.

After a loud outcry from the stakeholders, in August 2021, on the newly introduced levies, the Government of Tanzania made a of reduction 30% in the levies a slight improvement in customer activity was noted, but the industry as a whole could not immediately recover to its previous levels of performance. A year later, in July 2022, the government of Tanzania, through the Finance Act 2022, introduced a further 43% reduction to the mobile money levy in Tanzania, which represents a combined reduction of 40% since the introduction of the levies. The regulation also expanded the scope of the levy to apply to bank transfers. Again, this was contested on the basis of double taxation for users sending money to their own accounts, and in September 2022, a new regulation was issued which eliminates levy charges on transfers from users' bank accounts to same user bank account, as well as transfers from a user's bank account to the same user's mobile money account, and vice versa.

Apparently, as of 2023, 72% of Tanzanians use mobile money services, up from 60% five years ago while 22% of the population uses commercial banks. Amidst this, the Tanzanian government recognized mobile money as a driver of financial inclusion, contributing to economic growth and social development, especially among women and rural populations, Delaporte and Bahia, (2023). However, the number of person-to-person (P2P) and cash-out transactions dropped by 38% and 25%, respectively, from June to September 2021. The tax's impact is estimated to be equivalent to a 30% reduction in P2P and 60% in cash-out transactions in March 2023 if it had not been introduced. Lower-value P2P transactions have, to a small extent, recovered to levels above those before the tax, while mid and higher-value transactions are still 31% and 58% lower, respectively. This indicates users' appreciation for lower transaction costs. Per the GSMA report, "The reduction in affordability of mobile money, therefore, threatens to reverse the commendable financial inclusion gains as Tanzanians revert to cash, particularly amongst the vulnerable and the poorest segments of the population. The situation is similar in Kenya where Kenya's tax authority raised concerns over a rising trend among business owners who have discontinued their mobile merchant payment accounts to cash transactions following increased compliance checks by the tax authority. According to KRA, (2022) businesses, previously using *Lipa Na M-PESA-a mobile money payment platform*-are currently requesting cash payments contrary to previous habit of transacting via mobile money. This shift comes after Kenya Revenue Authority deployed revenue service assistants to boost tax compliance efforts, which also included facilitating online business registrations.

4.1.3 Mobile Money Taxes and the Principles of a Good Tax System

What constitutes a good fiscal policy is still debatable by both policy practitioners and academic community. However, a general compromise on principles underlying such policy is well discussed in literature. Adam Smith, (1776) broadly understands the principles of fairness, certainty, convenience and efficiency as a requirement to take taxpayer's ability to pay and personal circumstances into account when defining their tax burden. In as far as *fairness principle* is concerned, the responsibility to pay taxes should never burden one group of taxpayers being clearly disproportionately better- or worse-off than the other due to tax system design. *"Certainty*" means that the taxpayers should be informed an appropriate time in advance about the cause and size of any tax levied, and that the rules of taxation should not be subject to a frequent change. According to a principle of "*convenience",* collection and payment of taxes should be as simple and cheap as possible, not presenting a significant burden to either taxpayers or tax administrations. Finally, *"efficiency*" means that we should aim to maximize economic benefits of taxation by minimizing costs of collecting taxes and economic distortions associated with Digital Financial Services taxes in general, and mobile money taxation in particular, have been criticized for going against the principles of a good tax system.

According to Pushkareva, (2021) tax policies applied to digital financial services, in most of African countries, are hardly consistent with the principles of good tax policy, and unfortunately, mobile money taxation is the cheapest and easiest tax to collect, although it is discriminative in nature as it is not broad-based. It does not extend to other similar services like banking services. This brings complaints from tax payers about its fairness and equity. Table 5 below summarizes how the principles of a good tax system are observed in setting and designing mobile money tax policy in the selected East African countries in this study.

