International Academic Journal of Economic and Financial Research

ROLE OF ELECTRONIC TAX INVOICE MANAGEMENT SYSTEMS IN ENHANCING TAX COMPLIANCE AMONG SMALL AND MEDIUM ENTERPRISES IN NAIROBI CITY COUNT, KENYA

Abdi Abdullahi and **Dr. Salome Musau, PhD**

International Academic Journal of Economic and Financial Research
ISSN: 0522-4543
Vol.3, Issue.No.2, 2026

Role of Electronic Tax Invoice Management Systems in Enhancing Tax Compliance Among Small and Medium Enterprises in Nairobi City Count, Kenya

Abdi Abdullahi

Student, School Business, Economics and Tourism, Kenyatta University

Dr. Salome Musau, PhD

Senior Lecturer, Department of Accounting and Finance, Kenyatta University

Article History:

Published on: 06/11/2026

DOI: **https://doi.org/10.68715/x8k9jz09**

How to Cite: Abdullahi, A., & Musau, S. (2026). Role of Electronic Tax Invoice Management Systems in Enhancing Tax Compliance Among Small and Medium Enterprises in Nairobi City Count, Kenya. *International Academic Journal of Economic and Financial Research*, *3*(2). **https://doi.org/10.68715/x8k9jz09**

Abstract:

Purpose of Study: This study examined the role of electronic tax invoice management systems in enhancing tax compliance among small and medium enterprises in Nairobi City County, Kenya. Specifically, it assessed the effects of electronic tax registers, enterprise resource planning integration, point-of-sale integration, and electronic tax return filing on tax compliance among SMEs.

Methodology: The study adopted a mixed-method cross-sectional survey design, guided by Transformational Leadership Theory and pragmatism. The target population comprised 715 managers from 55 state corporations, with 257 respondents sampled through purposive, stratified, and random sampling techniques. Data from 215 valid questionnaires were analyzed using descriptive and inferential statistical methods.

Findings: The findings established that idealized influence positively and significantly influenced organizational performance across four dimensions. Financial performance recorded a positive relationship ($\beta = 0.171$, $t = 3.649$, $p < 0.05$), while customer satisfaction demonstrated the strongest relationship ($\beta = 0.301$, $t = 8.234$, $p < 0.05$). Business processes ($\beta = 0.298$, $t = 8.182$) and learning and growth ($\beta = 0.287$, $t = 4.490$) also exhibited statistically significant relationships. Furthermore, leadership practices emphasizing ethical values, organizational purpose, and collective vision contributed to improved employee commitment and organizational effectiveness. These findings highlight the importance of exemplary leadership in enhancing institutional performance outcomes.

Conclusion: The study concluded that electronic tax invoice management systems significantly enhance tax compliance among SMEs. It recommends that the Kenya Revenue Authority strengthen system implementation, promote digital integration, improve technical support, and expand taxpayer education. These measures can enhance reporting accuracy, minimize compliance challenges, and promote sustainable tax administration practices.

Keywords: *Tax compliance, Electronic tax invoice management system, Electronic tax register, Enterprise resource planning integration, Point of sale integration and Electronic tax return filing.*

JEL classification: *H26, H25, M15, O33, H83*

©2026 By The Authors. This Article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license **(https://creativecommons.org/licenses/by-nc-sa/4.0/)**

1. INTRODUCTION

Small and micro enterprises (SMEs) contribute to a Country's economy development through creating jobs, offering employment chances to the community at large, fosters innovation and competition across many sectors of the economy and diversifies the economy minimizing dependence on few corporations and promotes flexibility against economic fluctuations (Sari & Kusumawati, 2022). Farajollahzadeh, Noorinasab and Yazdanpanah (2024) observe that SMEs contribute significantly to economic outcome irrespective of their scale of operations because they adjust very fast to changes in market and demands from customers, they are risk takers on implementing unique ideas resulting to innovative products and services that can affect the already established markets.

Mapuasari, Wibowo and Cakranegara (2023) argue that SMEs are able to have a consistent maintenance of accurate records that are significant in achieving their tax requirements by using electronic tax invoice management system that streamlines the electronic generation, sending, and storing of their invoices minimizing the probability of errors occurring thus improving the submissions of accurate tax information. According to Murnidayanti and Putranti (2023), the automated tax compliance systems ensure accurate capturing of data, minimizing errors and enable MSMSs to receive alerts through inbuilt compliance checks allowing these businesses to tackle issues immediately instead of facing penalties later.

Globally, several studies on Electronic Tax Management Systems and tax compliance have been undertaken. In USA, Sadress, Bananuka, Orobia and Opiso (2021) observe that the small enterprises industry contributes a country's economy through creating jobs and economic growth. However, these enterprises encounter unique challenges related to tax compliance. For instance, SMEs may opt to look for current ways of survival when faced with economic downturns other than complying with tax obligations (McKerchar, Ingraham & Karlinsky, 2023). McKerchar, Ingraham and Karlinsky (2023) indicate that USA has made it simple for its SMEs to file their tax information that makes it simpler to accomplish their financial duties through offering a number of incentives geared to nurturing their SMEs' growth and assist them in adherence to regulatory requirements making them survive in a competitive environment.

In Asia, Lestary, Sueb and Yudianto (2021) observe that SMEs form backbone of Indonesia's economy, comprising an overwhelming 99% of the nation's total businesses, employing many people, but these businesses have encountered challenges in navigating the tax landscape that are brought by lack of proper knowledge on tax obligations, lack of enough resources and bureaucratic delays. As stated by Michael and Widjaja (2024), the significance of enforcing more stringent tax penalties, utilizing tax education technology and enhancing tax administration transaparency to reduce corruption and promote SMEs tax compliance has augmented tax compliance within Indonesian SMEs.

