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Article

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A framework for digitalising tax revenue collection for the informal economic sphere in Zimbabwe

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ABSTRACT

The paper proposes a novel framework for digitalising tax revenue for the Zimbabwe's informal economic sphere. The study addresses the pressing challenge of informal economy taxation, identifying the absence of a modern (or contemporary) tax framework as a critical catalyst for this study. The purpose of the study was to devise an innovative framework tailored to improve tax revenue collection efficiency from the informal economic sector in Zimbabwe. Employing a mixed method approach deemed effective complex subject, data were gathered through structured questionnaire and in-depths interviews. The findings of this study reveals that the existing presumptive tax system is ineffective and insignificantly contributing to the treasury. Based on the results, the study developed a comprehensive contemporary framework designed specifically for tax revenue collection from the informal economic sphere in Zimbabwe. The study, therefore, advocates for the adoption of the proposed framework to streamline tax collection processes within the informal economy, thereby bolstering economic growth and inclusivity.

IMPACT STATEMENT

The study aims to tackle the challenges of tax revenue generation in the informal sector by developing a digital framework to enhance efficiency, transparency, and compliance. By facilitating easier registration and compliance for informal businesses, the study seeks to boost national revenue, promote economic growth, improve governance, and empower local tax authorities, ultimately transforming Zimbabwe's tax landscape.

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Zimbabwe; digitalised tax revenue; tax revenue; informal economy; presumptive tax; tax framework



SUBJECTS

Business, Management and Accounting; Finance; Economics

1. Introduction

The informal economy worldwide is escalating, and recent research indicates that the informal sector in Zimbabwe has not only persisted but has grown, dominating in both output and employment (Zimbabwe National Statistics Agency, 2023, 2024). Based on the findings of World Economics (2024) and Zimbabwe Revenue Authority (ZIMRA) (2023), Zimbabwe's is highly informalised, with more than 64.1% of economic activities are controlled by this economic sphere, representing an estimated \$73 billion at GDP levels. Regardless of the fact that the informal economy in Zimbabwe is large, it contributes abysmally to tax revenue inflows (Kupangwa et al., 2024).

In their investigation of informal sector taxation, Vingirayi et al. (2020) and Pitoyo et al. (2020) found that there is low tax revenue inflow from the informal economy despite its perceived revenue-generating capabilities. This shows that the revenue from the informal economy is totally unexploited. The tax instrument (the Presumptive Tax Act) has failed to achieve its goal of revenue generation from the thriving informal economy (Manhimanzi et al., 2022). Moyo (2022) and Mpofu (2021) argue that the tax inflow from this economic sphere is very marginal, and the bulk of the potential taxpayers in the informal economy remain untaxed.

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ZIMRA reports that revenue inflow from the informal economy is less than 0.5% of the revenue generated by this sector (ZIMRA, 2022) and the government reported budget deficits in “2013...2023” (Makoni & Chikanda, 2023; ZIMRA, 2023) due to the informalisation of the economy. This figure symbolises the lowest contribution of the presumptive tax head to revenue generated from taxes (Nyamukapa, 2023). Recently, poor revenue collections from the formal economy (as many companies in Zimbabwe have closed or are at the brink of collapse) (Karombo, 2018; Mhlanga, 2018; Ncube, 2018) have compelled the government to resort to the taxation of the informal economy, but the big challenge is that the government seems reluctant to embrace technology for the taxation of this economic sector (Mabwe & Mugozhi, 2018).

Recently, the Zimbabwe Revenue Authority (ZIMRA) Board chair acknowledged that increased use of plastic or digital money in Zimbabwe has contributed to the improved revenue performance (ZIMRA, 2018). In 2016, Zimbabwe’s payment system was fully digitalised, and about 90% of transactions were made using plastic money (United Nations, 2020), and it is expected that more will be collected from the informal economy. However, Sikwila et al. (2016) ascertained that Zimbabwe is woefully losing potential revenue for fiscal development in untaxed revenue.

Notwithstanding the fact that Zimbabwe has adopted the use of virtual money for more than five years, there are still doubts as to whether the current government will ever grab the golden opportunity – a cashless society – to bring the informal economy into the tax net. The feasibility of collecting tax revenue from the informal economy is still unclear (Ligomeka, 2019) in Zimbabwe. The continued losses of potential tax revenue from the informal sector in Zimbabwe seem to cast doubts on the ability of digitalisation to alleviate unreported tax bases, as was widely acknowledged in the academic literature by several scholars (OECD, 2018). ZIMRA (2018) acknowledges that the advantages of a digitalised economy have not been fully capitalised, and there is no modern system in place to obtain data from taxpayers – however, a pilot project was being launched in June 2018, and its effectiveness is not yet established. The debate surrounding a digitalised economy is still on, with many researchers pointing out that it will reduce tax evasion and the informal economy.

However, it should be noted that the digitalisation of the economy is generating some disruptive effects, such as the increase in tax evasion, and some governments in developed countries have set up mechanisms in place to fight cybercrime. It is not clear in the literature that the adoption of a cashless payment system will eliminate tax evasion or reduce the informal economy in Zimbabwe. Currently, in Zimbabwe, there is no tax framework to fit into the digitalised economy, which is able to extract secreted knowledge from the informal economy and measure actual income generated. This view was also shared by ZimStat (2024), who observed that the informal economy employs the bulk of the workforce, yet there is currently no tax framework to collect income tax from the informal economy in a digitalised Zimbabwe. The absence of such a framework results in constant budget deficits and tax revenue losses. Thus, the research problem of this study is: *A formal digitalised framework for the collection of tax revenue from the informal economic sector in Zimbabwe does not exist.* The purpose of the study is therefore, to *develop a digitalised framework for the collection of tax revenue from the informal economic sector in Zimbabwe.*

This study enriches scholarship literature by proposing a tailored approach to leverage technologies for the collection of tax revenue from the informal economy. It also, provides policymakers and tax administrators with practical (or actionable) recommendations (or strategies) to enhance tax revenue collection efficiency while bolstering economic inclusivity. Further, it contributes to a comprehensive understanding of effective tax policy interventions designed for informal sector in the present day contexts. This study bridges theoretical insights with practical implications, providing a timely guide for resolving endemic challenges specific to informal economies in developing contexts like Zimbabwe. This paper is structured as follows: Section 2 provide review of related literature. Section 3 discusses the methods adopted in this study while Section 4 presents and discuss the findings of this study. Lastly, Section 5 provides the conclusion and recommendations.