Table 5: Summary of Principles of Good Tax System and their implication to mobile money taxation

Principle	Explanations	How the principle holds and its implication	Source
Equity, Fairness and Neutrality	Tax payers whose incomes are closely equal have to pay equal tax, and this is *horizontal equity*. On the other hand, *vertical equity* requires those who earn more income to pay more tax than those earn less	✓ The principle is violated as it does not consider the varying circumstances of taxpayers, especially the fact that mobile money platforms are largely used by the underrepresented or underserved segments of the population. ✓ More specifically, Mobile money tax applies to only mobile money transactions, and not to similar transactions through bank account. ✓ Likewise, it does not apply to other alternative money transfer services such as Western Union or MoneyGram. ✓ On the face of it, the tax appears to be discriminatory as it only applies to mobile money transactions. ✓ It is also a form of double and in some cases triple taxation as the money being subjected to the mobile money tax was already taxed at the time of being earned *Impact:* Violation of equity/fairness/neutrality lowers tax morale as well as trust in the government and tax morale. *Recommendations:* To create fairness and observe neutrality, governments of the selected countries should create an equilibrium by reducing the levies on mobile money and spreading it over to other sectors. That way equilibrium is created and fairness established	Mpofu, (2020), Delaporte and Bahia, (2020),OECD (2014)

		and restored while maintaining the speed of financial inclusion progress.	
Certainty	✓ Taxpayers must be certain of their tax liability and how to honor their tax liability. ✓ Tax policy must have some consistency and stability.	✓ Mobile money tax policy construction in East Africa is fragmented and unstable to a great extent *Evidence of Violation*: The policy is characterized by proposals, introduction of the taxes, withdrawals of the tax policy, outright repealing, re-implementations, and constant amendments. Given the badly designed tax policy in the selected East African countries two outcomes have resulted: policy reversal as seen in Uganda in 2018 and Tanzania in 2021, *Impact*: Uncertainty and lack of transparency over taxation systems can have a direct impact on the operations of the tax authority, increasing enforcement costs, as well as discouraging investment. Also, unintended negative consequences of the tax policy reversal not only have an impact on tax certainty and confidence for the whole tax system, it can also highlight weaknesses in government decision making. *Recommendations:* Governments and policymakers must work towards bringing more stability, consistency, and certainty to the mobile money taxation frameworks and certainty.	Clifford, (2020), Delaporte and Bahia, (2021)
Convenience and Efficiency	The convenient and efficient taxation principle states that "*A stable and transparent tax system in line with international standards is a strategy that would deliver sustained investment.* ✓ Convenience within a tax system reflects the ease with which taxpayers can comply with the rules and mechanisms of the system. ✓ Tax assessment and payment should present the smallest burden possible on a taxpayer. ✓ Economic efficiency within a tax system reflects the need to balance revenue mobilization with economic development and functionality. ✓ Administrative efficiency, on the other hand, reflects the need for the	✓ The analysis of documents shows that regardless of the positive contribution mobile sector to economic growth, East African countries studied do not always align their sector-specific taxes with best-practice principles of taxation, thereby distorting the industry's continued development. ✓ Faced with short-term revenue needs, some governments in selected countries have been driven to apply additional sector-specific taxes on mobile operators. ✓ Sector-specific taxes and fees often drive the high tax burden: for instance, governments levy sector specific consumer taxes, excluding customs duties, in selected countries ✓ Strengthening convenience has the added benefit of reducing the cost of tax administration, as well as compliance. *Impact: A*ccording to the analyzed documents and literature, the selected East African countries have experienced weaknesses in the way to formulate and administer tax policies. Additionally, according to Delaporte and Bahia, (2020), capacity limitations within policy research units and the lack of national policy frameworks have, in the selected countries, led to insufficient assessments of the full impact of mobile money taxes.	Delaporte and Bahia, (2020)

	execution of a tax system to be inexpensive and easy to administer.	*Recommendations*: Policymakers must uphold the two principles by appropriately designing mobile money tax frameworks; otherwise, their inappropriate design could affect other tax heads, financial inclusion, digital transformation, digital financial inclusion, and the usage of digital financial services as well as the fruition of economic plans. There is a need for tax policy to strike an equilibrium between the revenue generation and economic development as well as other functions of tax policy.	

