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Adoption of Digital Tax Systems: Evidence from SMEs' Awareness and Use of EFRIS in Kampala, Uganda

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Abstract

The study examined the adoption of the Electronic Fiscal Receipting and Invoicing Solution (EFRIS) and its influence on the financial performance of Small and Medium Enterprises (SMEs) in Kampala, Uganda. Using a quantitative cross-sectional design, data were collected from 310 SME operators across Kampala's five administrative divisions. Descriptive statistics and Pearson correlation analysis were employed to analyze levels of awareness, adoption, and incentives for EFRIS use, as well as their relationship with SME performance. The findings showed that SMEs had a moderate level of awareness of EFRIS but comparatively lower levels of actual adoption, indicating a gap between knowledge and practice. Human and cognitive factors such as training, digital literacy, and positive perceptions strongly supported adoption, while infrastructural and institutional factors including internet connectivity, technical support, and government incentives, were only moderate and constrained effective use. Correlation results revealed significant positive relationships between EFRIS awareness, adoption, and SME performance, particularly in terms of profit growth and financial reporting accuracy. The study concludes that strengthening incentives, infrastructure, and technical support is essential for enhancing sustained EFRIS adoption and improving SME performance in Uganda.

Keywords: Electronic Fiscal Receipting and Invoicing Solution (EFRIS); Digital Tax Systems; SME Performance; Tax Compliance; Technology Adoption; Uganda

Back ground of the study

The digitization of tax administration represented a cornerstone of global fiscal policy reform. It was driven by imperatives to enhance revenue mobilization, curb evasion, and improve administrative efficiency (OECD, 2023). For developing economies like Uganda, broadening the domestic tax base was particularly critical to achieve sustainable development goals and reduce fiscal dependency. However, the success of these digital transformations was not guaranteed; it was fundamentally contingent upon adoption by taxpayers, especially Small and Medium Enterprises (SMEs). SMEs formed the backbone of Uganda's economy but were often characterized by informality and low tax compliance, presenting a significant challenge to revenue authorities (World Bank, 2022).

In response to these challenges, the Uganda Revenue Authority (URA) embarked on a strategic shift toward technology-driven tax administration. Its flagship initiative was the Electronic Fiscal Receipting and Invoicing Solution (EFRIS)**,** which had been launched mandatorily for VAT-registered businesses. EFRIS required the use of certified Digital Tax Registers (DTRs) or software that issued electronic receipts/invoices, with transaction data transmitted in real-time to the URA. The system aimed to create an auditable trail of transactions, minimize under-declaration of sales, and simplify compliance processes (URA, 2023).

The investigation into EFRIS adoption was anchored in established technology adoption theories. The Unified Theory of Acceptance and Use of Technology (UTAUT2**)** was particularly relevant, as it integrated factors like performance

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expectancy, effort expectancy, social influence, facilitating conditions, and cost all critical determinants for resource-constrained SMEs (Venkatesh et al., 2012). Furthermore, the concept of tax morale the intrinsic willingness to pay taxes interacted with technological interventions. Digital systems could bolster morale by promoting perceived fairness and transparency or diminish it if viewed as coercive (Cummings et al., 2021).

A pivotal distinction in this study was between awareness and use. High-level policy mandates and URA sensitization campaigns could create awareness, but this did not automatically translate into effective and consistent usage. The gap between knowing about EFRIS and competently integrating it into daily business operations was a significant concern. This gap could be influenced by digital literacy, perceived complexity, the cost of technology acquisition, and unreliable infrastructural enablers like electricity and internet connectivity (Ali et al., 2021).

Kampala provided a critical context for this study. As the nation's economic epicenter, it hosted the highest concentration of VAT-registered SMEs in sectors like trade, services, and manufacturing, making it the primary battleground for EFRIS implementation. Preliminary evidence and business community feedback highlighted a contentious rollout. While the URA emphasized the system's benefits for compliance and record-keeping, many SMEs reported substantial challenges, including the financial burden of purchasing DTRs, technical glitches with software, a steep learning curve, and anxieties about increased tax exposure (Private Sector Foundation Uganda, 2022).