2. Review of related literature

2.1. Presumptive tax system

Research shows that taxation is the only effective method in the domestic resource mobilisation globally (Adefolake & Omodero, 2022). The tax literature shows that in the past, tax authorities were collecting

taxes from the formal economy, thus, neglecting the informal economy (Mpofu & Mususa, 2019). The informal economy was perceived as a hard-to-tax sector. As a result, they remain outside the purview of tax laws (Orkaido et al., 2024). The term “hard to tax” describes the non-registered taxpayers, who normally transact on a cash basis, evade taxes as well as not keeping accounting records (Okunogbe & Santoro, 2023). However, Abate (2019), Ligomeka (2019), point out, the taxation of the informal economy is a daunting task due to lack of statistical databases of the informal economy, absence of recording keeping, lack of principal permanent residence and costs and benefits associated with collection of tax from the informal economy.

In light of the above facts, tax authorities do not collect tax from the informal economy through the convectional form of taxation in spite of high income in this economic segment (Waiswa et al., 2021). EY (2018) suggests that tax revenue from the informal economy can be collected through various ways: (i) by extending income taxes and PAYE, (ii) application of indirect taxes (VAT) and presumptive tax. Empirical evidence suggests that a presumptive tax system or “simplified tax regimes” (Mas-Montserrat et al., 2023, p. 6) could be the most effective way of collecting tax revenue from the growing informal economy (Ampaabeng, 2018). Many authors suggested that presumptive tax regime is more entrenched in several tax systems worldwide (Abate, 2019; Bucci, 2019) as a tool of addressing the budget deficits (Boru, 2019; Eissa et al., 2017).

Practically, presumptive tax system addresses equity, fairness, administration, and compliance costs related issues within the informal economy (Mpofu & Mususa, 2019; TRA, 2023) to increase tax revenue (Action Aid, 2018; Mabwe & Mugozhi, 2018; Muchichwa, 2017) and is levied on a presumed or estimated base to determine taxable income (OECD, 2023). It has become a popular tool applied worldwide (Dube & Casale, 2017). Many scholars assert that presumptive tax is the most suitable form of tax used for the taxation of the hard to tax and solve administrative inadequacies (Getachew, 2019). Dube and Casale (2016) reaffirms that a presumptive tax system is generally a “single tax” more applicable in developing countries with their large informal economies. Taxpayers taxed under this system are not subject to the other direct and indirect taxes such as social security and PAYE (Dube & Casale, 2016). Scores of researchers affirm that a presumptive tax system would contribute to the formalisation of informal economy worldwide and reinforce long term future tax compliance (Abate, 2019).

In studying the impact of presumptive tax regimes on total tax revenue, Danquah and Osei-Assibey (2018) and Mabwe and Chimanga (2018) found that the tax regime generates statistically small amounts of tax revenue. They support that the application of presumptive tax system seeks to encourage tax compliance and instil voluntary tax compliance in future. Dube and Casale (2017) and Eissa et al. (2017) argue that presumptive tax did not produce expected results because some tax authorities applied it based on theoretical assumptions without conducting feasibility studies that provide credible historical effects in terms of revenue capacity. Thus, Devereux et al. (2021) argue that the extant tax strategy in this case presumptive tax is substantially flawed and there is need for massive tax reforms.

2.2. Digitalisation and taxation of informal economy

In a research review, Audrin (2019, p. 4) defines digitalisation as “the summary of the technological and organizational changes that are centred on the creation, exchange, sharing and using of significant volumes of data”. A more comprehensive definition provided in the literature defines digitalisation as:

“Digitalisation is the transformation of all sectors of our economy, government and society based on the large-scale adoption of existing and emerging digital technologies” (OECD, 2020, p. 4).

Nonetheless, Martinez-Vazquez et al. (2023) view digitalisation as an ongoing use and adoption of a modern software solution to transform a traditional business model into digital (virtual) and pave the way for new revenue and value creation opportunities. The integration of online tax system and fiscal data applications facilitate the data or information flow between tax authorities and the taxpayers (Smith & Brown, 2022). Other empirical studies highlight that the integration of technological tools in the tax system enhance tax transparency, tax fairness and tax revenue collection (Olatunji & Ayodee, 2017).

Literature shows that many countries around the world embraced modern software solutions in combating tax evasion and improving the quality of tax revenue collection (Dyson & Hodgson, 2016). Scholars point out that several countries have adopted e-filing, accounting e-match, e-audit and e-assess (Dyson & Hodgson, 2016). Based on the empirical evidence, the use of modern software solutions enables tax administration to improve the quality of tax reporting and reduction in tax non-compliance (EY, 2017; ACCA, 2015). Developed countries such as Germany, Australia, Estonia, China, Canada, and UK have developed sophisticated software to facilitate the adoption of digital accounts (Meall, 2017). In Austria, for instance, it is mandatory to issue receipts to all cash transactions via electronic registers. This means that all business-related transactions are registered on e-cash registers, and instantly, tax authorities deduct from an e-account holder's account (Okunogbe & Santoro, 2023).

