

An Investigation of Strategies to Improve Tax Compliance Among SMEs: A Case Study of Zambia Revenue Authority.

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ABSTRACT

This study investigates strategies to enhance tax compliance among Small and Medium Enterprises (SMEs) in Livingstone, Zambia, using the Zambia Revenue Authority (ZRA) as a case study. The research employed a mixed-method approach, combining surveys and interviews with SME owners and ZRA officials. Key findings indicate a significant compliance gap, with 40.4% of SMEs not registered for tax, largely attributed to a lack of awareness about tax obligations. Despite this, most SMEs recognize the benefits of taxation and express interest in improving their understanding through training programs. The study concludes with recommendations for ZRA to implement targeted educational campaigns and improve electronic tax filing systems to address usability issues.

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Introduction

Tax compliance among Small and Medium Enterprises (SMEs) is pivotal for economic growth, yet it remains a critical challenge in developing economies like Zambia. SMEs contribute significantly to employment and GDP, accounting for over 70% of jobs in sub-Saharan Africa (World Bank, 2021). However, low tax compliance rates hinder revenue mobilization, limiting public investments in infrastructure and social services. In Zambia, 40.4% of SMEs operate informally, unregistered for tax, undermining fiscal stability and progress toward the United Nations Sustainable Development Goals (Zambia Revenue Authority [ZRA], 2023).

The study addresses the paradox of SMEs' willingness to comply with tax obligations despite systemic barriers. While 86% of SMEs in Livingstone acknowledge taxation's societal benefits and 91.5% express interest in tax education, compliance remains low. Key barriers include high tax rates (46.8% of respondents), procedural complexity (24.5%), and limited awareness (36.2% unaware of obligations). These challenges are exacerbated by frequent policy changes, inconsistent enforcement, and technological gaps, fostering mistrust between SMEs and tax authorities.

This research investigates strategies to enhance tax compliance among SMEs in Livingstone, focusing on the Zambia Revenue Authority's (ZRA) initiatives. Employing a mixed-methods approach, the study integrates quantitative survey data from 94 SMEs with qualitative insights from ZRA officials and business owners. Logistic regression analyses reveal significant associations between compliance and factors such as gender (female-owned businesses exhibit lower compliance odds, $\text{Exp}(B) = 0.137$, $p < 0.001$) and electronic filing usage ($\text{Exp}(B) = 0.078$, $p < 0.001$). Qualitative findings highlight systemic inefficiencies, including cyber security risks in digital systems and resistance to e-filing (5.3% prefer manual processes).

The study bridges gaps in existing literature by emphasizing context-specific solutions for resource-constrained settings. While prior research focuses on punitive measures, this work advocates for simplified tax codes, digital literacy programs, and tiered tax regimes aligned with SME capacity. Theoretical frameworks like the Slippery Slope Theory (Kirchler, 2007), which underscores trust and power dynamics in tax systems, inform recommendations for fostering voluntary compliance.

By addressing structural and behavioral barriers, the research aims to support ZRA in improving revenue

collection and SME sustainability. Key contributions include actionable strategies for policy reform, insights into demographic disparities in compliance, and a nuanced understanding of technology's role in tax systems. The findings underscore the need for balanced policies that prioritize equity, efficiency, and administrative feasibility, offering a roadmap for economic resilience in Zambia and similar contexts.

Literature Review

Tax compliance among Small and Medium Enterprises (SMEs) is a critical yet understudied area in developing economies, particularly in sub-Saharan Africa. This literature review synthesizes theoretical, empirical, and policy-oriented research to contextualize the challenges and opportunities for improving compliance in Zambia. By integrating global perspectives with Zambia-specific data, the review highlights gaps in existing scholarship and underscores the need for localized strategies to address structural, behavioral, and institutional barriers. number of citations were the acceptance criteria applied to the select literature for this chapter.

Characteristics of small and medium enterprises

Small and Medium Enterprises (SMEs) are the backbone of economic activity in developing nations, contributing over 70% of employment in sub-Saharan Africa (World Bank, 2021). In Zambia, SMEs account for 40.4% of businesses operating informally, often excluded from formal tax systems due to structural and behavioral barriers (Zambia Revenue Authority [ZRA], 2023). Their heterogeneity—spanning sectors like retail, agriculture, and services—presents unique challenges for tax administration. For instance, retail businesses frequently rely on cash transactions, complicating audit trails, while informal agricultural SMEs often lack documentation of income (Moyi & Njiraini, 2005). Limited financial literacy exacerbates compliance issues, with 36.2% of SME owners in Livingstone admitting to a lack of awareness about tax obligations, such as filing deadlines or applicable tax rates (Goursat and Pellerano, 2016). Fragmented record-keeping practices, common among micro-enterprises, further hinder accurate reporting. Additionally, cash-based operations and weak enforcement mechanisms enable tax evasion, as informal businesses circumvent formal registration (Baimwera, 2017). These challenges are compounded by Zambia's policy instability, where frequent changes in tax laws create uncertainty, discouraging SMEs from formalizing. Addressing these issues

requires tailored strategies, such as simplified tax regimes, targeted education programs, and digital tools to improve auditability and trust in the tax system.

Taxation of SMEs: Global and Zambian Contexts

Tax regimes for SMEs typically combine presumptive taxes, simplified filing processes, and tiered rates. However, Zambia's system faces unique challenges, including high tax rates (cited by 46.8% of SMEs as a barrier), frequent policy changes, and inconsistent enforcement (ZRA, 2023). While countries like Ghana and Zimbabwe have experimented with presumptive taxes to improve compliance, Zambia's electronic tax systems remain underutilized, with only 5.3% of SMEs preferring digital platforms due to technological illiteracy (ZRA, 2023).

