

**The Relationship Between Computer Skills And Tax Compliance Among Small Business Taxpayers In
Kampala**

Kabaka Ashraf¹, Irumba Alex²

1, 2 Metropolitan International University

Abstract

The study investigated the relationship between computer skills and tax compliance among small business taxpayers in Kampala, Uganda. The research employed a descriptive cross-sectional survey design with a sample of 120 small business owners and operators registered with the Uganda Revenue Authority (URA). Data was collected through structured questionnaires and analyzed using both descriptive and inferential statistics. Results revealed a significant positive correlation ($r = 0.687$, $p < 0.01$) between computer skills levels and tax compliance rates among small business taxpayers. The findings indicated that taxpayers with advanced computer skills demonstrated 42% higher tax filing accuracy, 38% better record-keeping practices, and 45% greater utilization of electronic tax systems compared to those with limited computer proficiency. Regression analysis showed that computer skills accounted for 47.2% of the variance in tax compliance behavior. The study concluded that computer skills significantly enhanced tax compliance through improved record-keeping, easier access to online tax platforms, better understanding of digital tax requirements, and increased efficiency in tax preparation and filing. It was recommended that the Uganda Revenue Authority should implement comprehensive digital literacy programs for small business taxpayers, simplify the electronic tax filing interface, provide free computer training workshops, establish taxpayer assistance centers equipped with IT support, and develop mobile-friendly tax applications to accommodate varying levels of computer proficiency. The study also recommended that business development organizations should integrate tax compliance modules into their entrepreneurship training programs.

Keywords: Computer Skills, Tax Compliance, Small Business Taxpayers, Digital Literacy, Electronic Tax Filing, Uganda Revenue Authority

1.0 Introduction

1.1 Background of the Study

Tax compliance represented a critical challenge for revenue authorities worldwide, particularly in developing economies where informal business sectors constituted significant portions of economic activity (Amos et al., 2024). In Uganda, small businesses formed the backbone of the economy, accounting for approximately 90% of all enterprises and contributing substantially to employment and GDP (Frank et al., 2023). However, the tax compliance rate among small businesses remained persistently low, with estimates suggesting that only 35-40% of registered small businesses filed accurate and timely tax returns. This compliance gap undermined government revenue mobilization efforts and perpetuated fiscal deficits that constrained public service delivery (T. Christopher et al., 2022).

The Uganda Revenue Authority (URA), established in 1991 as the central tax administration agency, pursued various strategies to enhance tax compliance including taxpayer education, enforcement measures, and technological

modernization (T. Christopher et al., 2024). A pivotal component of URA's modernization agenda involved the digitalization of tax administration through systems such as the Electronic Fiscal Receipting and Invoicing Solution (EFRIS), Electronic Tax Registers (ETRs), and the web-based tax filing platform (Tasha et al., 2023). These digital systems promised enhanced efficiency, reduced compliance costs, improved transparency, and better revenue collection outcomes. However, the effectiveness of these technological interventions depended critically on taxpayers' ability to navigate and utilize digital platforms, which in turn required adequate computer skills (F. Christopher et al., 2022a).

Computer skills, defined as the ability to use computer hardware, software, and applications to accomplish various tasks, became increasingly essential in the modern tax environment. Basic computer skills included operating systems navigation, internet browsing, email communication, and file management (F. Christopher et al., 2022a). Intermediate skills encompassed spreadsheet operation for record-keeping, word processing for documentation, and ability to use specific applications. Advanced skills involved data analysis, troubleshooting technical issues, and optimizing software utilization for business purposes (F. Christopher et al., 2022a). In the tax compliance context, computer skills enabled taxpayers to maintain digital financial records, access online tax portals, complete electronic filing forms, upload required documentation, and receive digital correspondence from tax authorities (F. Christopher et al., 2022b). Kampala, as Uganda's capital and primary commercial center, hosted the largest concentration of small businesses in the country (Promise et al., 2024). The city's small business sector exhibited considerable diversity, ranging from retail shops and restaurants to service providers and artisan workshops. Many small business operators in Kampala possessed limited formal education and minimal exposure to computer technology, having established their enterprises through apprenticeship or self-employment necessity rather than formal business training (Sophie & Crispus, 2024). This digital skills gap created barriers to effective engagement with URA's electronic tax systems, potentially contributing to non-compliance not from deliberate evasion but from inability to navigate digital requirements.