Tax experts maintain that the integration of the e-accounting system of taxpayers with the online accounts that taxpayers have with authorities will improve tax revenue levels and tax compliance (Campbell & Hanschitz, 2018; Nguvava & Sangar, 2024). The direct interaction between informal taxpayers and the tax authorities via e-applications would mean a cut in administration costs and bureaucratic processes, particularly in the collection and computation of their income taxes. The resultant effects of the adoption of a digital tax system are improved tax revenue and a tax compliance culture within the informal economy (UN, 2021; Timans, 2019). The integrated system sends a communication to the government in real-time. This enables tax authorities to access the legality of that specific transaction and then clears it before the actual transaction it covers proceed (Chand et al., 2020; Toyon, 2021). This means that tax authorities are aware of the legality of each transaction before it is completed, and they have the right to block the transaction whenever a suspicion or dispute arises regarding the tax liability. Figure 1 below illustrate the conceptual framework for this study.

The taxation of the informal economy presents complex and intricate challenges as documented in the literature (Mpofu, 2021, OECD, 2018). While existing studies recognise these challenges, there remain a critical; need to delineate specific gaps in the research landscape. Thus, this study aims to address these identified gaps in the literature by elucidating the relationships and significance of key constructs or variable integral to the development of digitalised tax framework for the informal sector taxation. Literature highlights the significance of digitisation as a vehicle for transforming tax systems, with empirical evidence revealing its impact on optimising tax revenue (Aditlya, 2020; Devereux et al., 2021), fostering voluntary tax compliance (Nieuwenhuizen, 2019; Nyamukapa, 2023) and enhancing sustainable economic development (Makoni & Chikanda, 2023) and stimulating the formalisation of informal sector economic activities (Smith & Brown, 2022). Based on the above discussion, the following hypotheses are formulated:

- H1: Digitalisation of tax framework has a significant impact on tax revenue optimisation*
- H2: Digitalisation of tax framework has a significant impact on voluntary tax compliance*
- H3: Digitalisation of tax framework has a significant impact on sustainable economic growth*
- H4: Digitalisation of tax framework has a significant impact on formalisation of the informal sector*

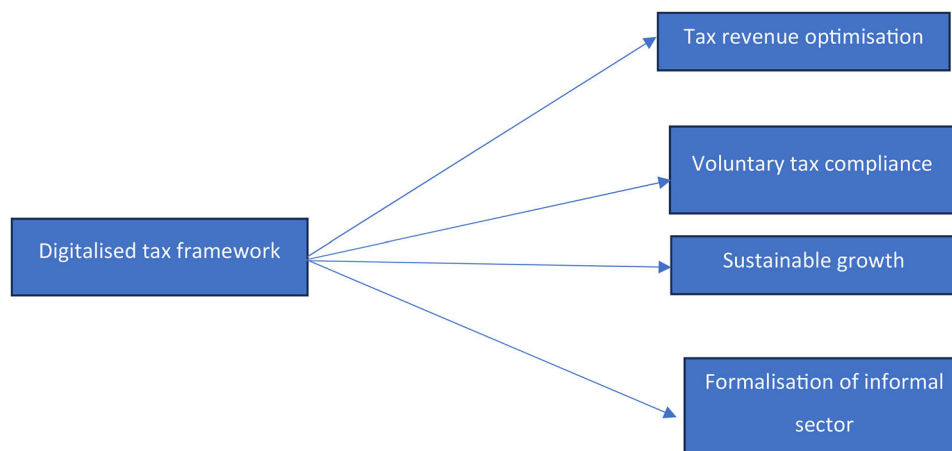


Figure 1. Conceptual framework.

3. Research methodology

The aim of the study is to develop a digitalised framework for the collection of tax revenue from the informal economic sector in Zimbabwe. This study used a mixed-methods approach to assess the efficacy of a digital framework for collecting tax income from Zimbabwe's informal economy, integrating quantitative and qualitative research methodologies to provide a full understanding of the topic. Data was collected in two stages: first, ten purposefully selected interviews were conducted with key stakeholders, including Zimbabwe Revenue Authority (ZIMRA) officials, academics, and informal economy participants, to gather their perspectives on the importance of digitalising tax collection. Following that, a quantitative survey was conducted to validate and expand on the qualitative results. This mixed-approaches approach, as stated by Timans et al. (2019), emphasises the significance of doing qualitative research and thematic analysis before applying quantitative methods, so providing a nuanced understanding of the phenomenon. The use of mixed methods is justified by the need to combine detailed, context-specific insights with broader, generalizable data, ensuring a robust evaluation of the digital framework's efficacy in alignment with the high standards of leading academic journals. Thereafter, the findings are then validated using survey or experiments to provide broader statistical generalisations (Clark & Ivankova, 2016; Ivankova et al., 2006). The initial stage involves in-depth interviews using an interview guide developed from reviewed literature. Ten (10) interviews were conducted with purposively selected key participants from ZIMRA officials, academia and informal economy. The data collected through qualitative was analysed using thematic analysis. This was done to understand the participants' perceptions of the need to digitalised the revenue collection from the informal economy in Zimbabwe.

Subsequently, the study employed quantitative research approach to confirm or refute the qualitative findings, thereby providing a robust basis for recommendations aimed at strengthening tax compliance and economic inclusivity in developing countries's informal economy. Furthermore, the findings from literature review and in-depth interviews were used to develop a survey instrument. Additionally, primary data were collected through survey or paper based questionnaires administered to 40 respondents. To collect quantitative data, the study developed structured questionnaire from literature consisting 43 items and was designed to capture data relating to both dependent and independent variables. Furthermore, the developed questionnaire were pilot tested to 35 respondents who did not subsequently participate in the main study. This was done to test reliability and validity of research instrument. It was further given to a tax professor at the University of Botswana to assess the appropriateness of and relevance of research questions and comments on areas of ambiguity to be addressed. The corrected and validated questionnaires were then administered to 42 purposively selected respondents drawn from Zimbabwe Revenue Authority (ZIMRA), Ministry of Finance and Economic Development (MoFED), government departments, informal sector associations, civic society and Reserve Bank of Zimbabwe.