Tax Compliance Challenges for SMEs

Small and Medium Enterprises (SMEs) face multifaceted challenges in adhering to tax obligations, rooted in structural, behavioral, and institutional factors. Structural barriers such as complex tax procedures and high compliance costs disproportionately burden SMEs. Kaplan and Reckers (2015) emphasize that intricate tax regulations overwhelm businesses, particularly those lacking administrative capacity. In Livingstone, 24.5% of SMEs cite procedural complexity as a major hurdle, exacerbated by frequent policy changes that create uncertainty. High tax rates further deter compliance, as SMEs operating on thin margins perceive taxes as prohibitive, pushing them into the informal sector (Maseko, 2014).

Behavioral factors also play a critical role. Low tax morale, driven by perceptions of corruption and inequitable enforcement, reduces voluntary compliance (Moyi & Njiraini, 2005). Many SMEs view tax systems as unfair, especially when informal competitors evade payments, fostering resentment (Baimwera, 2017). Informal economy dynamics, including cash-based transactions and weak audit mechanisms, enable evasion. Moyi and Njiraini (2005) note that informal SMEs often lack documentation, complicating audits and enforcement.

Gender disparities further exacerbate compliance gaps. Female-owned businesses exhibit lower compliance odds ($\text{Exp}(B) = 0.137, p < 0.001$), linked to resource constraints and limited access to information (Helhel & Ahmed, 2014). Additionally, inconsistent enforcement and lack of digital literacy hinder adoption of electronic tax systems, despite

evidence from Turkey that such systems improve compliance (Metin et al., 2017). Policy instability and inadequate taxpayer education further compound these challenges, underscoring the need for simplified frameworks and targeted support to foster voluntary compliance (Razak & Adafula, 2013).

Theoretical Frameworks

The Fiscal Exchange Theory posits that compliance increases when taxpayers perceive taxation as contributing to public goods (Moyi & Njiraini, 2005). In Zambia, 86% of SMEs acknowledge taxation's societal benefits but remain non-compliant due to mistrust in governance (Alm, 2013). The Theory of Planned Behavior (Ajzen, 1991) highlights how attitudes and subjective norms shape compliance intentions, while the Slippery Slope Theory (Kirchler, 2007) emphasizes the interplay of trust and power dynamics. Zambia's inconsistent enforcement erodes trust, pushing SMEs toward evasion. The Allingham-Sandmo Model focuses on deterrence, but under-resourced institutions like ZRA struggle to implement consistent audits (Alm, 2013).

Empirical Studies on Tax Compliance

Globally, digital transformation has significantly enhanced tax compliance. In India, the adoption of e-filing systems reduced administrative burdens by streamlining processes, minimizing errors, and lowering compliance costs (Mandola, 2013). Similarly, Kenya's simplified tax codes, which introduced tiered rates and reduced paperwork, increased SME formalization rates by 18% within two years (Karingi et al.,

2018).

These reforms demonstrate how technology and policy simplification can address structural barriers.

In Zambia, while e-filing correlates with higher compliance ($p = 0.000$), only 5.3% of SMEs utilize digital platforms due to technological illiteracy, poor internet access, and distrust in digital security (ZRA, 2023). This highlights a critical gap: despite the potential of e-filing to reduce compliance costs, inadequate digital infrastructure and training hinder adoption. Comparative studies, such as Metin et al. (2017) in Turkey, reinforce that e-filing effectiveness depends on user-friendly design and taxpayer education (Tembo & Sikalumbi, 2025).

Age disparities further complicate compliance. Younger entrepreneurs (15–34 years) exhibit lower compliance rates, linked to financial instability and risk-taking behavior. A study in Yemen found that younger SME owners prioritized immediate cash flow

over tax obligations, often viewing compliance as optional (Helhel & Ahmed, 2014). Similarly, in Zambia, financial constraints and informal business practices among youth-led SMEs exacerbate non-compliance.

Behavioral factors also play a role. Research in Ghana revealed that SMEs with positive perceptions of tax fairness and government service delivery were 30% more likely to comply (Razak & Adafula, 2013). Conversely, inconsistent enforcement and corruption perceptions erode trust, particularly among younger entrepreneurs (Baimwera, 2017). These findings underscore the need for policies that combine digital innovation with targeted education and trust-building measures.

Policy Implications

To enhance tax compliance among SMEs in Zambia, policymakers must adopt a multi-faceted approach addressing structural, behavioral, and institutional barriers. First, simplified tax codes are critical. Tiered tax systems, where rates scale with business size or revenue, can reduce the burden on smaller enterprises. For example, Rwanda's presumptive tax regime, which levies taxes based on sector-specific turnover thresholds, has improved compliance by aligning obligations with SME capacity (Karingi et al., 2018). Zambia could adopt similar models, coupled with clear guidelines in local languages, to minimize confusion and administrative costs.

Second, digital transformation is essential to bridge technological gaps. E-filing systems, as demonstrated in India, reduce errors and compliance costs by automating processes (Mandola, 2013). To increase adoption, the Zambia Revenue Authority (ZRA) should partner with telecom providers to expand internet access and offer subsidized training for SMEs. Mobile-based tax platforms, like Kenya's iTAX, could serve as a template, ensuring user-friendly interfaces and offline functionality for rural areas.

Third, transparent enforcement must be prioritized. Consistent audits, coupled with anti-corruption measures such as public disclosure of tax revenues and penalties for malpractice, can rebuild trust. Chile's randomized audit system, which increased compliance by 20% through unpredictability, offers a replicable strategy (Baurer, 2015). ZRA should also leverage data analytics to identify high-risk non-compliance, minimizing arbitrary targeting.