Despite the global push for digital tax, there was a pronounced knowledge gap regarding the on-the-ground realities of adoption within Uganda's unique SME ecosystem. Existing literature offered more insights into large taxpayer units or digital systems in other East African nations like Kenya and Rwanda (Mascagni et al., 2022). A focused study on the awareness and use continuum of EFRIS among Kampala's SMEs was therefore essential. It sought to move beyond technical implementation to examine the socio-technical

Integration the interplay between the technology, the users (SME owners/accountants), and their business environment. Consequently, this study was situated at the intersection of public finance, digital innovation, and SME development. By empirically investigating the factors that facilitated or hindered the transition from mere awareness of EFRIS to its actual use, the research aimed to generate evidence-based insights. The findings were intended to inform the URA's communication strategies, training programs, and technical support frameworks. Moreover, the study contributed to the broader academic and policy discourse on effective digitalization for domestic revenue mobilization in developing countries, highlighting that technological solutions needed to be consciously designed and implemented with the end-user's capacity and constraints in mind.

Problem statement of the study

The Government of Uganda, through the Uganda Revenue Authority (URA), implemented the Electronic Fiscal Receipting and Invoicing Solution (EFRIS) as a cornerstone digital reform to modernize tax administration, expand the tax base, and improve compliance among Value-Added Tax (VAT)-registered businesses (URA, 2023). While digital tax systems like EFRIS are globally recognized for their potential to enhance revenue mobilization and transparency, their ultimate efficacy is contingent upon widespread and correct adoption by the taxpayer base,

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particularly Small and Medium Enterprises (SMEs) (OECD, 2023). Despite the mandatory rollout and associated sensitization campaigns, preliminary evidence and stakeholder reports indicated significant resistance and practical challenges among SMEs in Kampala, Uganda's commercial heartland (Private Sector Foundation Uganda, 2022). A critical disconnect appeared to exist between the policy's objectives and the on-the-ground reality for SMEs. While official awareness of EFRIS may have been high due to enforcement mandates, there was a lack of empirical evidence on the extent to which this awareness translated into effective, consistent, and correct *use* of the system. This gap between formal awareness and practical utilization represented a fundamental risk to the reform's success. The problem, therefore, was threefold on insufficient understanding of the specific factors such as perceived complexity, cost of compliance technology, digital literacy, and trust in the system—that hindered the transition from SME awareness to the actual adoption and sustained use of EFRIS (Venkatesh et al., 2012; Ali et al., 2021). Secondly, the URA lacked granular, evidence-based insights into the lived experiences and operational constraints faced by Kampala's diverse SMEs, which limited the ability to design targeted support mechanisms. And also**,** without diagnosing this awareness-use gap, the significant public investment in the digital tax infrastructure risked underperformance, potentially failing to achieve the anticipated gains in revenue collection and compliance fairness, while simultaneously increasing the compliance burden on a vital sector of the economy (World Bank, 2022).

Consequently, this study addressed the pressing problem of unidentified barriers to effective EFRIS adoption among SMEs in Kampala. It sought to systematically investigate the level of awareness, the degree of actual use, and the key determinants influencing this critical adoption pathway, thereby generating knowledge essential for refining policy implementation and ensuring the digital transformation's success.

Main objective

To investigate the factors influencing the transition from awareness to effective use of the EFRIS digital tax system among SMEs in Kampala**.**

Methodology

This study employed a quantitative, cross-sectional research design to examine the determinants of the Electronic Fiscal Receipting and Invoicing Solution (EFRIS) adoption among Small and Medium Enterprises (SMEs) in Kampala, Uganda. The cross-sectional approach was appropriate for gathering data at a single point in time to assess the relationships between awareness, perceived factors, and actual usage behavior. The target population comprised formally registered, VAT-eligible SMEs obligated to use EFRIS, operating within the five administrative divisions of Kampala: Central, Nakawa, Rubaga, Makindye, and Kawempe. This geographical stratification ensured the sample reflected the city's diverse commercial landscape. ((Kothari, 2004).)

The sample size was determined using the Yamane (1967) formula for finite populations, resulting in a target of 320 SMEs. This sample was proportionally allocated across the five divisions based on the relative density of registered businesses in each, as estimated from Uganda Revenue Authority (URA) district registries. A combination of stratified and simple random sampling was used: first, the population was stratified by division, and then SMEs within each

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division were randomly selected from URA and Kampala City Traders Association (KACITA) listings. Primary data was collected using a structured, self-administered questionnaire, which was also delivered via face-to-face interviews by trained enumerators to ensure clarity and improve response rates, particularly for respondents with lower literacy levels. (Dillman et al., 2014).