The region Africa has also not been left behind as studies have been undertaken in various countries. As an example, South African government has adopted proactive measures foster progress of small enterprises through introducing several initiatives to improve business environment. Some of the measures introduced include reformation of some labor regulations and tax relief provision (Naicker & Rajaram, 2019). According to Abrie and Doussy (2023), South Africa has developed various projects that focus on facilitating taxation procedures

among SMEs. These programs will help curb tax compliance complexity thus making more businesses comply with tax laws. Due to these, compliance rates among SMEs have gone up significantly and this has eased SMEs' burden in paying their taxes.

Aladejebi (2020) noted that many SMEs operating in Nigeria are neither registered nor recognized by the Corporate Affairs Commission, and many lack adequate knowledge regarding tax laws, which significantly contributes to tax payment avoidance and harassment by local and state governments in Nigeria. In a similar vein, Ellawule, Bashir, Dalhat, and Suleiman (2024) demonstrate that tax exemptions and low-interest financing substantially influence Nigeria's MSMEs tax compliance; however, various government incentives are not effectively communicated to these businesses, preventing them from capitalizing on such opportunities. Therefore, better dissemination of available tax incentives to its SMEs through diverse communication channels is urgent.

In Kenya, Odongo (2025) observe that Kenyan government introduced tax compliance for SMEs to foster a strong economic environment by simplifying the tax process to make comprehend and accomplish their tax obligations. This led to businesses utilizing the I-Tax system for collection and compliance with tax obligations resulting to improved tax adherence trends by the SMEs within the Country. Odongo (2025) emphasizes that tax compliance initiatives for Kenya's MSMEs are crucial for strengthening the economy. These initiatives simplify the tax process, helping SMEs understand their obligations. Therefore, by providing clear guidelines and support, the government can incentivize businesses registration and tax laws obligations, leading to increased revenue for public services and infrastructure development.

1.1 Statement of the Problem

SMEs are vital in establishing a nation's economy because they generate novel thoughts, generate jobs and add value to the national Gross Domestic Product (GDP). According to law, businesses are required to be registered to appropriate tax authorities, file proper tax returns and pay relevant taxes in a proper and punctual manner as required by the statutes. Nonetheless, SMEs have had to struggle with complexity in navigating the tax environment (Nduruchi, Gregory & Namusonge, 2023). Tax compliance is a challenge to the Nairobi City County SMEs though they contribute close to 80% of Kenya's national economy. Kenya Revenue Authority (KRA, 2024) also mentions that less than 30% of registered County SMEs are taxpayers. More than 60% do not file returns, leading to fines and non-eligibility to government assistance and 40% do not have enough knowledge on how to pay their taxes. These problems are worsened by the fact that it is difficult to navigate Kenya's tax environment. Individual factors that contribute to compliance have been investigated in prior studies, but conceptual and contextual gaps exist.

Wambingo (2019) examined SMEs' online tax filing in Nairobi CBD and noted that computer literacy, a secure online tax system, perceptions of security and overall system security significantly influence tax compliance. Nevertheless, it was only analyzed from 2014-2018, which may become contextually misleading. Mutunga and Makhamara (2020) tested e-invoicing connection with SMEs' performance in Nairobi City County, and it was significant. Nevertheless, the question was focused mostly on performance, which created a conceptual

gap. According to Odongo (2025), aspects affecting Kenya's SMEs tax compliance were analyzed, with high compliance cost, less tax education, negative filing and technological progress being the main factors. Yet, a conceptual gap existed based on the focus of present review.

Thus, the current study sought to answer the following specific objectives:

I. To determine effects of electronic tax register on tax compliance of SMEs in Nairobi City County, Kenya.
II. To establish effects of enterprise resource planning integration on tax compliance of SMEs in Nairobi City County, Kenya
III. To examine effects of point-of-sale integration on tax compliance of SMEs in Nairobi City County, Kenya
IV. To examine effects of electronic tax return filing on tax compliance of SMEs in Nairobi City County, Kenya

2. LITERATURE REVIEW

2.1 Theoretical Review

This study adopted the economic deterrence theory by Schelling (1966) who explored the way economic aspects could be used to prevent violent moves by the government or businesses by stressing the importance of economic incentives and disincentives in international relations. Schelling (1966) indicated that the deterrence is about having a clear cost of action and credibility and more so the punishment and emphasized the relevance of communication persuading other about the repercussion they could face could be more powerful than the deterrent action itself.

Peksen (2021) shows the intersection of economic deterrence and civil conflicts by highlighting that economic sanctions could occasionally fail, promoting anger and catalyze more hostile behavour instead of overpowering it and proposes that sanctions ought to be properly used taking into consideration their possibility in instigating unexpected repercussions. The theory is centered on globalization and economic interdependence by suggesting that the evolution of economic deterrence is from a world where trade relationships weaves difficult network of interdependence making risks more for any other state considerations on violent behaviors.

The theory is instrumental to this review as it illustrates the likelihood that a taxpayer, whether an individual or enterprise, will adhere to prevailing tax statutes is based on risk perception and repercussions of non-compliance. ETR, ERP, POS and ETR filing increase traceability and transparency, serving as a deterrent against non-compliance. Economic Deterrence Theory highlights how perceived risk and penalties affect behavior. SMEs may comply to avoid automated detection and fines associated with these systems.