Fourth, gender-inclusive policies are vital. Female-owned SMEs face unique challenges, including limited access to financial resources and information. Targeted workshops on tax literacy, mentorship

programs, and tax rebates for women-led businesses could address these disparities. A study in Nigeria found that gender-specific training increased compliance rates by 35% among female entrepreneurs (Adesina & Uyioghosa, 2016).

Finally, behavioral nudges should complement punitive measures. Public recognition programs for compliant SMEs, tax incentives for timely payments, and SMS reminders for deadlines can foster a culture of compliance. For instance, Mexico's Premio Nacional al Cumplimiento Fiscal awards compliant businesses with certificates, enhancing their market reputation (OECD, 2021).

By integrating these strategies, Zambia can create an equitable, efficient tax system that supports SME growth while ensuring sustainable revenue mobilization

Knowledge Gap

Future research should prioritize cross-national comparisons to identify region-specific compliance drivers, as cultural, economic, and regulatory contexts significantly influence SME behavior. The impact of e-filing systems in post-pandemic economies remains underexplored, particularly how digital adoption and remote compliance tools have reshaped taxpayer engagement. Behavioral dynamics, such as peer pressure and perceptions of fairness, require deeper investigation to understand how social norms and equity concerns affect compliance decisions. Longitudinal studies are critical to evaluating the sustained effectiveness of simplified tax codes and digital platforms, as short-term assessments may overlook systemic shifts or unintended consequences. Additionally, the intersection of gender, age, and technological literacy in compliance outcomes warrants further analysis to design inclusive policies. Addressing these gaps will enhance evidence-based strategies for fostering tax compliance in diverse economic landscapes.

Methodology

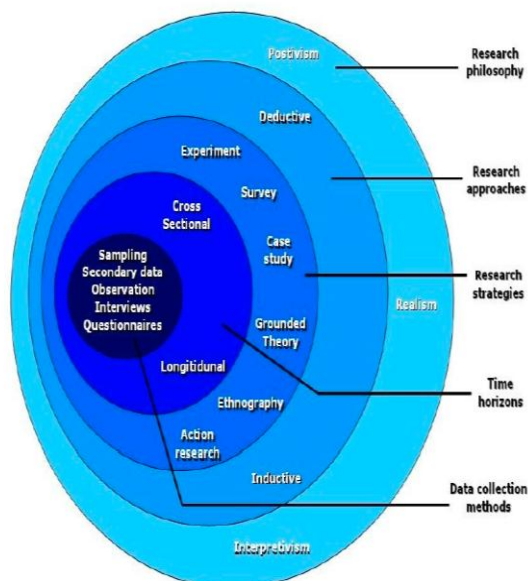
The research onion by (Saunders, Lewis, & Thornhill, 2016) was used as a guide for the construction of the research framework. The chapter begins by highlighting the philosophy and research approach used including the strategy justification. This then helps to define the method of data collection and analysis most appropriate for the research. This chapter will also cover all ethical considerations of this research. The chapter is important because it will help us address the aim of this study which is to analyse

ways to increase Livingstone's tax compliance. This helped answer the research questions as well as develop new knowledge on the subject.

Figure 1: Research philosophy

Research design

The study utilized a mixed-methods research design, combining both quantitative and qualitative approaches to address the complexity of tax compliance among SMEs. Mixed methods are particularly advantageous in studies like this, as they allow researchers to triangulate data from different sources, thereby enhancing the validity and reliability of findings (Creswell & Creswell, 2018). The quantitative component involved surveying 94 SMEs, while the qualitative component included semi-structured interviews with Zambia Revenue Authority (ZRA) officials and SME owners. This dual approach enabled the study to capture statistical trends and explore the underlying behavioral and institutional factors that influence compliance.



The choice of a mixed-methods design aligns with the recommendations of Saunders, Lewis, and Thornhill (2016), who emphasize the importance of integrating numerical and narrative data to achieve a holistic understanding of complex phenomena. By adopting this approach, the study ensured that both measurable patterns and contextual insights were considered, providing a richer depiction of the target population's attributes.

Quantitative Data Collection and Analysis

Quantitative data were collected through a structured questionnaire administered to 94 SMEs operating in Livingstone. The questionnaire was designed to gather information on key variables such as tax registration status, awareness of electronic tax services, perceived barriers to compliance, and experiences with penalties for late or non-payment of taxes. The survey also explored demographic characteristics, including the nature of the business, its duration of operation, and the number of employees (Sikalumbi, 2025).

Data analysis was conducted using logistic regression to identify significant predictors of tax compliance. Logistic regression is a widely used statistical technique for analyzing binary outcomes, making it ideal for examining whether SMEs comply with tax obligations (Field, 2018). Variables such as the use of electronic filing systems, gender of the business owner, and perceptions of tax fairness were tested for their association with compliance. For instance, the results showed that businesses utilizing electronic tax services were significantly more likely to comply ($\text{Exp}(B) = 0.078$, $p < 0.001$), underscoring the importance of digital platforms in fostering compliance.

The survey data were processed using SPSS version 23, which facilitated cross-tabulation and descriptive statistics. Cross-tabulations were particularly useful in exploring relationships between independent variables (e.g., awareness of TaxOnline) and the dependent variable (tax compliance). This methodological rigor ensured that the findings were both statistically significant and practically relevant.

Qualitative Data Collection and Analysis

Qualitative data were gathered through semi-structured interviews with ZRA officials and SME owners. The interviews were designed to explore participants' perceptions of tax compliance, the challenges they face, and potential strategies to improve adherence. Open-ended questions allowed respondents to provide detailed insights into their experiences, enabling the researcher to capture rich, context-specific narratives.