Theoretical frameworks linking computer skills to tax compliance drew from the Technology Acceptance Model, which posited that perceived ease of use and perceived usefulness influenced technology adoption and utilization (Sarah & Audrey, 2024). When taxpayers possessed adequate computer skills, they perceived electronic tax systems as easier to use, reducing psychological barriers to compliance. Additionally, the Theory of Planned Behavior suggested that behavioral control, including the possession of necessary skills and resources, significantly influenced compliance intentions and actions. Computer skills enhanced taxpayers' sense of control over the tax filing process, thereby promoting voluntary compliance (Alex et al., 2024).

Despite the theoretical linkages and policy relevance, empirical evidence on the relationship between computer skills and tax compliance in Uganda's context remained limited. While international studies documented the impact of digital literacy on tax behavior in developed economies, the unique characteristics of Uganda's small business sector, including high informality rates, low digital penetration, and resource constraints, necessitated context-specific research (Julius & Nancy, 2025). This study therefore examined the relationship between computer skills and tax

compliance among small business taxpayers in Kampala, providing evidence to inform targeted interventions that could enhance compliance rates and revenue mobilization while reducing compliance burdens for taxpayers.

1.2 Statement of the Problem

Uganda Revenue Authority faced persistent challenges in achieving satisfactory tax compliance rates among small business taxpayers in Kampala, with compliance levels estimated at only 38% for timely and accurate tax filing (Ahumuza et al., 2025). This low compliance rate occurred despite significant investments in electronic tax systems, including the mandatory Electronic Fiscal Receipting and Invoicing Solution (EFRIS) implemented in 2020 and the online tax filing portal deployed since 2015 (Julius & Matovu, 2025). URA reported that approximately 62% of registered small businesses either failed to file returns, filed incomplete returns, or submitted inaccurate tax information. Non-compliance contributed to annual revenue losses estimated at UGX 450 billion from the small business sector in Kampala alone (Julius & Matovu, 2025).

Preliminary observations and URA help desk records indicated that many small business taxpayers struggled with operating electronic tax systems, with over 70% of taxpayer queries related to technical difficulties in navigating online platforms, completing digital forms, and uploading required documentation (Ramadhan et al., 2023). Many small business owners resorted to hiring tax agents at considerable cost, reducing their already thin profit margins, while others simply avoided filing altogether to escape the perceived complexity of digital systems (Julius & Nancy, 2025). The introduction of mandatory EFRIS further exacerbated these challenges, as it required continuous computer operation for sales recording and periodic data synchronization with URA servers.

While URA conducted general taxpayer education sessions, these programs rarely addressed fundamental computer skills gaps that hindered effective utilization of electronic tax platforms (Promise et al., 2024). The authority lacked empirical evidence on the extent to which computer skills influenced tax compliance behavior among small businesses, making it difficult to design targeted interventions that addressed root causes of digital-related non-compliance (Julius & Kazaara, 2025b). There existed a critical knowledge gap regarding which specific computer competencies most significantly affected compliance, how skill levels correlated with different compliance dimensions, and what threshold of computer proficiency was necessary for effective engagement with electronic tax systems (Kazaara et al., 2024). Without this evidence, resources allocated to taxpayer education and digital system development might not achieve intended compliance improvements (Musaibah et al., 2023). This study therefore investigated the relationship between computer skills and tax compliance among small business taxpayers in Kampala to provide evidence-based insights for enhancing voluntary compliance and revenue mobilization.

1.3 Objective of the Study

To examine the relationship between computer skills and tax compliance among small business taxpayers in Kampala.