The data collected through quantitative data were analysed using Statistical Package for Social Sciences (commonly referred to as SPSS). Descriptives and inferential statistical techniques were utilised to test the hypotheses. Cronbach's alpha was deployed to assess and test reliability of the questionnaire. The researchers followed the thematic analysis process and repeated the process to refine the codes (Braun & Clarke, 2022). The researchers obtained ethical clearance from the Research Ethics Committee (Human) at the Nelson Mandela University. Verbal consent was obtained from participants instead of written consent due to sensitivity of the study being conducted during a campaign period. Participants were cautious about documentation due to concerns about privacy, potential repercussions and fear of being victimised. Consequently, verbal consent was documented through audio recordings which serves as a reliable record of participants' agreements.

4. Presentation and discussion of findings

The reviewed literature highlights a gap in the presumptive tax framework. Development of the framework in this study was guided by level

4.1. Responses from the qualitative interviews

The impact of developing a digitalised tax framework on presumptive tax voluntary compliance was identified through participants responses to the following interview questions:

"Can you outline your understanding of how tax reform intersects with digitalisation, particularly in modernising presumptive tax regime? How do you perceive digitalisation impacting the efficiency and effectiveness of tax collection?"

"In your opinion, what are the key challenges and opportunities associated with implementing presumptive tax compliance in a digitalised environment? How might technology be leveraged to improve compliance rates while minimising on taxpayers?"

"Cashless transactions are increasing becoming the norm in Zimbabwe. How do you foresee the role of cashless in enhancing the performance of presumptive tax revenue collection? What strategies would you propose to encourage cashless transactions and improve revenue collection?"

How can digitalisation facilitate the formalisation of informal economic activities and what specific measures would you advocate for to integrate informal economy into tax net? How might digital tools be utilised to track and regulate informal sector activities more effectively in Zimbabwe?"

Table 1. Extracts from participants.

Emergent subthemes	Extracts from participants statements
Modernising presumptive tax regime	<p>"One it will be very easy to collect tax. The collection cost will be low. The system should be linked to a return form where you don't have to employ anyone, you just actually link that form and complete that form and thus how the government will be in a position to tax the informal economy..."</p> <p>"Most Zimbabweans are using mobile money (Ecocash, Telecash, OneMoney, Mycash) in their daily transactions. It is estimated that Ecocash constitutes over 95% of daily transactions in Zimbabwe..."</p> <p>"RBZ is fully behind the adoption of plastic money technology in the economy and as RBZ Zimbabwe in the next few years should be a cashless society and I think Zimbabwe will be the first cashless country in Africa."</p> <p>"The cashless Zimbabwe has created a fertile ground for the collection of tax revenue to combat the hard to tax and tax evaders... follow the IMTT examples and every person or business is taxed on the revenue transaction and immediately collected by the state".</p>
Tax revenue	<p>"... ZIMRA is collecting tax revenue from the use of mobile platform (IMTT) in 2018. The only problem is that the current mobile tax is non-discriminatory..."</p> <p>"In 2020 ZIMRA collected annual net revenue from Intermediated Money Transfer Tax a total of ZW\$13 788 3945 651.27. This is a considerable nominal growth rate of about 419.69%. The revenue yield from the IMTT is increasing yearly hence the government must support and invest in digital technologies to reap full benefits of digitalisation. The government should completely do away with cash and all the information will be captured and stored in the central database."</p> <p>"it means more revenue since tax will be collected in real or near real time"</p>
Challenges and opportunities of modernising tax framework	<p>"Digitalising the tax framework has its own challenges. These unavoidable challenges include network security breaches, data losses, identity thefts and other cyber criminality. This compels the government to design strategies to mitigate these cyber threats."</p> <p>"Digitalised tax framework creates new opportunities and challenges. It is important to carry out a feasibility study to establish these unavoidable challenges. The common challenges include those related to infrastructure (software and hardware), maintenance and political will..."</p> <p>"The mobile money platform is the most notable intervention which gives tax authorities a platform to enforce compliance".</p>
Formalisation and presumptive tax voluntary compliance	<p>"It will be easy to formalised informal economy"</p> <p>"Reduction in tax noncompliance..."</p> <p>"Increased in the level of presumptive tax voluntary compliance..."</p> <p>"reduces corruption and other loopholes within the presumptive tax framework..."</p>

Source: Authors' own compilation (2024).

The researchers investigated the perspectives of 10 participants from diverse backgrounds with the aim of determining whether there is a nexus between digitalisation and formalisation of informal players in Zimbabwe. The interview data were classified under the sub-themes presented in [Table 1](#) below:

Most participants predicated an increase in tax revenue and high level of presumptive tax voluntary tax compliance due to the deployment of digital technology in tax system ([Table 1](#)). This high level of compliance and increase in tax revenue is propelled by real-time revenue collection and the elimination of cash in the system. Almost all the participants' comments on the impact of digitalisation of current tax regime and use of cashless on long term compliance and informal economy showed that tax evasion, corruption and any forms of tax fraud or crime will eventually be eliminated hence promotion of formalisation of informal economic activities.

During document analysis, evidence was also gathered from OD1, which confirmed the government's commitment to digitalisation. The study found that ZW\$139.8 billion has been allocated to support the ICT infrastructural programme, and again ZW\$2 billion was allocated to the Ministry of ICT, Postal and Courier Services, and a further ZW\$1.5 billion has been allocated to the Ministry of Information, Publicity and Broadcasting Services to facilitate digitalisation of the economy. It was also noted during the documentary review that the President of Zimbabwe has acknowledged the value of ICT in curbing corruption and other revenue leakages avenues. However, the funds are insufficient to support national digitalisation initiatives.