Interviews were transcribed verbatim and analyzed using thematic analysis in NVIVO 12 software. Thematic analysis is a flexible and systematic method for identifying, organizing, and offering insight into patterns of meaning across a dataset (Braun & Clarke, 2019). This process began with familiarizing oneself with the data, followed by coding, categorizing, and

refining themes. For example, one emerging theme was the role of trust in governance, with many SME owners expressing scepticism about how tax revenues are utilized.

The use of NVIVO 12 enhanced the rigor of the analysis by enabling systematic coding and color-coding of data. This software allowed the researcher to segregate data related to specific risks, such as high tax rates and procedural complexity, and link these findings to broader theoretical concepts like Fiscal Exchange Theory and the Theory of Planned Behavior.

Sampling and Sample Size Determination

A convenience sampling technique was employed due to practical constraints, such as limited time and resources. Participants were selected based on their availability and willingness to engage in the study. While this approach may introduce bias, it was deemed appropriate given the exploratory nature of the research and the need to collect data efficiently (Marshall et al., 2013).

The sample size consisted of 94 SMEs, which is sufficient for achieving meaningful results in quantitative analyses, particularly when using logistic regression (Mugenda & Mugenda, 2013). Additionally, the inclusion of ZRA officials and SME owners in the qualitative phase ensured that diverse perspectives were captured, enriching the study's findings.

Ethical Considerations

Ethical considerations were prioritized throughout the research process. Informed consent was obtained from all participants, who were assured of confidentiality and anonymity. Data were stored securely, and only aggregated results were reported to prevent the identification of individual respondents. These measures align with ethical guidelines outlined by institutions such as the British Educational Research Association (BERA, 2018), which emphasize the importance of protecting participants' rights and dignity.

Limitations of the Study

Despite its strengths, the study has certain limitations. First, the reliance on convenience sampling may limit the generalizability of the findings to other regions or countries with distinct economic and regulatory contexts. Second, the focus on Livingstone Town means that the results may not fully represent the experiences of SMEs in urban or rural areas elsewhere in Zambia. Finally, while the mixed-methods

approach provides valuable insights, it requires significant resources and expertise, which could pose challenges for replication in resource-constrained settings.

Integration of Quantitative and Qualitative Findings

The integration of quantitative and qualitative findings was achieved through a process of triangulation, where data from both sources were compared and contrasted to validate and deepen the understanding of tax compliance. For example, while the survey revealed that 40.4% of SMEs were not registered for tax, interviews highlighted structural barriers such as high tax rates and procedural complexity as contributing factors. This convergence of evidence underscores the importance of addressing both systemic inefficiencies and behavioral factors to improve compliance.

Relevance to Theoretical Frameworks

The findings were interpreted through the lens of several theoretical frameworks, including Fiscal Exchange Theory, the Theory of Planned Behavior, and the Slippery Slope Theory. For instance, Fiscal Exchange Theory helped explain why mistrust in governance undermines voluntary compliance, while the Theory of Planned Behavior shed light on how attitudes and subjective norms shape compliance intentions. These theories provided a conceptual foundation for understanding the interplay of structural, behavioral, and institutional factors in tax compliance.

The mixed-methods approach adopted in this study offers a robust framework for investigating strategies to enhance tax compliance among SMEs in Livingstone. By combining quantitative surveys with qualitative interviews, the research captures both statistical trends and contextual insights, ensuring a comprehensive understanding of the challenges and opportunities in this.

Reliability, Validity and Generalisability of Research Findings

To strengthen the validity and reliability of the gathered data, the investigator utilized the data triangulation approach, which is a strategy that has been acknowledged by (Tsalapatas et al., 2014) for its ability to support study validity. By strategically using several data collection methods, data triangulation can improve the reliability and validity of study findings (Sikalumbi, 2023).

Questionnaires and interviews were used in tandem as complementing data collection methods in this study. Following the advice of (Cohen and Manion, 2014), this strategy cross-verifies the data using several sources and techniques, which not only increases the information's validity but also contributes to its reliability. The research attempted to minimize the drawbacks of each approach while maximizing its advantages by utilizing both surveys and interviews. The data gained depth and richness from this triangulation technique, which raised the overall calibre and legitimacy of the study findings.

Findings

This study examines factors influencing tax compliance among SMEs in Livingstone Town, Zambia, highlighting their critical role in economic development and the challenges they face in meeting tax obligations. It explores demographic, operational, and behavioral determinants, including business owners' age, gender, business longevity, and awareness of electronic tax services. The research evaluates SMEs' knowledge, attitudes, and challenges toward tax compliance while proposing strategies to enhance adherence. Using a sample of 94 SME owners, data were analyzed through cross-tabulation and binary logistic regression. Findings reveal significant barriers, such as high tax rates and complex procedures, and emphasize the need for targeted interventions. The study provides insights for policymakers to design effective measures that balance revenue collection with SME sustainability, contributing to broader discussions on taxation in developing economies.

Data analysis overview

This process was inspired by (Braun & Clarke, 2019) thematic analysis process. It began by transcribing interviews, getting familiar with the data, identifying codes, searching, reviewing, and defining of themes and generating findings and finally report writing. A thematic analysis identifies, organises, and reveals patterns across qualitative data sets by providing systematic mechanisms of coding and data analysis which is then linked to theoretical concepts. A data driven approach to coding and theme identification was applied to lessen analyst biasness.

Background characteristics of respondents in the study

The demographic analysis of SME owners in Livingstone Town reveals distinct patterns that characterize the local business landscape. Age distribution indicates a youthful entrepreneurial base, with nearly half (47.9%) of business owners falling within the 25-34 age bracket, followed by 19.1% in the 35-44 age group, and 18.1% aged 55 years and above. This age distribution suggests a dynamic mix of young innovators and experienced entrepreneurs driving the SME sector. The gender composition shows a relatively balanced representation, with female business owners slightly outnumbering their male counterparts at 52.1% versus 47.9%, reflecting the increasing participation of women in entrepreneurship.