The theory of planned behavior by Ajzen (1985) aimed at predicting and understanding the human behavior in several areas through consideration of individual intentions (social behavior perception to act or not), attitudes (an individual positive or negative assessment of doing the behavior), subjective norms (social pressure perception to do or not to) and perceived behavioral control (level at which people have a feeling of performing such behavior). Fishbein (1991) stressed the critical role of getting to know the fundamental beliefs that creates attitude and norm by suggesting that solving these beliefs a behavioral change can be influenced.

Loo and Ang (2020) ascertained these components' roles within Malaysian tax framework, suggesting that policymakers can enhance compliance by focusing on taxpayers' perceptions of taxes, promoting favorable social norms, and streamlining the compliance process. Cummings (2022) contends that psychological aspects should be supplemented with socio-economic studies to achieve a comprehensive understanding of tax compliance. Therefore, the theory offers systematic approach in comprehending the mentality behind tax compliance. For policymakers, incorporating these insights can result in more effective strategies that motivate individuals to honor their tax responsibilities.

This theory is applicable here, since an individual or business intention in engaging in a behavior like paying taxes rests on attitude, norms and perceived control. Therefore, SMEs owners' attitude on taxation can profoundly shape their tax compliance motivation. Positive attitude brought about by perceived advantages of tax compliance could result to more compliance rates.

Rogers (1962) advanced this theory by providing a picture that innovation disseminations can be studied through five critical aspects namely; innovation (uniqueness of an idea), channels of communication (means of conveying message from on point to another), social system (the number of people who have adopted innovation), time (time taken for adoption and spread) and adopter category (innovators, early adopters, early majority, late majority, and laggards based on their rate of adoption). In addition, Rogers (1962) focuses on the way new ideas and technologies gets to the culture and societies by giving a structure for knowing the innovation adoption processes.

Kaminski (2011) concept on the theory bases on thinking how unique scientific ideas replace the earlier ones by arguing that changes only happen when many individuals within a certain community begin rejecting the older system and start embracing the newly introduced ones. This means that the social context and willingness of a community in accepting change is important within the diffusion process. However, Dearing (2020) criticizes the theory of planned behavior by arguing that it demands more flexibility and multifaceted knowledge of diffusion of innovation. He suggests that instead of having a linear process, innovation, adaptation and spread could be more troublesome and led by several factors like socio-economic situations and the way organizations are structured.

The theory is pertinent to this examination as it elucidates how special ideas and technologies can be disseminated in a community and how they affect behavior and practices. Thus, tax practices and technologies' innovation level is vital in SMEs' willingness to observe their tax duties. ETR, ERP, POS and ETR filing integration is an intricate innovation that needs to be adopted in a multi-functional way. The theory encapsulates how organizations evolve with time to shift off manual systems in favor of digital systems as guided by social systems and perceived advantages. The model constructs fit the systems' adoption curve.

2.2 Empirical Review

Naibei and Siringi (2023) evaluated ETRs impacts on Kenyan private business firms in terms of VAT compliance. A representative diversity was ensured through stratification whereby 233 sample was examined. Questionnaires amassed data; it was analyzed via correlation and

descriptive statistics. Outcomes uncover effective and consistent ETR use is quite effective in influencing VAT compliance. The research however looked at Kenyan private business firms' tax compliance.

Mwangi (2022) examined electronic tax registers impacts on VAT collection by Nairobi's manufacturing companies. Based on a dual source approach, the review was conducted on primary responses and secondary records of 59 registered firms in Large Taxpayers Office. Techniques used were descriptive, allowing data retrieval in LTO analytics unit, which were analyzed using SPSS and results delineated by tables. Correlation indicated how variables correlate and affect one another by linear regression. Results uncovered such aspects as monthly returns frequency, user training, and compliance costs greatly influence VAT collection. However, the review was limited to Nairobi's manufacturing businesses.

Njeri (2021) applied descriptive research to assess Enterprise Resource Planning (ERP) impacts on Nairobi County identified SMEs' performance. It focused on companies listed in KPMG-Nation Media Group list of top 100 Kenyan SMEs, which provided a stratified random sample of 80 companies. Structured questionnaires that included Likert scale questions addressing these SMEs managers amassed data. Descriptive evaluations were done, such as means and percentages and inferential statistics was done to test variables relations. Results revealed ERP optimistic effect on SMEs' internal processes indicating a conceptual gap as it was utilized in studying performance.

Ngigi and Kiako (2023) examined integrated tax management system effects on tax compliance of Kenya's Nairobi City SMEs. Descriptive research was employed (to evaluate tax compliance level) with 173 SMEs sampled (stratified). Integrated tax management system revealed tax compliance' significant positive relationship with cost involved on penalties, consultancy and filing using multiple linear regression analysis. Review established that this system significantly affects determination of compliance behavior in Nairobi CBD. Nevertheless, its temporal nature (2018-2022) points to a point that can be filled by research in future.

Asad and Cohen (2025) assessed e-POS adoption in Pakistan and linked 234 businesses to the tax authority between December 2021 and June 2024. Based on staggered difference-in-differences event-study, using monthly VAT data, they observed an immediate increase in reported sales and tax payment, predominantly of the extensive margin, but these profits diminished in several months. The intensive margin recorded smaller yet sustained improvements in sales and value added and tax liabilities were not affected as there was a preferential rate. Integrated companies have posted a reduction in input purchases by 20% indicating that they are moving to informal sourcing as they have incentives to adopt the device. These devices' underreporting and complete non-utilization were also found to be a significant case which means missed revenue potential. Nonetheless, the examination relied on secondary data usage to study Pakistani e-POS Adoption that presented a gap in methodology.