The questionnaire was organized into four distinct sections. Section A captured demographic and firmographic data, including the respondent's position, business sector, number of employees, and annual turnover. Section B assessed awareness and knowledge of EFRIS using a five-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). Key items included: "I am aware of the features and functions of the EFRIS system," "My staff have received sufficient training or information about EFRIS," "The Uganda Revenue Authority has promoted awareness of the EFRIS system effectively," and "I understand the benefits of using the EFRIS system in my business." Section C measured perceived performance outcomes following adoption, focusing on Financial Performance (FP) with items such as: "My profits have increased since using the EFRIS system," "EFRIS has improved our financial reporting accuracy," "The business has experienced stable revenue growth," and "We are better able to monitor and control costs." Section D identified and measured the constraining factors limiting EFRIS adoption, covering dimensions such as perceived cost, technical complexity, infrastructural challenges (e.g., internet reliability), and trust in the system.(Mascagni & Mengistu, 2019). To ensure robustness, the instrument's validity and reliability were rigorously tested. Content validity was established through a review by two academic experts in taxation and two URA field officers, leading to refinements in wording and scope. (Haynes et al., 2023). A pilot study was conducted with 30 SME operators in the Nakawa division (excluded from the main sample). Reliability was assessed using Cronbach's Alpha, with all constructs in Sections B, C, and D yielding coefficients above the acceptable threshold of 0.70, indicating high internal consistency. Data collection was carried out over a six-week period, specifically from mid-November to the end of December 2025. A team of five assistant researchers was trained over two days on ethical interview protocols, questionnaire administration, and data handling procedures to minimize bias.

Out of the 320 questionnaires distributed, 310 were completed and returned, yielding a high response rate of 96.9%. The returned questionnaires were checked for completeness and consistency before data entry. Data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 26**.** Descriptive statistics including frequencies, percentages, means, and standard deviations were computed to summarize the demographic profile and the responses across all sections. Inferential analysis involved the use of Pearson's correlation coefficient to examine the strength and direction of the relationships between key variables, such as the link between awareness levels (Section B) and perceived financial performance (Section C). Ethical considerations were strictly adhered to throughout the study: participation was voluntary, informed consent was obtained from all respondents, anonymity and confidentiality were guaranteed, and the research protocol was reviewed for ethical compliance.

Data Analysis and Results

Demographic and Business Characteristics of Respondents

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Table 1: Demographic and Geographical Characteristics of Respondents (N = 310)

Characteristic	*Category*	*Frequency (n)*	*Percentage (%)*
Gender		**310**	**100.0**
	Male	198	63.9
	Female	112	36.1
Age		**310**	**100.0**
	18–25 years	42	13.5
	26–35 years	128	41.3
	36–45 years	97	31.3
	Above 45 years	43	13.9
Education Level		**310**	**100.0**
	Primary or below	25	8.1
	Secondary (O-level)	76	24.5
	Secondary (A-level)	89	28.7
	Tertiary (Diploma/Degree+)	120	38.7
Business Division		**310**	**100.0**
	Central	95	30.6
	Kawempe	62	20.0
	Makindye	50	16.1
	Nakawa	58	18.7
	Rubaga	45	14.5

Source: Primary Field Data, (2025)

The sample was predominantly male, with 63.9% (n = 198) of respondents identifying as men and 36.1% (n = 112) as women. This distribution reflected national business ownership patterns in Uganda, where men were more likely to own and manage registered SMEs (World Bank, 2021). Because EFRIS adoption and use were analyzed across this sample, the findings primarily represented the experiences of male-led enterprises, which has implications for understanding gender-based differences in awareness and system uptake.

Most respondents were within the 26–45 year age range. Specifically, 41.3% (n = 128) were aged 26–35 years and 31.3% (n = 97) were aged 36–45 years, together accounting for 72.6% of the sample. Younger (18–25 years) and older (above 45 years) operators each comprised approximately 14%. This age profile was relevant to EFRIS adoption because individuals in the 26–45 year cohort were more likely to possess higher digital literacy and adaptability to technology, factors associated with perceived ease of use and actual system utilization (Venkatesh et al., 2012).

With regard to education, 38.7% (n = 120) of respondents held tertiary qualifications, 28.7% (n = 89) had completed A-level education, and 24.5% (n = 76) had O-level education. Only 8.1% (n = 25) reported primary education or

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below. This relatively high educational attainment was positively associated with awareness of EFRIS and confidence in using digital tax platforms, which are key predictors of adoption (Ali et al., 2021).