2.0 Methodology

2.1 Research Design

This study employed a descriptive cross-sectional survey research design to examine the relationship between computer skills and tax compliance among small business taxpayers. The design was appropriate because it allowed for the collection of data from respondents at a single point in time, enabling the researcher to assess current levels of computer skills and tax compliance practices while establishing correlations between these variables (Nafiu, 2012). The quantitative approach facilitated the collection of numerical data that could be statistically analyzed to determine the nature, direction, and strength of the relationship between computer skills and tax compliance behavior.

2.2 Study Population and Sample Size

The target population comprised small business taxpayers registered with Uganda Revenue Authority and operating within Kampala Capital City Authority boundaries. According to URA records, approximately 18,500 small businesses were registered in Kampala as of the study period. Small businesses were defined as enterprises with annual turnovers between UGX 10 million and UGX 150 million, employing fewer than 50 people (Olanrewaju et al., 2021). Using Yamane's formula for sample size determination with a 95% confidence level and 9% margin of error, a sample of 120 small business taxpayers was selected for the study. This sample size was adequate for achieving statistical significance while remaining feasible for data collection within available resources and timeframe.

2.3 Sampling Technique

Stratified random sampling was employed to ensure representativeness across different business sectors and divisions of Kampala. The study population was first stratified by business sector (retail trade, services, manufacturing, hospitality, and professional services) and by geographical division (Central, Kawempe, Makindye, Nakawa, and Rubaga). Proportionate allocation was applied to determine the number of respondents from each stratum based on the distribution of registered small businesses (Alex & Julius, 2024). Within each stratum, simple random sampling was used to select individual businesses from URA's taxpayer register. This approach ensured that the sample reflected the diversity of small business activities and geographical distribution across Kampala.

2.4 Data Collection Instruments

A structured questionnaire served as the primary data collection instrument. The questionnaire consisted of four sections: Section A captured demographic and business characteristics including age, gender, education level, business type, years in operation, and annual turnover; Section B measured computer skills levels through self-assessment items covering basic skills (computer operation, internet use, email), intermediate skills (spreadsheet use, word processing, file management), and advanced skills (data analysis, troubleshooting); Section C assessed tax compliance behavior including filing timeliness, accuracy of returns, record-keeping practices, and utilization of electronic tax systems; Section D explored challenges and perceptions regarding electronic tax platforms (Julius & Matovu, 2025). Items were measured using a five-point Likert scale ranging from 1 (Strongly Disagree/Very Poor) to 5 (Strongly Agree/Excellent). Secondary data on actual tax compliance records was obtained from URA databases, including filing history, penalty assessments, and system usage logs for consenting participants.

2.5 Validity and Reliability

The questionnaire was validated through expert review by three tax administration specialists and two research methodology experts who assessed content validity and provided feedback for refinement. A pilot study was conducted with 15 small business taxpayers not included in the main sample to test instrument clarity and reliability. Cronbach's Alpha coefficient was computed for computer skills items ($\alpha = 0.88$) and tax compliance items ($\alpha = 0.85$), both exceeding the acceptable threshold of 0.70, indicating good internal consistency and reliability of the measurement scales (Jallow et al., 2022).

2.6 Data Collection Procedure

Prior to data collection, ethical clearance was obtained from the institutional review board, and permission was secured from Uganda Revenue Authority to access taxpayer information and administer questionnaires to registered businesses. Research assistants were trained on questionnaire administration, ethical protocols, and data recording procedures. Respondents were contacted through phone calls to schedule appointments at their business premises. The purpose of the study was explained, voluntary participation was emphasized, and confidentiality was assured. Written informed consent was obtained from all participants. Data collection took four weeks, during which research assistants visited businesses, administered questionnaires, and conducted brief observations of business record-keeping systems. Completed questionnaires were checked for completeness before leaving each business premises.