Sources: Summary of Literature

4.2 The Economic Consequence of Mobile Money Taxation on Financial Inclusion

There is limited empirical work to determine the potential impact of mobile money taxation on digital financial inclusion. However, most recently, Delaporte and Bahia, (2020) pointed out that many mobile money users belong to marginalized societal groups, and that the negative impact on financial inclusion and broader development goals is significant. According to Delaporte and Bahia, (2020), this user profile - and the fact that these taxes don't extend to the banking sector - strongly suggests that they are regressive in nature, undermining the fundamental concept of tax equity. Putting it differently, this tax would increase income inequality, and as the economy is integrated, an increase in tax, or an introduction of a new tax in one area will, inevitably, have an impact on other sources of tax revenues. However, while high taxes on mobile money transactions may be a convenient tax window, it may lead to a slowdown in economic activities - and aggravate inequality in the region and in individual countries in the region.

According Delaporte and Bahia, (2021), mobile money taxes imposed in selected East African countries have been troublesome for the industry's development and mobile money users, having raised the transaction cost for low-income customers. Unfortunately, Governments' desire to impose mobile money taxes is mainly influenced by the need to broaden the tax base and raise revenue which fosters economic growth. It is also worth understanding that digitalization of financial services is apparently the game changer towards achieving the sustainable development goals as stipulated in SDGs via universal financial inclusion, particularly in developing countries like Kenya, Uganda and Tanzania where this innovation is relatively evolving.

Delaporte and Bahia, (2021), reports that in the three selected countries the current tax system has a high incidence on the mobile sector, limiting the positive externalities generated by the industry. As shown in report, the mobile tax contribution is high in Kenya at 37% of the total market revenue. Consumers pay 57% of this tax contribution, primarily because they are subject to excise duties on mobile services and mobile money. This high tax contribution can challenge the affordability of mobile services, thereby limiting the wider benefits of increased mobile connectivity, productivity, and digital inclusion across the whole regional economy.

In Tanzania according to the most recent statistics from Delaporte and Bahia, (2022), taxes on mobile money fees represented 23% of total transfer cost, including VAT (18%) and excise duty (10%). The taxes on mobile money fees represented 60% of total transfer cost, on average, due to the introduction of new mobile money levy in June 2021. Fortunately, from September 2021, the proportion of tax slightly reduced to 56% of mobile money fees following the public outcry which forced government to reduce the levy. In particular, those taxes that are mobile-specific have the highest negative impact and lack of alignment with the established principles of taxation. These taxes are not broad-based, as they are specific to mobile services and as such may create distortions. By increasing the final price of mobile they create a barrier to affordability and to mobile access. This barrier is greater for low income consumers and therefore risks excluding them from the benefits of mobile and the internet.

Related work by Katz, (2015) suggests that government decisions concerning implementing electronic transaction taxes are premised on public policies guided by established goals and the cost-benefit analysis to meet stated objectives. Furthermore, economic theories show that taxation affects market equilibrium by shifting the demand

and supply curves due to rising prices with the substantial reduction in the number of products, and, therefore, one may say taxes affect consumer behavior. While governments rely on the argument that increased revenue mobilization could produce funds to improve social services such as education, security, health, and security, such tax collection initiative may lead to the possible effects on the consumers, the SMEs and mobile service providers, and the government itself.

4.2.1 The Consequence of Mobile Money Taxation to Consumers

Mobile money taxes are more likely to have a negative and regressive impact on consumers. They could unfairly and disproportionately burden the poor if not appropriately constructed, and their multiplicity could compound the situation. In their current structure and rates, mobile money taxes threaten financial integration, financial inclusion, and poverty reduction initiatives.