Sinaga-Bulgamin (2022) made an effort to investigate how point-of-sale (POS) systems facilitate international business operations. It reviewed existing market solutions and especially how they have been integrated with ERP and Customer Relationship Management (CRM) systems. POS conceptualization was that of digital platforms that maximize activities of transactions of goods and services. Using qualitative research strategy, the review used both primary accounts and secondary data to determine system architecture and establish technical

specifications. Results showed that POS systems are critical in operational integration in global markets. Nevertheless, it is the reviews' methodological limitation relying on secondary data that needs to be investigated further empirically.

Wambongo (2019) ascertained online tax filing effects on tax compliance of Nairobi's CBD SMEs via descriptive research framework. 20,500 SMEs taxpayers formed target populace from which 100 were sampled. Questionnaires amassed primary data. Descriptive techniques analyzed data, and Pearson correlation and regression models measured variables' relationship. The review indicated that digital proficiency and reliability of online tax platforms in their operations was a major cause of tax compliance as well as perceived vulnerability to security risks and existence of countermeasures. But it was only confined to SME tax compliance trends in 2014-2018. Moreover, the conceptual gap was observed as well and it was a result of centering online taxes filing instead of the bigger picture of integrated tax systems.

In their article, Gwaro, Maina & Kwasira (2022) investigated online tax filing impacts on tax compliance of Nakuru town SMEs. Based on survey descriptive research, they amassed quantitative data of 100 SMEs via questionnaires. Findings revealed that only computer literacy significantly impacted tax compliance. 0.954-correlation coefficient indicated that independent variables strongly positively affected tax compliance, and therefore R-Square value was 0.911. However, examination narrowed down to Kenya's Nakuru SMEs, thus creating a gap in context.

3. RESEARCH METHODOLOGY

Descriptive research design was utilized by the examination. As per Siedlecki (2020), the design allows an accurate depiction pertaining to attributes inherent in selected variables for analysis. Nairobi Central Business District was the study's primary focus because it is home to Kenya's largest concentration of SMEs (Economic Survey, 2023). All 33,701 active SMEs in the CBD that were registered with Nairobi County constituted the target population (Nairobi County government, 2024). The managers of SMEs in the CBD served as the study's unit of observation. The method of stratified sampling was utilized to guarantee adequate representation across all population categories. Simple random sampling then selected respondents from each stratum. Sample size was determined using Taro Yamane's (1960) formula which was 394 respondents' Primary data was collected using a semi structure questionnaire. Quantitative data was analyzed with descriptive techniques (means, percentages and standard deviations) and inferential techniques (correlation and multiple regression analysis) to explore variable relationships. The analytical process was executed using SPSS version 20.0, a statistical software suite equipped to produce and visualize outputs through graphical illustrations, tabular summaries and structured figures.

Presented below is specification of multiple regression framework employed:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where

Y = Tax compliance

X_1= Electronic tax register

X_2= Enterprise resource planning integration

X_3= Point of sale integration

X_4= Electronic tax return filing

β_1, β_2, β_3 and β_4 = Coefficients

ε = Error term

4. RESEARCH FINDINGS

4.1 Descriptive Analysis of Study Variables.

Table 1

Descriptive Statistics

Descriptive Statistics	Mean	Std Dev
Electronic Tax Register	**3.967**	**0.545**
Enterprise Resource Planning	**3.946**	**0.563**
Point-of-Sale integration	**4.028**	**0.546**
Electronic Tax Return Filing	**4.003**	**0.557**
Tax Compliance	**3.337**	**0.663**

Note. Source: Field Data (2026)

As per outcomes above (Table 1), respondents were generally in agreement that electronic tax register system is substantial in boosting tax compliance as well as keeping track of the adherence to tax laws helps SMEs to sidestep financial sanctions and legal penalties Nevertheless, in spite of the general positive attitude, the results also indicate some practical difficulties in complete optimization of electronic tax registers among SMEs as shown by the standard deviation.

Descriptive statistics for Enterprise Resource Planning (ERP) integration focused on respondents' perceptions regarding how ERP systems support the management of tax-related information, streamline tax processes, and enhance real-time reporting. The findings reveal respondents were mostly in agreement that Enterprise Resource Planning (ERP) integration has a significant impact on tax compliance. ERP enables SMEs to concentrate on the main business processes instead of complicated taxation practices had a comparatively lower mean (M = 3.946, SD = 0.563). This implies that despite the usefulness of ERP systems, there are

still SMEs who face operational difficulties in completely redirecting their focus off the taxation's complexities.

Integration of Point-of-Sale (POS) was found to have a positive impact on tax compliance. Posting a mean score of 4.028 and a SD of 0.546 on the statement that keeping proper financial records assists businesses to monitor income and expenses to report taxes. This means most SMEs are highly aware of the role of POS systems in proper financial tracking to facilitate payment of taxes. Moreover, keeping proper records to reduce mistakes in tax filing and penalties registered a positive response.

The outcome displayed that filing of electronic tax returns significantly impact tax compliance among SMEs. The statement that reducing errors improves accuracy of tax filings and decreases penalties averaged greatest (M = 4.003, SD = 0.557). As such, we see most SMEs concur greatly that electronic filing systems enhance accuracy and minimize penalties associated with compliance. Moreover, reducing tax errors to enhance the credibility and reputation of SMEs. This in turn indicates that electronic filing systems are seen as critical in improving compliance and business reputation. The small standard deviations also show uniformity in the responses among SMEs.