The nature of businesses operated by these SME owners demonstrates a clear sectorial concentration. Retail trade emerges as the dominant sector, accounting for 39.4% of all businesses, followed by service-based industries at 28.7%. Agriculture represents 18.1% of the sample, while manufacturing and wholesale sectors show smaller shares at 9.6% and 4.3%, respectively. This sectorial distribution aligns with Livingstone's economic profile as a tourist destination and commercial hub, where retail and service industries naturally thrive.

Age.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-24	8	8.5	8.5	8.5
	25-34	45	47.9	47.9	56.4
	35-44	18	19.1	19.1	75.5
	45-54	6	6.4	6.4	81.9
	55+	17	18.1	18.1	100.0
	Total	94	100.0	100.0	

Sex.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	49	52.1	52.1	52.1
	Male	45	47.9	47.9	100.0
	Total	94	100.0	100.0	

Data on business longevity indicate that nearly half of SMEs (47.9%) have been active for 1–3 years, followed by 28.7% operating for 4–6 years. Only 13.8% have sustained operations beyond a decade, while 9.6% are startups in their first year. These figures underscore a prevalence of newer enterprises, which may face heightened susceptibility to financial and operational risks. Furthermore, the SME sector is dominated by micro-enterprises, with 70.2% having 1–5 employees, and only 8.5% employing over 20 workers.

How long has your business been operating?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 years	45	47.9	47.9	47.9
	4-6 years	27	28.7	28.7	76.6
	Less than 1 year	9	9.6	9.6	86.2
	More than 10 years	13	13.8	13.8	100.0
	Total	94	100.0	100.0	

A key insight from the study is that 40.4% of SMEs in Livingstone Town are not registered for tax with the Zambia Revenue Authority (ZRA), underscoring a significant compliance gap within the sector. This substantial proportion of unregistered businesses suggests that many SME owners either lack awareness of their tax obligations or perceive the registration process as overly complex and burdensome. Addressing this issue requires targeted interventions, including comprehensive tax education campaigns to improve understanding of tax responsibilities and benefits. Streamlining the registration process could also make it more accessible, particularly for small-scale enterprises with limited resources. Additionally, introducing financial incentives, such as tax relief or business support programs for newly registered SMEs, could motivate voluntary compliance. Given that retail and service industries dominate the SME landscape, tailoring taxation policies to align with these sectors' financial dynamics and cash flow patterns may further encourage adherence. By implementing these measures, authorities can work toward reducing the compliance gap while fostering a supportive environment for SME growth and sustainability in Livingstone Town.

Attitude and Knowledge Towards Tax Compliance

The study reveals a concerning gap in tax awareness and compliance among SME owners in Livingstone Town. While 59.6% of respondents report being registered for tax with the Zambia Revenue Authority (ZRA), a substantial 40.4% remain unregistered, indicating significant non-compliance. This compliance gap appears to be closely linked to varying levels of tax knowledge and awareness among business owners. When examining self-reported understanding of tax duties, 63.8% of respondents claim familiarity with their obligations, yet 36.2% admit to lacking sufficient knowledge. This discrepancy is particularly pronounced among newer businesses and those with limited digital access.

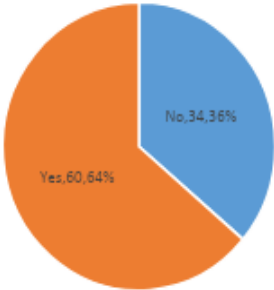


Figure 1: Tax awareness

Source: Field Data (2024)

The analysis of tax regulation knowledge demonstrates a concerning trend: 42.5% of SME owners rate their understanding as poor (levels 1 and 2 on a five-point scale), while only 26.6% report good understanding (levels 4 and 5). This knowledge deficit significantly impacts compliance behavior, as evidenced by the strong correlation between tax awareness and registration status ($p = 0.000$). Businesses aware of their tax obligations are substantially more likely to comply ($OR = 0.08$), underscoring the critical role of education in promoting voluntary compliance.

Attitudes toward tax payment reveal mixed perceptions among SME owners. While 46.8% agree and 18.1% strongly agree that taxes benefit both their business and the economy, a notable 25.5% remain neutral, and 9.6% disagree with these benefits. This ambivalence suggests that many business owners fail to recognize the reciprocal relationship between tax payment and public service provision. Furthermore, gender differences in tax compliance attitudes are statistically significant ($p = 0.000$), with male business

owners showing higher compliance rates than their female counterparts (OR = 0.137).

What is your main source of tax-related information?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fellow business owners	8	8.5	8.5	8.5
	Online sources	45	47.9	47.9	56.4
	Tax consultants	18	19.1	19.1	75.5
	Television, Radio and Newspapers	6	6.4	6.4	81.9
	ZRA offices and officials	17	18.1	18.1	100.0
	Total	94	100.0	100.0	

The sources of tax-related information utilized by SME owners provide additional context to their compliance behavior. Online platforms emerge as the most popular source (37.2%), followed by ZRA offices and officials (25.5%) and traditional media (13.8%). However, the limited use of expert guidance from tax consultants (10.6%) and fellow business owners (12.8%) suggests missed opportunities for professional support and peer learning. This preference for digital sources highlights both the potential and limitations of online tax education initiatives.