Respondents were drawn from all five administrative divisions of Kampala, with the largest proportion from Central Division (30.6%, n = 95), followed by Kawempe (20.0%, n = 62), Nakawa (18.7%, n = 58), Makindye (16.1%, n = 50), and Rubaga (14.5%, n = 45). This distribution ensured that EFRIS adoption patterns reflected both central and peripheral business environments, where infrastructure and institutional support differ.

In general, the demographic profile indicated that the sample consisted largely of middle-aged, educated SME operators with foundational capacity to engage with digital tax systems. These characteristics were directly relevant to the study's key variables EFRIS awareness, perceived usefulness, perceived ease of use, and actual adoption providing an important context for interpreting subsequent analyses of system uptake.

Table 2: Business Characteristics of Respondents (N = 310)

Characteristic	*Category*	*Frequency (n)*	*Percentage (%)*
Business Type	Retail & Wholesale Businesses	120	38.7
	Hospitality (Hotels & Restaurants)	70	22.6
	Transportation	40	12.9
	Manufacturing	45	14.5
	Other Services	35	11.3
Total		**310**	**100.0**
Business Duration	Less than 1 year	25	8.1
	1–3 years	95	30.6
	4–6 years	105	33.9
	Above 6 years	85	27.4
Total		**310**	**100.0**
Monthly Turnover	Below UGX 600,000	100	32.3
	UGX 600,000–1,200,000	85	27.4
	UGX 1,200,000–3,200,000	75	24.2
	Above UGX 3,200,000	50	16.1
Total		**310**	**100.0**
Number of Employees	Owner Only	120	38.7
	1–2 Employees	115	37.1

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	3–4 Employees	75	24.2
Total		**310**	**100.0**

Source: Primary Data, (2025)

Table 2 presents the business characteristics of the respondents. The results showed that the majority of SMEs operated in the retail and wholesale sector (38.7%, n = 120), followed by hospitality businesses such as hotels and restaurants (22.6%, n = 70). Transportation enterprises accounted for 12.9% (n = 40), while manufacturing firms made up 14.5% (n = 45). Other service-based businesses constituted 11.3% (n = 35). This distribution indicated that EFRIS awareness and adoption were assessed mainly among trade- and service-oriented enterprises, which are highly transaction-based and therefore directly affected by electronic invoicing requirements.

Regarding business duration, most respondents had been in operation for a moderate period. Enterprises operating for 4–6 years formed the largest group (33.9%, n = 105), followed by those in business for 1–3 years (30.6%, n = 95). Firms operating for more than six years accounted for 27.4% (n = 85), while only 8.1% (n = 25) had existed for less than one year. This pattern suggested that the sample largely consisted of relatively established SMEs, which are more likely to encounter and respond to regulatory systems such as EFRIS.

In terms of monthly turnover, 32.3% (n = 100) of the respondents reported earnings below UGX 600,000, while 27.4% (n = 85) earned between UGX 600,000 and UGX 1,200,000. About 24.2% (n = 75) reported monthly turnover between UGX 1,200,000 and UGX 3,200,000, and 16.1% (n = 50) earned above UGX 3,200,000. These results indicated that most SMEs operated at low to moderate income levels, which has implications for their capacity to invest in digital infrastructure required for effective EFRIS adoption.

With respect to firm size, the majority of businesses were small. Enterprises run by the owner only accounted for 38.7% (n = 120), while those employing 1–2 workers made up 37.1% (n = 115). Only 24.2% (n = 75) had 3–4 employees. This confirmed that the sample was dominated by micro and small enterprises, a factor that is important when interpreting EFRIS awareness and usage, as smaller firms often face greater financial and technical constraints in adopting digital tax systems.

Digital Tax Systems: Evidence from SMEs' Awareness, Adoption and Use of EFRIS in Kampala,

Table 3: Descriptive Statistics for Digital Tax Systems (N=310)

Digital Tax Systems Indicators	**Mean**	**SD**	**Interpretation**
EFRIS Awareness			
I am aware of the features and functions of the EFRIS system	3.42	1.18	Moderate
My staff have received sufficient training/information about EFRIS	3.21	1.24	Moderate
URA has promoted awareness of EFRIS effectively	3.10	1.27	Moderate
I understand the benefits of using EFRIS in my business	3.36	1.20	Moderate
I am familiar with how EFRIS operates in daily transactions	3.28	1.22	Moderate