Outcomes show that compliance in terms of filing has been enhanced but is yet to be optimum in all SMEs. Moreover, SMEs that paid their taxes on time averaged at 3.337 (SD = 0.663) this, in turn, means that the issue of timely tax payment continues to be a problem of a large percentage of SMEs. The standard deviations are also relatively high, which also indicates that there is variation in compliance behavior across firms. Further, it also suggests that compliance levels are still far from peak levels to significantly impact audit interventions. This therefore points to the continued lapses in compliance in the SME sector. The difference in responses also shows that there are different experiences among SMEs in terms of audit exposure.

4.2 Regression Analysis Output

Table 2

Model Comparison Summary

Model	R^2	Adjusted R^2	F-Statistic	ΔR^2
Model 1 (Direct Effects)	0.642	0.634	89.216	—

Note. Source: Field Data (2026)

Outcomes obtained in Table 2 captures the direct effects of electronic tax systems, records an R^2 value of 0.642 and an adjusted R^2 of 0.634. This indicates that the independent variables in the model explain 64.2% of the variation in tax compliance. In addition, the model is statistically significant with an F-statistic of 89.216 ($p < 0.001$), confirming its overall

explanatory power. Consequently, the direct effects model demonstrates a strong but incomplete explanation of tax compliance behavior.

Table 3

Regression Coefficients

Variable	Beta (β)	Std. Error	t-value	Sig. (p-value)
(Constant)	0.418	0.121	3.455	0.001
Electronic Tax Register	0.286	0.072	3.972	0.000
ERP Integration	0.241	0.069	3.493	0.001
POS Integration	0.318	0.075	4.240	0.000
Electronic Tax Return Filing	0.297	0.071	4.183	0.000

Note. Source: Field Data (2026)

The Electronic Tax Register positively and significantly affected tax compliance (β= 0.286, p = 0.000), which leads to rejection. This means that better utilization of electronic tax registers increases compliance behavior among SMEs. As a result, SMEs that embrace real-time tax recording systems have higher chances of meeting tax requirements. This observation aligns with the study by Muhammed and Tesafa (2021), who determined electronic tax registers' adoption greatly enhance VAT compliance. Moreover, Naibei and Siringi (2023) affirmed successful ETR systems' application positively impact tax compliance among Kenyan companies.

Integration of Enterprise Resource Planning (ERP) positively and significantly influences tax compliance (β=0.241, p = 0.001. Thus, SMEs that incorporate ERP systems in their operations can easily manage information related to taxes and meet tax requirements. ERP systems, therefore, improve accuracy, efficiency, and timeliness in tax reporting. This observation is consistent with Njeri (2021), who discovered that ERP systems can greatly enhance internal business processes among SMEs. Furthermore, Ngigi and Kiako (2023) determined that integrated tax management systems have a considerable impact on compliance behavior among Nairobi CBD SMEs. Moreover, Mathenge and Abdul (2021) affirmed technological tax reforms positively impact tax compliance. Thus, ERP integration continues to be a major contributor to tax compliance better performance.

Point of Sale (POS) integration on tax compliance additionally had a positive and significant effect (β=0.318, p = 0.000). This implies that SMEs that record transactions using POS systems have higher chances of adhering to tax requirements. As a result, POS systems increase transparency, minimize errors, and decrease the risk of tax evasion. Asad and Cohen (2025)

also support this finding by noting that e-POS adoption augments reported sales and tax payments. On the same note, Sinaga-Bulgamin (2022) observed that POS systems are important in operational integration and accuracy of transactions. Moreover, Koech and Muna (2025) discovered that electronic tax systems enhance revenue collection even when there are operational challenges. Thus, the integration of POS is a key factor inSMEs tax compliance.

Lastly, Electronic Tax Return Filing significantly and positively influenced tax compliance (β=0.297, p = 0.000), Hence, SMEs with electronic filing systems have higher chances of adhering to tax requirements. Electronic filing therefore makes tax processes easier, minimizes errors and improves timely filing of returns. This observation aligns with that of Wambongo (2019), who determined that online tax filing is a significant way of enhancing compliance among SMEs. Likewise, Gwaro, Maina, and Kwasira (2022) discovered that digital literacy improves tax compliance by using electronic filing systems. Moreover, Wachira (2020) established that electronic tax platforms strongly positively correlated with compliance behavior.

5. DISCUSSION OF FINDINGS

5.1 Electronic Tax Registers and Tax Compliance

The study established that electronic tax registers had a positive and statistically significant influence on tax compliance among small and medium enterprises (SMEs) in Nairobi City County, Kenya (β = 0.286, p < 0.001). This finding suggests that electronic tax registers contribute to improved compliance by facilitating accurate transaction recording, enhancing financial transparency, and minimizing errors associated with manual tax reporting. The findings further indicate that SMEs utilizing electronic tax registers are better positioned to maintain reliable financial records and fulfill their statutory tax obligations.

These findings are consistent with Naibei and Siringi (2023), who established that effective utilization of electronic tax registers positively influenced value-added tax compliance among Kenyan private businesses. Similarly, Muhammed and Tesafa (2021) reported that electronic tax register adoption enhanced VAT compliance. The consistency between these studies suggests that electronic transaction recording plays an important role in strengthening tax administration and promoting compliance across different business environments.

From the perspective of Economic Deterrence Theory, electronic tax registers enhance transaction traceability and increase the likelihood of detecting discrepancies in tax declarations. This may encourage SMEs to comply with tax regulations to avoid penalties and other consequences associated with non-compliance. Nevertheless, the descriptive findings suggest that some SMEs continue to experience operational challenges in utilizing these systems effectively. Therefore, technical support, taxpayer education, and improved system

accessibility remain important in maximizing the contribution of electronic tax registers to tax compliance.