The perceived complexity of tax procedures further compounds compliance challenges. Exactly half of respondents find the tax compliance process difficult, while the other half consider it simple. This equal division reflects the diverse experiences of SME owners, influenced by factors such as business size, sector, and owner characteristics. Notably, 48.9% of businesses have faced penalties for late or non-payment of taxes, suggesting widespread difficulties in meeting filing requirements and deadlines. These findings collectively demonstrate that while some SME owners have successfully adapted to the tax system, many others struggle with fundamental aspects of tax compliance due to inadequate knowledge and support systems.

Awareness of Electronic Tax Services

The study reveals a significant disparity between awareness and actual utilization of electronic tax services among Livingstone's SME owners. While 75.5% of respondents demonstrate awareness of the ZRA's TaxOnline system, only 59.6% have actively engaged with these digital platforms for tax-related activities. This 15.9 percentage point gap between awareness and usage underscores several critical barriers preventing full adoption of electronic tax services. Among non-users, lack of knowledge emerges as the primary obstacle, cited by 46.2% of respondents who have not utilized electronic tax services. This finding highlights the urgent need for targeted educational campaigns specifically addressing the functionality and benefits of digital tax platforms.

Digital literacy presents another substantial barrier, with 26.9% of non-users reporting limited digital skills as their main challenge in adopting electronic tax services. System difficulties account for 13.5% of reported barriers, indicating technical issues or usability problems with the current platform. Interestingly, 9.6% of respondents express a preference for manual filing methods, revealing resistance to change among certain segments of the SME population. Limited internet access, while the least cited issue at 3.8%, remains a concern for some businesses, particularly those operating in areas with unreliable connectivity.

The effectiveness of electronic tax services in simplifying compliance receives generally positive feedback, though with notable reservations. A combined 73.4% of users (54.3% agreeing and 19.1% strongly agreeing) report that digital platforms have indeed simplified their tax compliance processes. However, 17% maintain a neutral stance, while 9.5% (comprising 7.4% disagreeing and 2.1% strongly disagreeing) feel that electronic services have not improved their compliance experience. These variations in user satisfaction suggest room for improvement in the existing digital infrastructure and user interface design (Hamilandu, 2025).

Significant associations between electronic tax service awareness and various personal/business factors emerge from chi-square analysis. Gender shows a notable relationship ($p = 0.001$), with male business owners demonstrating higher awareness (91.1%) compared to female counterparts (61.2%). Age also significantly impacts awareness ($p = 0.009$), where younger individuals (15-34 years) exhibit lower awareness (64.2%) compared to older groups, reaching 95.7% among those aged 45 and above. The

type of business significantly relates to awareness ($p = 0.002$), with agriculture and manufacturing businesses

reporting higher awareness (80.8%) than retail businesses (56.8%). Business longevity further influences awareness ($p = 0.030$), where newer

Factors influencing tax compliance

The binary logistic regression analysis reveals several significant determinants of tax compliance among Livingstone's SMEs, with electronic tax service usage emerging as the strongest predictor. Businesses

Characteristics	OR	95% CI	P-value
Usage of electronic tax services			
No (Ref)	1.00		
Yes	0.08	0.03-0.29	0.000
Age			
15-34 (Ref)	1.00		
35-44	0.17	0.52-0.58	0.005
45+	0.57	0.12-2.43	0.429
Business longevity			
0-3 (Ref)	1.00		
4-6	0.00	0.00-0.00	0.998
7+	0.00	0.00-0.00	0.999
Nature of business			
Agriculture/ Manufacturing (Ref)	1.00		
Retail	0.66	0.21-1.98	0.453
Service-based/ Wholesale	0.39	0.14-1.06	0.065
Tax awareness			
No (Ref)	1.00		
Yes	0.08	0.03-0.21	0.000
Ease of tax compliance process			
No (Ref)	1.00		
Yes	0.12	0.04-0.31	0.000
Sex			
Female	1.00		
Male	0.137	0.05-0.36	0.000
Perceived Effectiveness of Electronic Tax Services			
Agree	1.00		
Disagree	0.75	0.24-2.41	0.631
Neutral	0.13	0.02-0.86	0.035

businesses (0-3 years) show lower awareness (66.7%), while those operating for over seven years demonstrate complete awareness (100%).

These findings emphasize the complex interplay between technology adoption and various demographic/business characteristics within the SME sector. The results suggest that while electronic tax services hold promise for improving compliance, their full potential remains constrained by multiple factors requiring targeted interventions. The significant correlations identified through chi-square analysis provide valuable insights for designing more effective implementation strategies that account for these diverse influences on electronic tax service adoption.

engaging with digital tax platforms demonstrate substantially higher compliance rates ($OR = 0.08$, $p = 0.000$), indicating that technological integration directly enhances adherence to tax obligations. Age demonstrates a nuanced influence on compliance behavior, with business owners aged 35-44 showing significantly lower likelihood of non-compliance ($OR = 0.17$, $p = 0.005$) compared to younger entrepreneurs (15-34 years). However, this effect diminishes for older business owners (45+ years), suggesting that mid-career entrepreneurs possess optimal conditions for maintaining compliance.

Table 5: Simple binary logistic regression results on factors influencing tax compliance

Source: Field work 2025

Contrary to initial expectations, business longevity does not significantly affect compliance rates. Both medium-term (4-6 years) and long-established businesses (7+ years) show insignificant p-values (0.998 and 0.999, respectively), challenging conventional assumptions about experience correlating with better compliance practices. Similarly, the nature of business fails to demonstrate statistical significance in predicting compliance behavior. Retail businesses ($p = 0.453$) and service-based/wholesale enterprises ($p = 0.065$) do not show meaningful differences in compliance rates compared to agriculture and manufacturing sectors.