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Total Awareness of the System	**3.27**	**1.08**	**Moderate**
EFRIS Adoption			
My business is registered with EFRIS	2.54	1.36	Moderate
I have an e-invoicing device/app on my phone	2.48	1.33	Moderate
I issue electronic receipts to customers	2.61	1.38	Moderate
I use the e-invoicing system regularly	2.49	1.35	Moderate
I submit sales data through the e-invoicing system	2.44	1.32	Moderate
Total Adoption of EFRIS	**2.51**	**1.21**	**Moderate**
Financial Performance (FP) of SMEs			
My profits have increased since using EFRIS	3.18	1.26	Moderate
EFRIS has improved our financial reporting accuracy	3.45	1.19	High
The business has experienced stable revenue growth	3.22	1.23	Moderate
We are better able to monitor and control costs	3.31	1.21	Moderate
EFRIS has enhanced our market competitiveness	3.14	1.28	Moderate
My cost of tax compliance has reduced with EFRIS	3.08	1.30	Moderate
Total Financial Performance	**3.23**	**1.10**	**Moderate**
Total of All Indicators	**3.00**	**1.05**	**Moderate**

Sources: primary data, (2025)

Note. *Mean score interpretation: 1.00–2.00 = Low; 2.01–3.00 = Moderate; 3.01–4.00 = High; 4.01–5.00 = Very High.*

Table 3 presents the descriptive statistics for EFRIS awareness, adoption, and financial performance among SMEs in Kampala (N = 310). Overall, respondents demonstrated a moderate level of awareness of the EFRIS system (M = 3.27, SD = 1.08), indicating that most SME operators were familiar with the system's features, benefits, and operational requirements. In particular, understanding the benefits of EFRIS (M = 3.36, SD = 1.20) and awareness of its functions (M = 3.42, SD = 1.18) recorded the highest mean scores within this dimension.

In contrast, EFRIS adoption was also moderate but relatively lower (M = 2.51, SD = 1.21), suggesting that although many respondents were aware of EFRIS, fewer had fully integrated it into their daily business practices. Registration with EFRIS (M = 2.54, SD = 1.36) and regular system use (M = 2.49, SD = 1.35) reflected only partial uptake, indicating a gap between awareness and actual utilization.

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With regard to financial performance, the findings showed a moderate positive perception of EFRIS's contribution to SME performance (M = 3.23, SD = 1.10). Respondents reported improvements in financial reporting accuracy (M = 3.45, SD = 1.19) and better cost control (M = 3.31, SD = 1.21), though gains in profits and revenue growth remained modest. The overall mean across all indicators was moderate (M = 3.00, SD = 1.05), suggesting that while EFRIS is recognized as beneficial, its full potential for enhancing SME financial outcomes has not yet been fully realized.

Incentives for Adoption

Table 4: Descriptive Statistics for Incentives for Adoption Indicators (N = 310)

Incentives for Adoption Indicators	Mean	SD	Interpretation
Adequate training is provided to SME staff on the use of EFDs.	3.12	1.18	High
The cost of acquiring and implementing EFDs is affordable to SMEs.	2.74	1.24	Moderate
Technical support is easily accessible when challenges arise with EFDs.	2.96	1.21	Moderate
Government policies facilitate effective EFD implementation among SMEs.	3.05	1.19	High
SMEs have sufficient internet connectivity to use e-invoicing systems.	2.88	1.26	Moderate
SME owners/employees have a positive perception of EFD and e-invoicing.	3.22	1.15	High
Digital literacy among SME operators enables efficient system use.	3.18	1.17	High
Physical infrastructure (electricity, hardware) supports EFD use.	2.91	1.23	Moderate
Government provides incentives for SMEs to adopt and maintain EFD use.	2.67	1.28	Moderate
System downtime and delayed technical support reduce trust in EFDs.*	2.41	1.30	Moderate
Overall Incentives for Adoption	2.91	1.12	Moderate

Source: primary Data, (2025)

Table 4 presented the descriptive statistics on the incentives and enabling conditions that influence SMEs' adoption of Electronic Fiscal Devices (EFDs) and e-invoicing systems in Kampala (N = 310). The total mean score for the incentives for adoption construct was moderate with (M = 2.91, SD = 1.12), indicating that while several supportive conditions existed, important gaps still constrained full adoption.