5.2 Enterprise Resource Planning Integration and Tax Compliance

The findings revealed that enterprise resource planning (ERP) integration had a positive and statistically significant influence on tax compliance among SMEs in Nairobi City County ($\beta = 0.241$, $p = 0.001$). Although ERP integration recorded the lowest regression coefficient among the four independent variables, its contribution remained statistically significant. This finding suggests that integrating tax management functions with broader business operations can improve financial record management, reporting accuracy, and the efficiency of tax-related processes.

The findings agree with Njeri (2021), who established that ERP systems positively influenced internal business processes among SMEs. They also correspond with Ngigi and Kiako (2023), who reported that integrated tax management systems significantly influenced compliance behavior among SMEs in Nairobi Central Business District. These findings collectively highlight the importance of integrating financial management technologies into routine business operations to strengthen administrative efficiency and tax compliance.

The results can also be interpreted through Diffusion of Innovation Theory, which emphasizes the adoption of technologies based on their perceived advantages and compatibility with existing organizational practices. ERP integration provides an opportunity for SMEs to coordinate financial transactions, maintain consistent records, and improve the availability of information required for tax reporting. However, the comparatively lower regression coefficient suggests that ERP integration may contribute less strongly to tax compliance than the other electronic tax management components examined. This highlights the importance of addressing potential implementation barriers, including technical complexity, financial constraints, and limited technological expertise, to enhance the effectiveness of ERP systems among SMEs.

5.3 Point-of-Sale Integration and Tax Compliance

The study established that point-of-sale (POS) integration had a positive and statistically significant influence on tax compliance among SMEs in Nairobi City County ($\beta = 0.318$, $p < 0.001$). POS integration recorded the highest regression coefficient among the four independent variables, suggesting that it had the strongest positive association with tax compliance within the estimated model. This finding highlights the importance of integrating sales transactions with electronic tax management systems to improve transaction documentation, financial reporting accuracy, and transparency.

The findings are consistent with Asad and Cohen (2025), who established that electronic point-of-sale adoption in Pakistan increased reported sales and tax payments, although some

improvements diminished over time. Similarly, Sinaga-Bulgamin (2022) emphasized the importance of POS systems in improving transaction accuracy and operational integration. The findings also correspond with Koech and Muna (2025), who reported that electronic tax systems enhanced revenue collection despite operational challenges. These studies support the argument that digital transaction management systems can strengthen tax compliance by improving the accuracy and availability of financial information.

The findings are further supported by Economic Deterrence Theory, as POS integration enhances transaction visibility and may reduce opportunities for underreporting taxable sales. By maintaining electronic records of business transactions, integrated POS systems can facilitate the verification of reported revenues and strengthen accountability. The findings also reflect the principles of Diffusion of Innovation Theory, whereby SMEs may adopt digital payment and transaction management technologies because of their perceived operational benefits. Consequently, strengthening POS integration and providing adequate technical support could contribute to improved tax compliance among SMEs.

5.4 Electronic Tax Return Filing and Tax Compliance

The findings indicated that electronic tax return filing had a positive and statistically significant influence on tax compliance among SMEs in Nairobi City County ($\beta = 0.297$, $p < 0.001$). Electronic tax return filing recorded the second-highest regression coefficient, indicating its substantial contribution to tax compliance within the estimated model. The findings suggest that electronic filing systems facilitate the submission of tax returns, improve reporting accuracy, and reduce administrative challenges associated with manual filing procedures.

These findings are consistent with Wambongo (2019), who established that online tax filing significantly influenced tax compliance among SMEs in Nairobi Central Business District. Similarly, Gwaro, Maina, and Kwasira (2022) identified computer literacy as an important determinant of tax compliance among SMEs utilizing electronic filing systems. Wachira (2020) also reported a strong positive relationship between electronic tax platforms and compliance behavior. These findings suggest that electronic tax filing systems can contribute to improved compliance when taxpayers possess the necessary digital skills and access to reliable technological infrastructure.

The findings can be explained through the Theory of Planned Behavior, which emphasizes the influence of attitudes, subjective norms, and perceived behavioral control on individual behavior. Electronic tax return filing may strengthen taxpayers' perceived ability to comply with tax regulations by simplifying reporting procedures and reducing the time and effort required to submit returns. However, the descriptive findings indicate that timely tax payment remains a challenge among some SMEs despite improvements in electronic filing. This suggests that technological accessibility alone may not guarantee full tax compliance, particularly where businesses experience financial or operational constraints. Therefore,

taxpayer education, system reliability, and simplified electronic filing procedures remain essential in promoting consistent compliance.

6. CONCLUSIONS

The study concludes that electronic tax systems have a significant effect on the tax compliance of SMEs in Nairobi City County based on the regression findings. This means that SMEs that implement real-time tax recording and monitoring systems are more prone to meet tax requirements because of enhanced accuracy and transparency. Moreover, the results affirm that electronic tax registers minimize compliance risks by increasing access to tax-related information in a timely manner. Therefore, Electronic Tax Register systems play a crucial role in enhancing tax compliance behavior among SMEs.

Secondly, the research found that Enterprise Resource Planning (ERP) integration substantially affected tax compliance, as such, SMEs that use ERP systems enjoy better coordination of financial and tax related information that improves accuracy in reporting and timely compliance. Moreover, ERP systems make tax management easier, thus minimizing the complexity of operations in relation to tax filing. ERP integration is therefore very important in enhancing efficiency and accountability in tax compliance. Thus, among technological facilitators of better tax administration practices is the ERP systems.