According to Ndung'u, (2020), the common problem with most governments is that while tax revenues from digital transactions may increase in the short run, some more rise in the taxes above the optimal tax rate may end up reducing the tax collection. Regrettably, mobile money taxes regularly force low-income earners to revert back to cash transaction due to their inability to cater the transaction expenses associated with the transaction, while high-income earners may opt lump sum transactions through alternative forms of money transfer. As put forward by Ndung'u, (2020) the typical example is the excise tax on beer in Kenya where the rich beer drinkers switched to other alcoholic beverages when the tax on beer was increased beyond the optimal tax rate. While the rich consumers had options to advance to alternative beverages, the poor consumers reduced a drinking habits and created a market for illicit alcoholic beverages without government controls. This has remained a serious problem in Kenya for almost 20 years now years which has affected the youth and rural populations who consume such drinks, and may be taken as a lesson that poorly designed tax policy can not only bring unpleasant outcomes for tax revenues, but can also introduce market distortions that can drive consumption behavior on undesired manner. It should be emphasized that, poorly designed tax policy may actually reverse the economic gains from mobile banking, especially for low-income earners who rely solely on these services. Therefore, if tax policies are not properly implemented, the incentive to use cash, when mobile phone transactions seem costlier, will reverse the efforts of driving financial inclusion agenda in the region.

4.2.2 The Consequence of Mobile Money Taxation on Businesses, SMEs, and MNOs

Mobile money is an integral means through which citizens access utilities such as water and electricity. The imposition of taxes on mobile money implies that the cost of these utilities swiftly rises. Where physical payments may be unfeasible or unbearable, predominantly in the rural settings, there stands to be significant drop-outs in the use of these services, to the detriment of both consumers and service providers, Shinyekwa, (2018).

On the other hand, when mobile money tax is unstable and regularly changed mobile money operators find themselves in hard time and under considerable cost pressure to expand networks, improve service quality and address new regulatory requirements. Mobile money taxes have a serious impact on investment in mobile money and digital platforms, digital transformation, the growth of digital financial services, and the expansion of the digital economy. This, therefore, may signal the need for mobile money operators to expand their networks, improve the quality, and contend with new regulatory requirements.

Shapshak, (2021), opines that mobile money taxes affect both Person-2-Person and Bsiness-2-Business transactions, lowering the usage of mobile money and leading to the closure of small businesses that heavily relied on mobile money transactions. This could be due to the increase in the costs of utilities and the loss of the rural clientele base where payments are difficult to make through traditional financial institutions or it is impracticable to access these financial institutions. This has a negative effect on both consumers and service providers. Additionally, According to Shapshak, (2021), mobile money taxes can reduce the usage of mobile money, thus affecting both financial and social inclusion. Albeit the taxes herald a promising emergence of tax revenue mobilization simplification, tax administration efficiency improvement, and increased tax compliance, they can contrastingly result in low tax revenues due to decreased usage, reduced profitability for businesses due to

reduction in customers, and the loss of the rural customer base for businesses that are highly dependent on mobile money transactions (loss of VAT and corporate taxes). This might have implications far greater than the simplicity of the tax system benefits for governments.

4.2.3 The Consequence of Mobile Money Taxation on the Government

Since its inception, in East Africa, mobile money has been preferred by governments and revenue authorities not essentially to expand tax base and improve the efficiency of tax collection, but also as a direct source of taxation revenue. Although mobile money levies offer additional revenue for governments, there is a risk that they may undesirably affect the underserved groups that typically use mobile money services. This may end up reversing the current gains achieved in financial inclusion and increasing inequality and discouraging the realization of development goals. Technically, mobile money taxes offer a more simplified, convenient, and easy way to collect and boost tax compliance as revenue is collected at the source of the funds. The relationship is undistinguishable from the withholding tax relationship where the payer deducts the tax before paying the payee. In this case, the mobile money networks offering the mobile money accounts or the banks offering mobile banking services deduct tax each time a person sends money, transfers money, withdraws money, or makes purchases, money transfers, or swipes. This simplifies taxation and improves tax compliance as the revenue authority focuses on fewer taxpayers as compared to millions of money account holders and bank account holders. This is not to trivialize the possible cumbersomeness of the tax audits and verification of the completeness of tax remittances that would be experienced by both revenue authorities and agents (banks and mobile money networks). There is a trade-off between simplicity, enhanced tax compliance, and the chilling implications of the surveillance, vulnerabilities, and implications of mobile usage and taxation with respect to customers' personal information.