Respondents generally agreed that training was being provided to SME staff on the use of EFDs (M = 3.12, SD = 1.18), which was interpreted as high. This suggests that capacity-building initiatives had reached many SMEs and contributed positively to system readiness. Similarly, the level of digital literacy among SME operators was rated high (M = 3.18, SD = 1.17), showing that many business owners and employees possessed the basic skills required to operate electronic tax systems.

The perception of EFD and e-invoicing systems among SME owners and employees was also high (M = 3.22, SD = 1.15). This indicates a generally positive attitude toward digital tax tools, which is critical because favorable perceptions often translate into greater willingness to adopt and sustain system use. Government policies facilitating EFD implementation were rated highly (M = 3.05, SD = 1.19), reflecting that respondents acknowledged the

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regulatory framework as supportive. However, direct government incentives to encourage adoption and continued use of EFDs were only rated as moderate (M = 2.67, SD = 1.28). This implies that although rules and guidelines existed, financial or material incentives (such as subsidies, tax reliefs, or device support) were not perceived as sufficient by many SMEs.

Access to internet connectivity (M = 2.88, SD = 1.26) and physical infrastructure such as electricity and hardware (M = 2.91, SD = 1.23) were both rated as moderate. This shows that infrastructural limitations still affected some businesses, especially in less-served areas. Technical support accessibility was also moderate (M = 2.96, SD = 1.21), suggesting that while support services existed, they were not always timely or reliable.

The negatively worded item on system downtime and delays in technical support (M = 2.41, SD = 1.30) indicated that respondents moderately agreed that such problems reduced trust in the EFRIS system. This highlighted that system reliability and responsiveness of support services are critical for building and sustaining SME confidence in digital tax systems. On that note, the table revealed that human and attitudinal factors (training, digital literacy, and positive perceptions) were relatively strong enablers of the system adoption. In contrast, structural and institutional factors (infrastructure, affordability, technical support, and incentives) were only moderate, which likely limited the speed and depth of adoption. These findings suggest that for EFD and EFRIS systems to be fully embraced by SMEs, policy makers and implementing agencies need to strengthen infrastructure, improve support responsiveness, and introduce clearer financial or operational incentives.

Correlation Analysis

Table 5: Pearson Correlation Analysis between EFRIS Awareness, Adoption, and SME Performance (N = 310)

Variables	1	2	3	4
1. Awareness of EFRIS features and functions	—			
2. Business is registered with EFRIS	.48**	—		
3. Profits have increased since using EFRIS	.42**	.55**	—	
4. EFRIS has improved financial reporting accuracy	.46**	.58**	.61**	—

Correlation is significant at the 0.01 level (2-tailed).** $p < .01$.

The Pearson correlation results showed significant positive relationships among all study variables. Awareness of EFRIS features was moderately and positively correlated with business registration with EFRIS ($r = .48$, $p < .01$), indicating that higher awareness was associated with greater likelihood of adoption. In addition, EFRIS registration was strongly related to increased profits ($r = .55$, $p < .01$) and improved financial reporting accuracy ($r = .58$, $p < .01$). Moreover, profit growth and financial reporting accuracy were strongly correlated ($r = .61$, $p < .01$), suggesting that better reporting through EFRIS was linked to improved financial performance. Overall, the findings support the view that EFRIS awareness influences adoption, which in turn enhances SME performance.

Discussions of Findings

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The study examined the awareness, adoption, and incentives for EFRIS, and their influence on SME performance in Kampala. The descriptive results indicated that EFRIS awareness among SMEs was moderate (M = 3.27, SD = 1.08), suggesting that while SMEs were generally familiar with the system, there remained gaps in understanding its features and regulatory requirements. Adoption levels, however, were lower and moderate (M = 2.51, SD = 1.21), showing that awareness did not fully translate into consistent use of EFRIS in business operations. This is consistent with prior studies (Mugisha, 2021; URA, 2022) highlighting that adoption of digital tax systems in developing countries often lags behind awareness due to infrastructural and institutional constraints.

The analysis of incentives for adoption indicated that human factors such as training, digital literacy, and positive perceptions were strong enablers ($M \geq 3.12$), while structural and institutional factors—including affordability, technical support, and government incentives—were moderate, highlighting critical barriers that limit the effective utilization of EFRIS. These findings align with technology adoption theories such as TAM and UTAUT, which emphasize that both capability and facilitating conditions influence adoption behavior.