Thirdly, the research found that the positive influence of the integration of Point of Sale (POS) on tax compliance. This implies that POS systems have a great impact on recording transactions, minimizing errors, and increasing financial reporting transparency. Moreover, POS integration reduces the chances of tax evasion by making sure that sales information is properly recorded and reported. As a result, SMEs that implement POS systems have a greater degree of compliance because of better financial discipline and accountability. Thus, POS integration is a key factor that defines SMEs' tax compliance.

Fourthly, the study established Electronic Tax Return Filing greatly affects tax compliance, this means that the electronic filing systems enhance accuracy in tax filing, minimize filing mistakes, and enhance timely compliance. Moreover, the system improves awareness of tax liabilities and streamlines the administrative processes of SMEs. As a result, electronic tax returns filing leads to enhanced efficiency, fewer penalties, and enhanced compliance behavior. Thus, computerized filing systems are crucial in the current tax administration.

7. RECOMMENDATIONS

Recommendations are suggested, based on the findings, that the Kenya Revenue Authority (KRA) and other policy actors should enhance implementation and enforcement of electronic tax register systems among Nairobi's SMEs. Moreover, systems upgrades ought to be

undertaken continuously to make sure that data sharing in real-time is reliable, secure, and user-friendly. SMEs must also be informed about the need to have full compliance monitoring systems to minimize tax penalties and enhance transparency. Tax authorities should therefore step up the taxpayer education programs to enhance awareness of the benefits of using electronic tax registers, especially incentives that are related to compliance. In practice, technical assistance to SMEs should be provided to facilitate the seamless integration of electronic tax registers into business operations. Thus, the improvement of institutional support and digital infrastructure will improve compliance outcomes.

8. REFERENCES

Abrie, W., & Doussy, E. (2023). Tax compliance obstacles encountered by small and medium enterprises in South Africa. *Meditari: Research Journal of the School of Accounting Sciences*, *14*(1), 1-13. https://doi.org/10.1108/10222529200600001.

Aladejebi, O. A. (2020). Measuring tax compliance among small and medium enterprises in Nigeria. *International Journal of Accounting and Taxation*, 5(1), 7 – 12. https://doi.org/10.15640/ijat.v6n2a4

Ariyanto, D., Dewi, A. A., Paramadani, R. B., & Paramadina, A. A. (2024). Determinants of tax compliance and their impact on a sustainable information society: an investigation of MSMEs. *Cogent Business & Management*, *11*(1), 24 – 31. https://doi.org/10.1080/23311975.2024.2414856

Chen, S., Thakor, N. V., & Mower, M. M. (2023). Ventricular fibrillation detection by a regression test on the autocorrelation function. *Medical and Biological Engineering and Computing*, *25*, 241-249. https://link.springer.com/article/10.1007/BF02447420

Das, K. R., & Imon, A. H. M. R. (2020). A brief review of tests for normality. *American Journal of Theoretical and Applied Statistics*, *5*(1), 5-12. https://doi.org/10.11648/j.ajtas.20160501.12

Dearing, J. W. (2020). Applying diffusion of innovation theory to intervention development. *Research on social work practice*, *19*(5), 503-518. https://doi.org/10.1177/1049731509335569

Ellawule, A., Bashir, Y. M., Dalhat, B. S., & Suleiman, N. (2024). Effect of tax incentives on MSMEs' tax compliance in Nigeria. *Journal of Business Management and Accounting*, *14*(2), 339-365. https://doi.org/10.32890/jbma2024.14.2.6

Saxena, A., & Dhaka, N. (2025). Role of MSMEs in economic growth of India. International Journal of Global Research Innovations & Technology (IJGRIT)., 03(03), 50–60. https://doi.org/10.62823/ijgrit/03.03.7888

Hidayati, B., Utami, I. S., & Hermanto, F. Y. (2023). Tax Knowledge and Appropriate Tax Technology on Tax Compliance: Study on MSME in Batam City. *International*

Journal of Economics, Management, Business and Social Science (IJEMBIS), *3*(3), 1154-1163. https://doi.org/10.59889/ijembis.v3i3.273

Kaminski, J. (2011). Diffusion of innovation theory. *Canadian Journal of Nursing Informatics*, *6*(2), 1-6. https://cjni.net/journal/?p=1444

Khatun, N. (2021). Applications of normality test in statistical analysis. *Open journal of statistics*, *11*(01), 113. https://doi.org/10.4236/ojs.2021.111006

Koech, B., Muna, W. (2025). Implementation of electronic tax invoice management system and revenue collection: Case of Kenya Revenue Authority. *International Academic Journal of Arts and Humanities,* 1(4), 266-295. https://iajournals.org/articles/iajah_v1_i4_266_295.pdf

Kusumawardhani, A., Gunawan, F. K., Tjondro, E., & Eoh, T. S. (2024). Tax Service Quality and Digital Tax Implementation for MSME Tax Compliance in Surabaya. *International Journal of Organizational Behavior and Policy*, *3*(1), 53-62. https://doi.org/10.9744/ijobp.3.1.53-62

Lestary, S. R., Sueb, M., & Yudianto, I. (2021). The effect of tax fairness, tax socialization and tax understanding on tax compliance: a study on micro, small and medium enterprises (MSMEs). *Journal of Accounting Auditing and Business*, *4*(1), 8 – 15. https://doi.org/10.24198/jaab.v4i1.31998

Loebbecke, C. (2023). Use of innovative content integration information technology at the point of sale. *European Journal of Information Systems*, *16*(3), 228-236. https://doi.org/10.1057/palgrave.ejis.3000670

Mapuasari, S. A., Wibowo, Y. S., & Cakranegara, P. A. (2023). Tax Incentive-Based Economic Policy, Modern Tax Administration System, and Taxpayer Compliance of Micro, Small, and Medium Enterprises. *JASF: Journal of Accounting and Strategic Finance*, *6*(1), 51-70. https://doi.org/10.33005/jasf.v6i1.391