Based on the excerpts from participants, this study highlights the transformative potential of mobile money and a cashless economy in enhancing tax collection efficiency, reducing costs, and broadening the tax base. The widespread adoption of Ecocash and the Reserve Bank of Zimbabwe's (RBZ) support for a cashless future are identified as critical facilitators in modernizing tax administration and increasing revenue. The study provides substantial evidence of significant revenue growth from digital taxation and improved compliance and corruption reduction. However, it also underscores the pressing need to address cybersecurity challenges and invest in robust digital infrastructure to fully harness these benefits. This analysis contributes to the broader discourse on digital tax systems, suggesting that while digitalization presents significant opportunities for enhancing tax governance, careful attention to strategic safeguards is essential. Future research should explore the comparative impact of digital tax systems in diverse contexts and develop comprehensive strategies for managing emerging cyber risks.

4.2. Insights from the survey

A total of 40 properly filled responses were received within the prescribe timeframe. This shows a response rate of 100%, implying that the majority of respondents participated wholeheartedly in the data collection process. 100 percent response rate was attained because of the nature of the survey instrument- clear and unambiguity and consistent follow up of respondents.

Cronbach's Alpha was used to measure consistency reliability of the items or construct of the questionnaire. [Table 2](#) shows the results of reliability testing conducted using SPSS. On voluntary tax compliance, a Cronbach's alpha value of 0.931 indicates a strong level of reliability. Similarly, a Cronbach's alpha value of 0.930 for sustainable growth indicates very high consistency for the items measuring this construct. This suggests that the items included in this construct are highly correlated with each other, indicating a strong level of reliability in measuring sustainable growth. The Cronbach's alpha value of 0.912 for formalisation of the informal sector also indicates high internal consistency reliability. This denotes that the items measuring formalisation of the informal sector are significantly strongly correlated with each other, demonstrating a high level of reliability in measuring this construct. With a

Table 2. Reliability.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Voluntary tax Compliance	137.9000	1071.682	.871	.900	.931
Sustainable growth	137.2500	1066.808	.878	.971	.930
Formalisation of informal economy	136.8500	965.515	.972	.986	.912
Tax Revenue	138.2750	939.384	.892	.984	.933
Digitalisation of tax regime	162.4250	1366.661	.891	.939	.957

Cronbach's alpha value of 0.933 for tax revenue, suggests that the items are highly correlated with each other, indicating a strong level of reliability in measuring tax revenue. The Cronbach's alpha value of 0.957 for digitalisation of the tax regime indicates extremely high internal consistency reliability for items measuring this construct.

Overall, based on these results, this study concludes that all constructs (Voluntary tax compliance, sustainable growth, formalisation of the informal sector, tax revenue and digitalisation of the tax regime) demonstrate very high levels of internal consistency reliability, indicating that the items within each construct effectively measure the intended concept.

The estimated coefficient of 0.315, lower bound and upper bound of 0.245 and 0.380 respectively, p-value of 0.001 and overall, based on the above analysis, this study can infer that the digitalization of tax regime is associated with an increase in tax revenue, high level of voluntary tax compliance (reduction in tax noncompliance), sustainable growth and development and formalization of informal sector activities. The finding aligns with the expectation that digitalization can improve transparency, efficiency, and compliance in tax systems, thereby leading to higher revenue collection for the government (Table 3). Additionally, this increased tax revenue can potentially contribute to sustainable development in the country by providing resources for public services and infrastructure.

The findings from both in-depth interviews and surveys highlight optimism among respondents regarding the transformative potential of digitalising the tax framework in Zimbabwe. Qualitative study underscore a consensus among participants that digitising tax framework and adoption of cashless policies are perceived as alternative methods to facilitate the formalization of informal sector, contrasting with the existing tax regime- presumptive tax. On the other hand, the results from survey highlighted empirical evidence and statistically significant effects of adopting digital technologies in the domain of taxation on multiple fronts: promoting tax revenue generation, stimulating informal sector formalisation, bolstering sustainable economic growth and increasing voluntary tax compliance behavior.

These findings underscore the benefits of tech-driven solutions to revolutionize informal sector taxation policies, aligning with contemporary global trends towards sustainable economic inclusivity and efficiency.

4.3. Proposed digitalised framework for the collection of tax revenue from the informal economic sector

Having identified ambiguities and flaws within the presumptive tax legislation and the process involved, this paper proposes a framework for digitalising tax revenue collection for the informal economic sphere in Zimbabwe. The proposed framework focuses on an operational framework that can result in a high level of tax compliance in Zimbabwe. The proposed tax system should be a "digital end-to-end system", a digital tax system or simply a "just-in-time tax system".

The framework in Figure 2 displays the private sector, public sector, financial institutions and their employees. These institutions are registered for tax purposes and have unique digital tax identification numbers (TINs) (primary keys).

The network service provider (NSP) symbolises the informal economy (unbanked sector) dimension and is characterised by the use of mobile money and a mobile payment system (MMPS (electronic wallets)) to make payments between platforms (users). The MMPS epitomises an alternative payment service platform used by informal economy players who are unbanked and neglected by formal banking institutions. The system (MMPS) allows people to credit and receive money on cell phones (mobile phones) as well as transfer money to other service providers through the network service provider's Unstructured Supplementary Service Data (USSD). It is important to note that the users of MMPSs are registered with

Table 3. Merged regression weights.