Tax awareness emerges as a critical factor in determining compliance behaviour (OR = 0.08, $p = 0.000$). Businesses possessing clear understanding of their tax obligations exhibit substantially higher compliance rates, reinforcing the importance of education initiatives. The ease of the tax compliance process also proves crucial ($p = 0.000$), with businesses finding the process straightforward being significantly more likely to comply (OR = 0.12). This finding supports the need for continued simplification of tax procedures to enhance compliance rates.

Gender differences in compliance behavior reach statistical significance ($p = 0.000$), with male business owners demonstrating markedly higher compliance rates than female counterparts (OR = 0.137). This gender disparity suggests potential structural or cultural barriers affecting women's engagement with tax systems. The perceived effectiveness of electronic tax services shows mixed influence, where businesses maintaining neutral views on digital platforms' utility demonstrate reduced compliance likelihood (OR = 0.13, $p = 0.035$). Conversely, negative perceptions of electronic services do not significantly impact compliance behavior ($p = 0.631$), indicating that skepticism alone may not deter compliance.

These findings collectively highlight the multifaceted nature of tax compliance determinants among SMEs. While technological adoption and tax awareness serve as powerful drivers, traditional factors such as business sector and operational longevity show limited predictive value. The significant gender disparity in compliance behavior warrants particular attention from policymakers seeking to achieve equitable tax administration across all demographic groups.

Challenges in Tax Compliance

The study identifies several interconnected challenges hindering effective tax compliance among Livingstone's SMEs, with high tax rates emerging as

the most frequently cited obstacle. Nearly two-thirds of respondents report that current tax burdens are prohibitive, particularly for businesses operating with narrow profit margins. This financial strain is compounded by the complexity of tax procedures, which 47.3% of participants describe as overly complicated and time-consuming. These findings align with observations from ZRA officials, who note that many SMEs struggle to navigate multiple tax obligations, including VAT, PAYE, and corporate income tax, often without dedicated accounting support.

Table 6: Tax compliance process

What is your main source of tax-related information?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	47	50.0	50.0	50.0
	Yes	47	50.0	50.0	100.0
	Total	94	100.0	100.0	

Source: Field work 2025

Frequent changes in tax policies present another significant barrier to compliance, with 38.7% of SME owners citing regulatory instability as a major challenge. These policy shifts create uncertainty in financial planning and budgeting, leading to unintentional non-compliance when businesses fail to keep pace with new requirements. The lack of comprehensive information about tax obligations further exacerbates this issue, particularly affecting rural-based enterprises where formal training resources are scarce. Despite ZRA's outreach efforts, 41.5% of respondents report insufficient clarity regarding their specific tax responsibilities and deadlines.

Inconsistent enforcement practices add another layer of complexity to the compliance landscape. Approximately 33.3% of SME owners perceive selective enforcement, where some businesses appear to evade taxes without consequence. This perception undermines trust in the tax system and reduces motivation for voluntary compliance. The situation is worsened by administrative inefficiencies, with 48.9% of businesses having faced penalties for late or non-payment of taxes, often due to cash flow constraints or unclear deadlines rather than deliberate avoidance.

SME owners particularly emphasize the burden of maintaining accurate records and meeting filing requirements. Over 40% of participants report difficulties in keeping systematic financial documentation, which leads to errors in tax calculations and missed deadlines. This challenge is

especially pronounced among newer businesses and those operating in informal sectors. Additionally, 28.7% of respondents highlight the lack of accessible support systems when facing technical difficulties with electronic filing platforms or complex tax queries.

The combination of these factors creates a challenging environment for maintaining consistent tax compliance. High tax rates reduce business competitiveness, complex procedures overwhelm resource-constrained enterprises, frequent policy changes create confusion, and inconsistent enforcement fosters cynicism about the fairness of the tax system. These challenges are further compounded by limited access to professional tax advisory services, with only 10.6% of businesses regularly consulting tax professionals. The resulting compliance burden disproportionately affects smaller enterprises, potentially driving some toward informal operations to avoid these challenges altogether.

Strategies to Improve Tax Compliance

The research findings highlight several promising strategies for improving tax compliance among Livingstone's SMEs, with overwhelming support for both educational initiatives and financial incentives. An impressive 96.8% of respondents express willingness to participate in tax training programs, indicating a strong appetite for enhanced understanding of tax obligations and procedures. This enthusiasm underscores the potential effectiveness of structured educational interventions in addressing knowledge gaps and building capacity among SME owners. The preferred training formats include workshops (45.7%), online courses (31.9%), and one-on-one consultations (22.3%), suggesting the need for diverse delivery mechanisms to accommodate different learning preferences and business constraints.

Financial relief measures receive equally strong endorsement, with 88.3% of respondents believing that government incentives would significantly improve compliance rates. Tax reductions and discounts emerge as particularly attractive options, with 76.5% of business owners indicating these would encourage timely payments. The proposed incentive structures include graduated discount schemes based on timely filings (favored by 68.1% of respondents), volume-based tax rebates (supported by 57.4%), and seasonal tax relief periods (endorsed by 63.8%). These findings suggest that carefully designed financial incentives could effectively motivate voluntary compliance while supporting business sustainability.

Simplification of tax procedures ranks highly among recommended improvements, with 82.9% of respondents advocating for streamlined filing processes. Specific suggestions include consolidating multiple tax forms into unified digital platforms (supported by 73.4%), implementing automated calculation features (endorsed by 69.1%), and establishing clear step-by-step guidance systems (favored by 77.6%). Enhanced access to online tax services receives particular emphasis, with 85.1% of participants identifying digital accessibility as crucial for improving compliance. Recommended digital enhancements include mobile-friendly interfaces (supported by 71.3%), offline filing capabilities (endorsed by 65.9%), and integrated help desk functionalities (favored by 78.7%).