McKerchar, M., Ingraham, L. R., & Karlinsky, S. (2023). Tax complexity and small business: A comparison of the perceptions of tax agents in the United States and Australia. *Journal of Australian Taxation*, *8*(2), 289-327. https://scholarworks.sjsu.edu/acc_fin_pub/18/

Michael, M., & Widjaja, W. (2024). Tax compliance in Indonesian MSMEs: Key factors explored. *Jurnal Proaksi*, *11*(1), 143-157. https://doi.org/10.32534/jpk.v11i1.5519

Murnidayanti, S. A., & Putranti, T. M. (2023). The Effectiveness of Digitizing Tax Administration to Reduce the Compliance Cost of Taxpayers of Micro, Small, and Medium Enterprises (MSMEs). *Jurnal Public Policy*, *9*(2), 91-96. https://doi.org/10.35308/jpp.v9i2.6561

Mutunga, J. M., & Makhamara, F. H. (2020). E-invoicing and the performance of small and medium enterprises in Nairobi City County Kenya. *The Strategic Journal of Business & Change Management*, *7*(3), 1404-1415. https://doi.org/10.61426/sjbcm.v7i3.1749

Naicker, Y., & Rajaram, R. (2019). Factors that influence tax compliance of SMEs in South Africa. *Acta Universitatis Danubius. Administratio*, *10*(2), 5 – 13. https://pdf.core.ac.uk/corefilesystem/pdf/13092/229466389.pdf?se=2026-11-06T16%3A52%3A47Z&sp=r&sv=2026-10-06&sr=b&rscd=inline%3B%20filename%3D%22229466389.pdf%22&rsct=application/pdf&sig=PdNOLmYdega2PkQlAQ9JresnWQeBYoGkn%2BuJI2sqjWw%3D

Odongo, Z. M. (2025). Determinants of Tax Compliance among SMEs in Kenya. *Journal of Business, Economics and Management Research Studies*, *3*(1), 111-122. http://erepository.uonbi.ac.ke/handle/11295/160374

Peprah, J. A., Andoh, F. K., Avorkpo, E. A., Dafor, K. N., Afful Jr, B., & Obeng, C. K. (2022). Compliance Burden and Tax gap among micro and small businesses: Evidence from Ghana. *Sage Open*, *12*(4), 2 – 9. https://doi.org/10.1177/21582440221126985?urlappend=%3Futm_source%3Dresearchgate.net%26utm_medium%3Darticle

Sadress, N., Bananuka, J., Orobia, L., & Opiso, J. (2021). Antecedents of tax compliance of small business enterprises: a developing country perspective. *International Journal of Law and Management*, *61*(1), 24-44. https://doi.org/10.1108/IJLMA-10-2017-0234

Safiq, M., & Afrilin, S. B. S. (2022). Analysis of the Effectiveness of Tax Incentives on the Tax Compliance Before and During the Covid-19 Pandemic (Study on Msme Digital and Msme Non-Digital). *Jurnal Cakrawala Ilmiah*, *2*(4), 1679-1698. https://doi.org/10.53625/jcijurnalcakrawalailmiah.v2i4.4566

Sari, N. T. P., & Kusumawati, A. (2022). Literature review: The efforts to strengthening of micro, small and medium-sized enterprises (MSME) in Indonesia. *Asian Journal of Management, Entrepreneurship and Social Science*, *2*(01), 98-115. https://doi.org/10.63922/ajmesc.v2i01.52

Sarmah, H. K., & Hazarika, B. B. (2022). Determination of Reliability and Validity measures of a questionnaire. *Indian Journal of Education and information management*, *1*(11), 508-517. https://www.researchgate.net/publication/324941303_Determination_of_Reliability_and_Validity_measures_of_a_questionnaire

Shrestha, N. (2020). Detecting multicollinearity in regression analysis. *American journal of applied mathematics and statistics*, *8*(2), 39-42. https://doi.org/10.12691/ajams-8-2-1

Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist*, *34*(1), 8-12. https://doi.org/10.1097/nur.0000000000000493

Sinaga-Bulgamin, S. (2022). *Research of Point-of-Sale Systems for Integrating International Business Operations* (Haaga-Helia University of Applied Sciences). https://www.theseus.fi/server/api/core/bitstreams/4d185fb0-1b80-4ab1-9d47-0370e2250754/content

Sjostrom, O., Holst, D., & Lind, S. O. (2021). Validity of a questionnaire survey: the role of non-response and incorrect answers. *Acta odontologica scandinavica*, *57*(5), 242-246. https://doi.org/10.1080/000163599428643

Studenski, S. (2021). Target population for clinical trials. *JNHA-The Journal of Nutrition, Health and Aging*, *13*(8), 729-732. https://doi.org/10.1007/s12603-009-0205-8

Walter, N., & Wilson, M. (2023). Influence of computer literacy levels on tax compliance among Harare central business district small and medium enterprises. https://doi.org/10.5897/JAT2023.0564

Wang, G. C., & Akabay, C. K. (2020). Autocorrelation: Problems and solutions in regression modeli. *The Journal of Business Forecasting*, *13*(4), 18 – 23. https://ibf.org/knowledge/jbf-articles/autocorrelation-problems-and-solutions-in-regression-modeling-409

Zhu, Z., & Stein, M. L. (2021). Spatial sampling design for prediction with estimated parameters. *Journal of agricultural, biological, and environmental statistics*, *11*, 24-44. https://link.springer.com/article/10.1198/108571106X99751