Predictor	Outcome	Estimate	Lower	Upper	P	Std Beta
Digitalisation of tax regime	Voluntary Compliance	0.315	.245	.380	.001	.315***
Digitalisation of tax regime	Sustainable Growth	.215	.141	.291	.001	.215***
Digitalisation of tax regime	Formalisation of Informal Sector	0.195	.130	.262	.001	.195***
Digitalisation of tax regime	Tax revenue	0.261	.190	.325	.001	.261***

***Significance < .05.

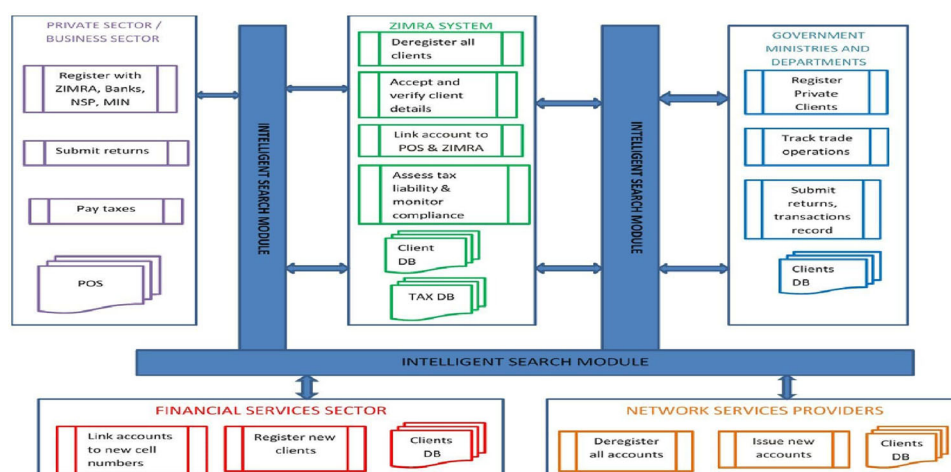


Figure 2. Proposed framework for digitalising tax revenue collection in the informal economic sphere.

Source: Authors' formulation (2023).

the chosen network provider and are identifiable by a unique cell phone number (primary key) to gain access to e-wallet and other MMPs services. This platform stores a digital financial record of all individual transactions (cash-in and cash-out) in an incorruptible manner.

The ZimSwitch platform (technology) represents a shared platform or national payment platform that allows regulators to monitor all financial transactions and states of accounts (e-wallet or bank) from the following stakeholders: network service providers, financial institutions, and the private and public sectors. This platform is central and a gateway to all transactions from mobile money (all mobile network providers) or formal banking systems (electronic fund transfers or internet banking) in one organisation to e-wallet or formal accounts in another institution (or platform). The researcher believes that since ZimSwitch is a funnel of all mobile money and internet-related transactions, there is an incorruptible database for service providers, including network service providers and users of MMPs.

The Zimra system is an integrated and interactive system that is largely dependent on the information from various stakeholders presented in the framework. The arrows denote the interdependence and interconnectivity of the stakeholders with each other with regard to financial transactions. Zimra depends on the national payment system (ZimSwitch) to access informal economy operators' financial information, and informal economy operators depend on the ZimSwitch process to make payments. ZimSwitch technologies offer interconnections between Zimra, financial institutions, the private sector, the public sector and mobile trading. The MMPs can also be used by Zimra for tracking financial transactions, identity management, compliance management, and revenue collection and fraud detection in real time. The Zimra system is considered to be distinct and constantly interacting with the ZimSwitch platform and other stakeholder databases; thus, all the revenue leakages are likely closed.

A centralised database (data silos) developed by Zimra is linked to the ZimSwitch platform, and structured query language (SQL) is used to communicate and interact with stakeholder databases as well as e-account holders (subscribers). Zimra will access all stakeholders' databases using an artificial search module (technological solutions) to view and determine tax payables or refunds. Under each payment platform (banking or mobile platform), algorithms trained from historical data are used to validate transactions and identify proactively invalid or dubious transactions before they occur, thereby activating the red flag indicators of revenue services. The framework incorporates intelligent search modules (supervised and unsupervised machine learning algorithms) and related tools, software, and applications to gather individuals' financial data from digital financial records to compute individuals' tax payable without requesting documentation, hence significantly reducing tax revenue loss due to its ability to detect and alert tax authorities.

Supervised algorithms curtail nontax compliance using previously learned techniques from historical data; for instance, in tax fraud detection, machine learning algorithms detect tax noncompliance by comparing incoming transactions with previous transactions to check for any variation. On the other hand, unsupervised machine learning algorithms use advanced analytical and predictive analysis to

detect fraudulent transactions on an incoming basis in real time. Any irregularity in behaviour is flagged and reported instantaneously to Zimra, and a further investigation is suggested.

The results of the transactions from each pillar of the framework will be reported in real time to Zimra. The information will be used to retrain and update the framework based on newly available data. Any suspicious transaction is flagged, blocked, or rejected awaiting human reviews to either authenticate or reject the transaction.

5. Discussion

Based on the findings of the regression analysis, the study finds that digitalisation of tax regime has a positive and statistically significant effect on long term presumptive tax voluntary compliance, tax revenue, formalisation of informal economy and sustainable growth in Zimbabwe.

This finding is consistent with a study conducted by ... which found that the use of cashless had a significant and positive effect on tax compliance. Moreso, the use of cashless or online banking system leaves an audit trail which increase detection and auditability. Prior research by ... supports this finding, as they suggest that the increasing use of e-payment and elimination of cash in the economy contribute to improving in tax revenue and ultimately tax compliance. Digitalisation of the tax system can produce a range of possible outcomes, from reduction in tax evasion and other forms of tax noncompliance to increase in tax revenue to formalisation of informal economy. This findings aligns with the previous study by ... which demonstrated that the increase use of digital technology in the economy will result in a significant reduction in tax noncompliance due to real time revenue collection.

Research evidence suggests that the use of digital technology can significantly contributes to sustainable growth and development. The increase in tax revenue means that the government may venture into sustainable investment which will transform the economy and lives of the people and eradicate poverty and meeting of some sustainable developmental goals (SDGs) such as poverty eradication and equality. Prior studies by ... emphasised the contribution of technology in promoting equality and sustainable development in a country such as Zimbabwe and closure of revenue leakages.

5.1. Conclusions and recommendations

Based on the research findings above, the paper contends that there is currently no modern tax framework available in Zimbabwe that can extract secreted knowledge from the informal economy and measure actual income generated. Thus, the developed framework would be beneficial because it will improve tax compliance challenges and tax revenue. The findings indicate that phasing out cash from the economy and linking the e-payment system to a Zimra application that computes, monitors, collects, and reports taxes in real time is the solution to the taxation of the informal economy.