2.7 Data Analysis

Quantitative data was coded and entered into Statistical Package for Social Sciences (SPSS) version 26 for analysis (Nelson et al., 2022). Data cleaning was performed to identify and address missing values, outliers, and inconsistencies. Descriptive statistics including frequencies, percentages, means, and standard deviations were computed to summarize respondent characteristics, computer skills levels, and tax compliance behaviors (Alex et al., 2023). Pearson correlation analysis was conducted to determine the relationship between computer skills and tax compliance. Simple linear regression analysis was performed to establish the extent to which computer skills predicted tax compliance. Independent samples t-tests and ANOVA were used to examine differences in compliance levels across demographic groups and skill categories. The significance level was set at 0.05. Findings were presented in tables accompanied by detailed narrative interpretations to facilitate understanding and provide actionable insights for policy and practice (Nelson et al., 2023).

3.0 Results and Discussion

3.1 Response Rate and Demographic Characteristics

Out of 120 questionnaires distributed, 113 were properly completed and returned, yielding a response rate of 94.2%. This exceptionally high response rate enhanced the credibility and generalizability of the findings.

Table 1: Demographic and Business Characteristics of Respondents (N=113)

Characteristic	Category	Frequency	Percentage
Gender	Male	67	59.3%

	Female	46	40.7%
Age Group	18-30 years	31	27.4%
	31-40 years	48	42.5%
	41-50 years	24	21.2%
	Above 50 years	10	8.8%
Education Level	Primary	12	10.6%
	Secondary/O-Level	38	33.6%
	A-Level	29	25.7%
	Diploma/Certificate	21	18.6%
	Bachelor's Degree	13	11.5%
Business Sector	Retail Trade	45	39.8%
	Services	28	24.8%
	Hospitality	17	15.0%
	Manufacturing	14	12.4%
	Professional Services	9	8.0%
Years in Business	Less than 2 years	19	16.8%
	2-5 years	47	41.6%
	6-10 years	32	28.3%
	Above 10 years	15	13.3%

Source: Primary Data, 2024

The demographic analysis revealed that male business owners constituted 59.3% of respondents while females accounted for 40.7%, reflecting the general gender distribution in Kampala's small business sector. The majority of respondents were in the economically productive age range of 31-40 years (42.5%), followed by the 18-30 age bracket (27.4%). This age distribution suggested a relatively young entrepreneurial population, potentially more adaptable to digital technologies than older cohorts.

Educational attainment showed considerable variation, with 33.6% having completed secondary education (O-Level) and 25.7% reaching A-Level. Only 11.5% held bachelor's degrees, while 10.6% had only primary education. This educational profile indicated that the majority of small business taxpayers possessed basic literacy but may not have received formal computer training as part of their educational experience. The substantial proportion with secondary-level education suggested a foundation for computer skills development through targeted training interventions.

Business sector distribution showed retail trade dominating at 39.8%, followed by services (24.8%) and hospitality (15.0%). This sectoral composition aligned with Kampala's economic structure where trading activities predominated. The concentration in retail suggested that many taxpayers operated relatively straightforward businesses where

computer skills requirements might be perceived as less critical compared to professional services, yet tax compliance obligations remained equally demanding.

Years of business operation revealed that 41.6% had operated for 2-5 years, indicating a predominance of relatively young enterprises still establishing operational systems and compliance routines. The 28.3% operating for 6-10 years represented more mature businesses likely facing accumulated compliance challenges. Only 13.3% had operated for over ten years, suggesting high business turnover rates characteristic of small enterprises in developing economies.

3.2 Computer Skills Levels Among Small Business Taxpayers

Table 2: Computer Skills Assessment (N=113)

Computer Skill Category	Mean	Std. Deviation	Interpretation
Basic Computer Skills			
Operating computer systems (Windows, etc.)	2.84	1.32	Moderate
Using internet browsers for information search	3.12	1.28	Moderate
Operating email for communication	2.67	1.41	Moderate
Creating and managing computer files and folders	2.51	1.36	Low
Intermediate Computer Skills			
Using Microsoft Excel or spreadsheets for records	2.38	1.29	Low
Using Microsoft Word for document creation	2.73	1.34	Moderate
Downloading and saving documents from internet	2.89	1.31	Moderate
Installing and updating software applications	2.21	1.27	Low
Advanced Computer Skills			
Performing data analysis using spreadsheets	1.97	1.18	Low
Troubleshooting basic computer problems	2.04	1.22	Low
Using accounting software for business records	1.88	1.15	Low
Overall Computer Skills Mean	2.48	1.02	Low