Mobile money taxes could lead to loss of employment and retrenchments (loss of income tax or pay as you earn), thus perpetuating poverty and inequality. Mobile money taxes could also possibly lead to further fracturing of the implicit social contract between a government and its citizens. The implicit social contract presupposes that as citizens pay their fair share of taxes, the government should in turn deliver quality public goods and services to justify the investment in taxes, Sebele-Mpofu, (2021). The tax levied must be fair, transparent, equitable, economic, and convenient. Mobile money taxes in their current form could hurt the fiscal objectives of African governments. The taxes can fail to mobilize the much- anticipated revenues but conversely affect the other possible advantages that could boost public finances. For example, through digitization of taxes, rates, water and electricity bill payments, levies, and other fees such as license fees, the government can easily and conveniently collect public revenue. This is upheld by Muthiora and Raitthatha, (2020) that in Kenya, digitization of the National Transport Safety Authority payment resulted in the monthly generated revenue increasing from USD 1.1 million to USD 2 million between July 2019 and October 2020. Tan (2022) showing the possible negative impact, submits that in Tanzania, person-to-person remittances reduced from 30 million to 18 million, reflecting a 38% reduction in usage in 2021.

4.2.4 Implications of Mobile Money Taxes and Customer Privacy and Confidentiality

Usage of mobile money as well as mobile banking applications literally aims at linking the telecommunication services- using a sim card for communication purposes- and the financial services connected with mobile money and mobile banking accounts. According to De Kober, (2013), although the selected East African countries have made the registration of the sim card compulsory to enhance the government's propensity for surveillance to reduce financial crimes and illegal money flowing into the system, this, on the other hand, heightens customer vulnerabilities. For example, through the registration details, authorities can follow the social and digital foot-prints of customers. According to De Koker, L. (2012) in the face of these possible privacy invasion implications, customers wanting to have access to their mobile banking services, mobile money accounts, and their telecommunications services have no choice but to provide these personal details. Both, mobile money accounts and mobile money usage offer a rich information on customers' social networks, personal preferences, behavior patterns, and financial transactions, De Koker, L, (2022). This information presents considerable vulnerabilities and risks in terms of abuse of the information not only by the private sector and criminals but also by authorities. More so from the angle of taxation, the personal data, and financial data from mobile money networks and banks,

can be used to collect taxes on behalf of the revenue authorities and remit them accordingly. The scrutiny of customer information during tax compliance assessments and tax audits increases the risks and vulnerabilities and potential abuse of information even further. Martin, (2019) raises these concerns and possible implications for tax revenue reduction and financial inclusion gains reversal when citizens revert to cash-driven economies and keep money at home due to perceived surveillance concerns.

5. Conclusions, Recommendations and Areas for Further Research

5.1. Conclusions

The paper examined the consequence of mobile money taxation on financial inclusion in the selected East African region countries. The paper found that political economy is a very powerful driving force for the taxation policies, with stakeholders on either side seeking to influence its design and outcomes. The result is often badly-designed taxes that fail to take into consideration the externalities that negatively impact the users of mobile money who are often drawn from marginalized communities. These have implications for the attainment of financial inclusion and wider development goals. The paper further found that, regardless of the varying impact of mobile money taxation across Kenya, Uganda, and Tanzania unintended consequences of the digital levy on financial inclusion have common potential impacts as follows; *First*, mobile money taxes may discourage people from using mobile money services due to increased transaction costs, and this may principally affect rural low-income individuals who chiefly rely on mobile money for financial transactions. Subsequently, mobile money usage rates may decrease, limiting financial inclusion efforts. *Secondly*, mobile money taxes may also slow down the adoption of mobile money services among the unbanked population., in which case high taxes may discourage individuals from opening mobile money accounts and exploring the benefits of digital financial services, slowing down financial inclusion progress.

Thirdly, increased mobile money taxes may unintentionally drive people towards financial transactions informal channels such as cash-based transactions or unregulated money transfer services which could possibly destabilize the formal banking sector's efforts to promote financial inclusion and enhance transparency. *Fourthly*, mobile money taxes may have an inconsistent impact on the economically vulnerable segments of society, such as small-scale traders, farmers, and low-income earners, the burden of the which could limit their ability to access formal financial services, hampering efforts to reduce poverty and achieve inclusive economic growth. *Finally*, imposing heavy taxes on mobile money transactions may discourage innovation and investment in the mobile money ecosystem, and therefore, fintech companies may be discouraged from developing new products and services that could enhance financial inclusion due to the potential negative impact of taxes on their profitability.