This paper was unable to test and validate the framework technically; therefore, future studies could test the feasibility and impact of the framework on revenue collection from the informal economy. The study recommends that the framework developed and proposed undergo rigorous testing by both tax practitioners and economists before its implementation with the aim of uncovering defects, refining, and enhancing the proposed digitalised framework. An operationalised tax system is valuable to Zimra, lawmakers and the citizens of Zimbabwe at large because effective domestic revenue mobilisation is likely to yield improved essential services and close the tax gap. It is expected that the framework will be available for adoption by other developing countries globally that experience informal economy taxation challenges. Notably, the application of digital tools in the tax framework requires political will, support, and transparency. For that reason, the Government of Zimbabwe should commit itself to investing in digital infrastructure to fully enjoy the benefits of digitalisation

Authors' contributions

E.M. was the primary researcher and author and contributed to the conception, study design, execution, acquisition of data, analysis and interpretation, and H.F. drafted or written, substantially revised or critically reviewed the article.

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author, E.M. The data are not publicly available due to restrictions including information that could compromise the privacy of research participants.

References

- Abate, A. A. (2019). Factors affecting presumptive tax collection in Ethiopia: Evidence from category "C" taxpayers in Bahir Dar city. *Journal of Taxa Administration*, 5(2). <http://jota.website/index.php/JoTA/article/view/235>
- ACCA. (2015). *Foundations for a sound tax system: Simplicity, certainty and stability*. Available from: <https://www.acca-global.com>
- Adefolake, A. O., & Omodero, C. O. (2022). Tax revenue and economic growth in Nigeria. *Cogent Business & Management*, 9(1), 2115282. <https://doi.org/10.1080/23311975.2022.2115282>
- Aditlya, C. (2020). The presumptive tax regime on micro, small and medium enterprises in Indonesia. *Syntax Literate*, 5(6), 50–63.
- Ampaabeng, A. (2018). *Taxing the informal sector in developing countries: The case of Ghana*. [PhD Thesis]. The University of Birmingham.
- Audrin, B. (2019). *Making sense of digitization: three studies on the digitization concept and its implementation in organizations*. [PhD Thesis]. University of Fribourg.
- Boru, D. (2019). Assessment of tax collection system and its challenges category 'C' taxpayers (the case of Nekemte Town). *Research Journal of Finance and Accounting*, 10(15), 1–7.
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3–26. <https://doi.org/10.1037/qup0000196>
- Bucci, V. (2019). Presumptive taxation methods: A review of the empirical literature. *Journal of Economic Surveys*, 1–26.
- Campbell, D. F. J., & Hanschitz, G. (2018). *Digitalisation of tax: Epistemic tax policy*. In E. Carayannis, D. Campbell, & M. Efthymiopoulos (eds.), *Handbook of cyber-development, cyber-democracy, and cyber-defense*. Springer, Cham. https://doi.org/10.1007/978-3-319-09069-6_30
- Chand, V., Kostic, S., & Reis, A. (2020). Taxing artificial intelligence and robots: critical assessment of potential policy solutions and recommendation for alternative approaches – sovereign measure: Education taxes/global measure: global education tax or planetary tax. *World Journal*, 711–761.
- Clark, P. V., & Ivankova, N. (2016). *Mixed methods research: A guide to the field*. SAGE Publications, Inc. <https://doi.org/10.4135/9781483398341>