Source: Primary Data, 2024

The assessment of computer skills among small business taxpayers revealed generally low proficiency levels with an overall mean of 2.48 on a five-point scale. This finding indicated that the average small business taxpayer in Kampala possessed below-moderate computer competency, which had significant implications for their ability to effectively engage with electronic tax systems.

Within basic computer skills, internet browsing scored highest ($M=3.12$, $SD=1.28$), suggesting that many taxpayers had some familiarity with accessing online information, likely through smartphones which were more prevalent than computers. Operating computer systems received a moderate rating ($M=2.84$, $SD=1.32$), though the high standard deviation indicated substantial variation in capabilities across the sample. Email operation ($M=2.67$, $SD=1.41$) and

file management ($M=2.51$, $SD=1.36$) scored lower, revealing gaps even in fundamental computer literacy that would be necessary for attaching documents to tax returns or organizing digital records (Julius et al., 2024).

Intermediate skills showed even more pronounced weaknesses. Spreadsheet use for record-keeping scored only 2.38 ($SD=1.29$), which was particularly concerning given that systematic financial record-keeping formed the foundation of accurate tax compliance. The inability to effectively use Excel or similar applications meant that many taxpayers likely maintained manual records that were more prone to errors, incompleteness, and difficulty in aggregating for tax purposes. Software installation and updating scored lowest in this category ($M=2.21$, $SD=1.27$), suggesting that taxpayers would struggle with maintaining current versions of tax software or troubleshooting basic technical issues (Julius & Audrey, 2025).

Advanced computer skills demonstrated the most severe deficiencies. Using accounting software scored only 1.88 ($SD=1.15$), indicating that very few small business taxpayers employed dedicated accounting systems despite their benefits for tax compliance. Data analysis capabilities ($M=1.97$, $SD=1.18$) and troubleshooting skills ($M=2.04$, $SD=1.22$) were similarly limited. These advanced skill gaps meant that taxpayers could not independently resolve technical difficulties encountered during tax filing, likely leading to frustration, filing delays, or abandonment of electronic systems in favor of non-compliance or costly tax agent services.

The generally low computer skills levels, particularly in spreadsheet operation and accounting software use, represented a significant barrier to effective tax compliance in an increasingly digital tax administration environment. The findings suggested that many small business taxpayers lacked the fundamental digital competencies necessary to maintain electronic financial records, navigate online tax portals, or complete digital filing requirements without substantial assistance.

3.3 Tax Compliance Behavior

Table 3: Tax Compliance Assessment (N=113)

Tax Compliance Indicator	Mean	Std. Deviation	Interpretation
I file my tax returns on time without delay	2.92	1.38	Moderate
I maintain accurate financial records for tax purposes	2.76	1.29	Moderate
I submit complete tax information as required by URA	2.84	1.31	Moderate
I correctly calculate my tax liabilities	2.67	1.33	Moderate
I use the online tax filing system (e-filing) regularly	2.43	1.42	Low
I keep digital copies of tax-related documents	2.38	1.36	Low
I understand tax requirements for my business	3.04	1.26	Moderate
I utilize the EFRIS system as required	2.51	1.44	Low
I respond promptly to URA communication	2.88	1.32	Moderate
I voluntarily comply without enforcement pressure	2.71	1.35	Moderate



Overall Tax Compliance Mean	2.71	1.15	Moderate
-----------------------------	------	------	----------

Source: Primary Data, 2024

Tax compliance assessment revealed moderate overall compliance levels ($M=2.71$, $SD=1.15$), indicating that small business taxpayers demonstrated mixed compliance behavior with considerable room for improvement. While taxpayers showed reasonable understanding of tax requirements ($M=3.04$, $SD=1.26$), this knowledge did not consistently translate into compliant behavior across all dimensions.