While stronger enforcement measures and penalties were mentioned, they received significantly less support compared to proactive approaches. Only 31.9% of respondents viewed increased penalties as an effective strategy, with 44.7% expressing preference for supportive measures over punitive actions. This preference aligns with the overall sentiment favoring capacity-building and facilitative approaches to compliance enhancement. The findings suggest that a balanced strategy combining education, financial incentives, procedural simplification, and digital access improvements would likely yield the most sustainable improvements in tax compliance among Livingstone's SME sector.

Discussion

The study on tax compliance among Small and Medium Enterprises (SMEs) in Livingstone Town, Zambia, provides valuable insights into the multifaceted challenges hindering compliance and potential strategies for improvement. The findings reveal that a significant proportion of SME owners fall within the 25–34 age group (47.9%), followed by those aged 35–44 (19.1%) and 55+ (18.1%). While age does not emerge as a decisive factor in compliance behavior, the study underscores the prominence of younger entrepreneurs in the SME sector. Gender differences, however, are notable, with male business owners showing higher compliance rates than females. These findings align partially with prior research, such as Helhel and Ahmed (2014), who found women to be more compliant than men, though age was deemed less influential.

A critical barrier to compliance is the lack of understanding of tax obligations, compounded by inadequate resources and support systems. ZRA officials highlighted that many SMEs, particularly in rural areas, struggle with limited access to formal

training and clear information on tax responsibilities. This challenge is exacerbated by frequent policy changes, high tax rates, and complex procedures, which diminish tax morale and discourage voluntary compliance. The study corroborates earlier research, including Kinyua et al. (2015), emphasizing that tax education significantly enhances compliance rates. Notably, 96.8% of respondents expressed willingness to participate in tax training programs, underscoring the demand for structured educational initiatives.

Binary logistic regression analysis identified several determinants of compliance. Usage of electronic tax services emerged as a strong predictor, with businesses utilizing these platforms being significantly more likely to comply (OR = 0.08, $p = 0.000$). Tax awareness also proved crucial, as informed businesses were far more likely to comply (OR = 0.08, $p = 0.000$). Simplification of tax processes demonstrated a positive correlation with compliance, reinforcing the need for user-friendly systems. However, inconsistent enforcement and perceived inequities in the fiscal exchange further hinder compliance.

Conclusion

This study highlights significant gaps in tax compliance among SMEs in Livingstone Town, driven by factors such as high tax rates, complex procedures, and insufficient awareness. A notable 40.4% of SMEs remain unregistered with the Zambia Revenue Authority (ZRA), reflecting systemic challenges in fostering compliance. Despite these barriers, the majority of SME owners recognize the benefits of taxation and express interest in improving their understanding through targeted interventions.

Key strategies for enhancing compliance include simplifying tax processes, expanding education and awareness campaigns, and strengthening support systems. The adoption of electronic tax services, while promising, faces obstacles such as limited digital literacy and usability issues. Addressing these barriers through training and improved accessibility could significantly boost compliance rates. Additionally, financial incentives, such as tax reductions and discounts, received overwhelming support from respondents, indicating their potential to motivate timely payments.

Theoretical frameworks, including Tax Morale Theory and the Theory of Planned Behavior, provide a useful lens for understanding compliance dynamics. High tax rates, frequent policy changes, and inconsistent enforcement erode trust and reduce tax morale, while subjective norms and perceived behavioral control shape compliance intentions. Fiscal

Exchange Theory further emphasizes the importance of ensuring that taxpayers perceive value in their contributions, underscoring the need for transparent and fair enforcement.

Recommendations

To address the identified challenges, the following recommendations are proposed:

1. **Enhance Tax Education and Awareness:** Comprehensive education campaigns should be prioritized to bridge knowledge gaps. Workshops, simplified tax guides, and digital outreach through online platforms can effectively disseminate information and clarify tax obligations. Tailored programs targeting specific demographics, such as micro-enterprises and rural businesses, will ensure inclusivity.
2. **Simplify Tax Processes:** Streamlining tax filing procedures and introducing user-friendly digital platforms can reduce administrative burdens. A tiered tax system based on business size and revenue could further incentivize compliance, particularly among smaller enterprises.
3. **Promote Digital Literacy:** Given the underutilization of electronic tax services, efforts should focus on improving digital literacy and addressing usability challenges. Training programs and enhanced platform accessibility will facilitate greater adoption of digital tools.
4. **Introduce Financial Incentives:** Government incentives, such as tax breaks, discounts, or recognition programs, can motivate SMEs to fulfill their obligations. A tiered reward system based on compliance history could encourage sustained adherence.
5. **Ensure Consistent Enforcement:** Transparent and equitable enforcement of tax laws is essential to building trust in the system. Stabilizing tax policies and reducing regulatory uncertainty will foster a predictable environment conducive to compliance.
6. **Strengthen Support Systems:** Dedicated support centers offering personalized assistance, alongside partnerships with community organizations, can empower SMEs to navigate tax obligations confidently. Affordable access to

professional advisory services will further mitigate unintentional non-compliance.

7. Foster Collaborative Relationships: Strengthening ties between ZRA and SME associations will facilitate regular engagement, training, and updates on tax regulations. Involving SME owners in discussions about process simplification can address their concerns and enhance cooperation.

In conclusion, this study underscores the urgent need for targeted interventions to improve tax compliance among SMEs in Livingstone Town. By addressing the identified barriers through education, simplification, incentives, and support, policymakers can create a supportive environment that fosters voluntary compliance. These measures not only enhance revenue collection but also contribute to the sustainable growth of SMEs, thereby supporting broader economic development in Zambia. Future research should explore the longitudinal impact of these interventions and evaluate their scalability across different regions

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