This paper contributes to advancing the fintech literature, particularly on mobile money, and while there is inadequate research on the impact of mobile taxation on fintech innovation, the study presents a fresh perspective to augment the extant literature. The paper would help inform mobile money tax policy initiatives and amendments by unpacking the likely unintended consequences, such as the likelihood of market distortions, potential tax evasion, and overreliance on cash transactions, thus affecting revenue mobilization and financial inclusion.

Conclusively, taxation remains an ongoing area of interest to the mobile money industry at large. Governments have more to gain by supporting the growth of the mobile money sector than by taxing it without understanding the impact of these taxes. For instance, mobile money taxes may affect providers' business models and profitability. Lower profitability may lead to diminished investment and delayed expansion plans. Given mobile money's influential role in driving financial inclusion, national financial targets risk being hit by a double blow: reduced demand for mobile money services and lower infrastructural availability for digital financial services. Lower profitability may also shrink the tax base and lower tax collections, frustrating government revenue projections. Overall, inadequate taxes can prevent individuals, businesses, and economies from realizing the benefits of mobile money services and limit progress towards achieving development goals

5.2 Managerial and Policy/Practical Implications & Recommendations

While taxation forms a considerable source of revenue, policymakers of the governments of selected countries are urged to weigh their potential repercussion on broader socio-economic objectives, particularly in advancing financial inclusion as narrated in the preceding subsection. In order to balance fiscal policy and digital development, while promoting fair and effective domestic revenue mobilization, this paper recommends the following;

Minimizing or removing sector-specific levies on mobile transactions: Sector-specific taxes are discriminatory because while they apply to mobile money transactions, they do not apply to similar payment services and over the counter cash transaction services offered by other financial services providers. Reducing or removing sector-specific levies will make the tax regime for mobile money more broad-based, improve the financial sustainability of the industry, enhance investment in mobile financial infrastructure, and increase the adoption and use of mobile financial services.

Tax Rationalization: Rationalization of taxes on the mobile sector is not a choice if one wants to account for positive externalities of the sector; Therefore, to get best out of the mobile sector government must rationalize taxes.
Ensuring Tax policy predictability and certainty: The governments and tax authorities are advised to ensure predictability and certainty of tax policy to increase certainty and make the tax system more conducive to investment in the mobile sector.

Reformation of Tax Policy: While keeping in line with best practice principles of taxation the reformation of taxation policy is very crucial so as to accelerate financial inclusion in East Africa's transition to a digital economy,
Simplifying and stabilizing taxes and fees in the mobile money sector: To minimize compliance costs, a tax regime should be simple (involving a reduced number of taxes that are easily understandable), and enforceable. Tax stability requires that governments limit unpredictable tax and fee changes as they create an uncertain taxation environment that negatively affects investment levels, ultimately decreasing competition within the mobile money sector.

Transparent Communication of taxes and their intended purposes: While educating users about the importance of tax payment is very vital to reduce perceptions and maintain trust in the system, ensuring transparent communication regarding taxes and their intended purposes can empower users to make informed decisions.

Reducing the overall tax burden on mobile money users to improving affordability and raise demand for mobile money services: The burden of taxation should not fall disproportionately on the poorer members of society. Governments should consider the implications of imposing new taxes on the usage and affordability of mobile money, particularly among low-income users. The reason is that this consumer segment tends to be more price-sensitive, avoiding the extra cost and erosion of their disposable income by shifting away from mobile money towards cash transactions when taxes are increased.

5.3. Limitations and Areas for Future Research

This paper was a critical review, and this could have affected the findings as they are based on few studies, though supported by relevant statistics form different sources. However, more further studies may explore the relationship between mobile money and financial inclusion to check whether and how mobile money taxes affect financial inclusion. Future researchers could also further investigate the effect mobile money taxes have on revenue mobilization, tax compliance, and simplification in all East African countries using empirical data and revenue statistics.

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