- Danquah, M., & Osei-Assibey, E. (2018). The extent and determinants of the tax gap in the informal sector: Evidence from Ghana. *Journal of International Development*, 30(6), 992–1005. <https://doi.org/10.1002/jid.3361>
- Devereux, M. P., Auerbach, A. J., Keen, M., Oosterhuis, P., Schon, W., & Vella, J. (2021). Taxing Profit in a Global Economy (Oxford, 2021; online edn, Oxford Academic. <https://doi.org/10.1093/oso/9780198808060.001.0001>
- Dube, G., & Casale, D. (2016). The implementation of informal sector taxation: Evidence from selected African countries. *eJournal of Tax Research*, 14, 601–623. <https://www.business.unsw.edu.au/research-site/publications-site/>
- Dube, G., & Casale, D. (2017). Informal sector taxes and equity: Evidence from presumptive taxation in Zimbabwe. *Development Policy Review*, 37(1), 47–66. <https://doi.org/10.1111/dpr.12316>
- Dyson, B., & Hodgson, G. (2016). *Digital cash; Why Central Banks should start issuing electronic money*, Positive Money, available at <http://www.positivemoney.org/>
- Eissa, N., Murray, S., & Zitlin, A. (2017). *Fiscal impacts of a presumptive tax for microenterprises in Rwanda*. International Growth Centre and Georgetown University, Final report 1–38113. RW-1.
- Getachew, A. (2019). Turnover-based presumptive taxation and taxpayers' perceptions in Ethiopia. ICTD African Tax Administration Paper 7.
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18(1), 3–20. <https://doi.org/10.1177/1525822X05282260>
- Karombo, T. (2018). Zimbabwean companies want the tax system to include booming informal economy. Business Report, 9 December 2018.
- Kupangwa, W., Farrington, S. M., & Venter, E. (2024). Value sets of business-owning families: An indigenous African perspective. *Journal of African Business*, 1–32. <https://doi.org/10.1080/15228916.2024.2352951>
- Ligomeka, W. (2019). Expensive to be a female Trader: The reality of taxation of flea market traders in Zimbabwe. ICTD Working Paper 93.
- Mabwe, L. M., & Chimanga, D. (2018). An examination into the administration of the presumptive tax legislation in Zimbabwean. *International Journal of Innovative Research and Advanced Studies*, 5(2), 227–233.
- Mabwe, L. M., & Mugozhi, F. (2018). An analysis into the implementation of presumptive tax legislation in Zimbabwe. *The International Journal of Business and Management*, 6(2), 58–65.
- Makoni, P., & Chikanda, A. (2023). Informal economy dynamics in Zimbabwe: A qualitative study. *Journal of African Studies*, 45(2), 123–135.
- Manhimanzi, G. C., Chagwedera, E., Fundira, T., Karuru, B., & Hlatywayo, M. (2022). The effectiveness of presumptive tax in increasing tax revenue collection from informal traders in Bindura. *Zimbabwe. Journal of African Interdisciplinary Studies*, 6(12), 15–39.
- Martinez- Vazquez, J., Sanz-Arcega, E., & Martin, J. M. T. (2023). *Tax revenue management and reform in the digital era in developing and developed countries* Care Homes in a Turbulent Era, 202.
- Mas-Montserrat, M., Colin, C., Ribault, E., & Brys, B. (2023). The design of presumptive tax regimes. OECD Taxation Working Papers. <https://doi.org/10.1787/141239bb-en>
- Meall, L. (2017). *Digital tax administration is here: AB magazine*. http://www.accaglobal.com/uk/en/member/member/accounting_business/2017/04/practice/digital-tax.html
- Mhlanga, P. (2018). Amnesty attracts few tax defaulters. The Financial Gazette, May 31- June 6.
- Moyo, B. (2022). Factors affecting the probability of formalizing informal sector activities in Sub Saharan Africa: evidence from World Bank enterprise surveys. *African Journal of Economic and Management Studies*, 13(3), 480–507, Emerald Publishing Limited.
- Mpofu, F. Y. S. (2021). Taxing the informal sector through presumptivetaxes in Zimbabwe: An avenue for a broadened tax base, stifling of the informal sector activities or both. *Journal of Accounting and Taxation*, 13(3), 153–177.
- Mpofu, S. F. Y., & Mususa, A. (2019). How successful is a presumptive tax in bringing informal operators into the tax net in Zimbabwe? A study of transport operators in Bulawayo. *International Journal of Innovative Science and Research Technology*, 4(3), 79–88.
- Muchichwa, N. (2017). *Decent work in the informal economy: towards formalisation of the informal economy*. Labour and Economic Development Research Institute of Zimbabwe and Friedrich-Stiftung, 4–25.
- Ncube, M. (2018). The 2019 National Budget Statement: 'Austerity for prosperity'.
- Nguvava, H. E., & Sangar, V. J. (2024). The influence of tax services quality on presumptive taxpayers' compliance in Tanzania: A case of Ilala tax region. *African Journal of Economics and Sustainable Development*, 7(1), 123–138.
- Nieuwenhuizen, C. (2019). The effect of regulations and legislation on small, micro and medium enterprises in South Africa. *Development Southern Africa*, 36(5), 666–677. <https://doi.org/10.1080/0376835X.2019.1581053>
- Nyamukapa, C. (2023). *Presumptive tax policies in Zimbabwe*. Oxford University Press.
- Okunogbe, O., & Santoro, F. (2023). The promise and limitations of information technology for tax mobilization. *The World Bank Research Observer*, 38(2), 295–324. <https://doi.org/10.1093/wbro/lkac008>
- Olatunji, O. C., & Ayodele, K. B. (2017). Impact of information technology on tax administration in Southwest. *Nigeria, Archives of Business Research*, 5(9), 139–150.
- Orkaido, K., Beyene, T., Mitiku, S., & Tesiso, Y. (2024). Examining factors affecting presumptive tax voluntary compliance (A case study in Gedeo Zone). *Journal of World Economic Research*, 13(1), 11–23. <https://doi.org/10.11648/j.jwer.20241301.12>

- Pitoyo, A. J., Aditya, B., & Amri, I. (2020). The impacts of COVID-19 pandemic to informal economic sector in Indonesia: Theoretical and empirical comparison. *E3S Web of Conferences*, 200, 03014. <https://doi.org/10.1051/e3sconf/202020003014>
- Sikwila, M. N., Karedza, G., & Mungadza, A. (2016). Tax collection constraints and tax burden on the urban informal sector enterprises: Evidence from Bulawayo, Zimbabwe. *Mediterranean Journal of Social Sciences*, 7(6), 79–86. <https://doi.org/10.5901/mjss.2016.v7n6p79>
- Smith, J., & Brown, A. (2022). Digitalisation and tax revenue: A meta-analysis of global trends. *Journal of Economic Policy*, 30(4), 567–580.
- Tanzania Revenue Authority. (2023). Presumptive Tax System.
- Timans, R., Wouters, P., & Heilbron, J. (2019). Mixed methods research: What it is and what it could be. *Theory and Society*, 48(2), 193–216. <https://doi.org/10.1007/s11186-019-09345-5>
- Toyon, A. S. (2021). Explanatory sequential design of mixed methods research: Phases and challenges. *International Journal of Research in Business and Social Science*, 10(5), 253–260.
- Vingirayi, I., Hapanyengwi, O., Nyagaza, B., & Nyamuraradza, N. (2020). Zimbabwean informal sector ZIMRA tax revenue collection barriers. *Journal of Global Economics, Management and Business Research*, 12(2), 14–25.
- Waiswa, R., Lastunen, J., Wright, G., Noble, M., et al. (2021). New directions for presumptive tax in Uganda. This Policy Brief is Based on the WIDER Working Paper, 163/2021.
- World Economics. (2024). *Zimbabwe's informal economy size*. <https://www.worldeconomics.com/National-Statistics/Informal-Economy/Zimbabwe.aspx>
- Zimbabwe National Statistics Agency. (2023). First Quarter, Quarterly Labour Force Survey Report.
- Zimbabwe National Statistics Agency. (2024). First Quarter, Quarterly Labour Force Survey Report. <https://www.zimstat.co.zw/wp-content/uploads/>.
- ZIMRA. Annual Report. (2022).
- ZIMRA. Annual Report. (2023).