Pearson correlation results further revealed that EFRIS awareness positively influenced adoption ($r = .48$, $p < .01$), and adoption in turn positively impacted SME performance, including profits ($r = .55$, $p < .01$) and financial reporting accuracy ($r = .58$, $p < .01$). These findings confirm the theoretical expectation that digital tax systems improve operational efficiency and financial outcomes when effectively adopted.

Conclusion and Implications of the Findings

The study concluded that the adoption of EFRIS among SMEs in Kampala was influenced by awareness, incentives, infrastructure, and institutional support**.** Although SMEs demonstrated moderate awareness of EFRIS (M = 3.27) and generally positive perceptions, adoption levels were lower (M = 2.51), indicating a gap between knowledge and actual utilization**.** Human and cognitive factors, such as training and digital literacy, were strong enablers, whereas structural and institutional factors including infrastructure, affordability, technical support, and government incentives were only moderate, limiting effective system adoption. The positive correlations between awareness, adoption, and SME financial performance (profits and reporting accuracy) further highlighted that increased use of EFRIS contributes to improved business outcomes**,** confirming that adoption is a key determinant of the system's impact.

The implications of these findings are significant for both policy and practice. First, tax authorities, particularly the Uganda Revenue Authority, should focus on enhancing incentives, improving technical support, and ensuring reliable infrastructure to bridge adoption gaps. Second, capacity-building programs targeting SME owners and employees should continue, as digital skills and positive perceptions are crucial for sustained use. Finally, continuous monitoring and evaluation of adoption levels and performance outcomes are essential to ensure that interventions are targeted effectively and that SMEs fully benefit from EFRIS. Overall, the study underscores that while awareness and positive attitudes are necessary, structural support and enabling conditions are critical for translating awareness into sustained adoption and improved SME performance**.**

Recommendations of the Findings

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Policy and Incentives. The study found that while SMEs were aware of EFRIS, adoption levels were only moderate, partly because direct financial or operational incentives were perceived as insufficient (M = 2.67, SD = 1.28). To address this, the Uganda Revenue Authority (URA) could introduce targeted incentives, such as subsidized Electronic Fiscal Devices (EFDs), tax rebates, or reduced compliance fees. These measures would reduce the financial burden of adoption and motivate SMEs to integrate EFRIS into daily operations. Providing tangible benefits would strengthen the perceived usefulness of the system, which is a key factor in technology adoption theories such as TAM and UTAUT.

2. Capacity Building: Human and cognitive factors, including training and digital literacy, were strong enablers of EFRIS adoption ($M \geq 3.12$). However, not all SMEs had equal access to training or possessed the required skills. Regular training workshops for SME owners and employees would enhance competence and confidence, enabling them to operate EFDs efficiently and interpret financial reports accurately. Capacity building also ensures sustainability, as SMEs are better equipped to maintain compliance without constant external support.

3. Infrastructure Development: Infrastructure limitations—such as inconsistent internet connectivity (M = 2.88) and unreliable electricity (M = 2.91), were identified as barriers to EFRIS adoption. Improving these structural conditions, especially in peri-urban and underserved divisions, would facilitate seamless operation of electronic tax systems. Adequate infrastructure reduces the risk of system downtime, encourages regular usage, and supports long-term integration of digital tax solutions in SME operations.

4. Technical Support: Moderate ratings for technical support accessibility (M = 2.96) and concerns about system downtime (M = 2.41) highlighted a gap in system reliability and trust. Establishing responsive, accessible technical support services ensures SMEs can quickly resolve operational issues, minimizing disruption in reporting and compliance. Reliable support increases confidence in using EFRIS, which is critical for adoption and continuous use.

5. Awareness Campaigns: While awareness levels were moderate (M = 3.27), knowledge gaps still existed regarding EFRIS functions, benefits, and penalties for non-compliance. Continuous awareness campaigns can reinforce the advantages of using EFRIS, such as accurate financial reporting, improved tax compliance, and potential profitability gains. Campaigns should target both owners and staff, emphasizing practical benefits that directly affect business performance, thereby linking awareness to adoption and sustained use.

6. Monitoring and Evaluation: Finally, regular assessment of SME adoption rates, usage patterns, and performance outcomes is essential to inform policy adjustments and resource allocation. Monitoring ensures that interventions such as incentives, training, or infrastructure improvements are effective and targeted where needed. Evaluation provides evidence-based feedback to the URA, helping refine strategies to increase adoption and maximize EFRIS's impact on SME financial performance.

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