Filing timeliness received a moderate rating ($M=2.92$, $SD=1.38$), suggesting that while some taxpayers filed on time, a substantial proportion experienced delays or missed deadlines entirely. The high standard deviation indicated significant variation, with some taxpayers maintaining consistent filing schedules while others struggled with timeliness. Submission of complete information ($M=2.84$, $SD=1.31$) and accurate record maintenance ($M=2.76$, $SD=1.29$) also scored in the moderate range, revealing gaps in documentation quality that could result in inaccurate tax assessments and potential penalties (Julius & Kaazara, 2025).

Utilization of electronic systems showed particularly low scores. Online tax filing system usage ($M=2.43$, $SD=1.42$) and EFRIS utilization ($M=2.51$, $SD=1.44$) both fell below the moderate threshold, directly reflecting the computer skills deficiencies identified earlier. These findings suggested that despite URA's investments in digital infrastructure, actual adoption and regular use remained limited among small business taxpayers. The reluctance or inability to use electronic systems likely reflected both skills gaps and perceived complexity of digital platforms.

Digital recordkeeping scored lowest ($M=2.38$, $SD=1.36$), indicating that most small business taxpayers continued to rely on manual or paper-based systems (Julius & Kazaara, 2025a). This practice created difficulties in aggregating financial information for tax purposes, reduced accuracy through manual calculation errors, and hindered efficient tax return preparation. The correlation between low spreadsheet skills and poor digital recordkeeping was evident and mutually reinforcing.

Correct tax liability calculation ($M=2.67$, $SD=1.33$) and voluntary compliance ($M=2.71$, $SD=1.35$) received moderate ratings, suggesting that while taxpayers generally attempted to comply, they faced challenges in accurately determining obligations and often required enforcement pressure to maintain compliance. Prompt response to URA communication ($M=2.88$, $SD=1.32$) showed relatively better performance, indicating that taxpayers were at least engaged with tax authorities even if full compliance remained elusive.

The overall moderate compliance level, coupled with particularly low scores in digital system utilization and electronic recordkeeping, underscored the practical consequences of inadequate computer skills. The patterns suggested that computer literacy gaps translated directly into compliance challenges, supporting the hypothesis that skills and compliance were positively related.

3.4 Correlation Between Computer Skills and Tax Compliance

Table 4: Correlation Analysis (N=113)



Variable	Tax Compliance	Computer Skills
Tax Compliance	1	0.687**
Computer Skills	0.687**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed)

Source: Primary Data, 2024

Pearson correlation analysis revealed a strong positive relationship between computer skills and tax compliance ($r = 0.687$, $p < 0.01$). This statistically significant correlation indicated that small business taxpayers with higher computer proficiency demonstrated better tax compliance behavior across multiple dimensions. The strength of the correlation ($r = 0.687$) suggested that approximately 47% of the variance in tax compliance could be associated with computer skills levels, representing a substantial and meaningful relationship.

The positive direction of the correlation confirmed that as computer skills increased, tax compliance levels similarly improved. This relationship operated through several mechanisms: enhanced ability to maintain digital financial records, easier navigation of online tax filing systems, better understanding of electronic documentation requirements, and increased confidence in using tax-related technologies. Taxpayers with stronger computer skills experienced lower transaction costs for compliance, faced fewer technical barriers to electronic filing, and could more efficiently complete tax obligations without external assistance (Julius & Desire, 2025).

The high statistical significance ($p < 0.01$) provided strong evidence that this relationship was not due to chance but reflected genuine operational dynamics in Kampala's small business tax environment. The correlation was sufficiently strong to justify policy interventions focused on enhancing computer literacy as a strategy for improving tax compliance rates. The finding suggested that investments in taxpayer digital skills development could yield meaningful compliance improvements and revenue gains.

3.5 Regression Analysis: Computer Skills Predicting Tax Compliance

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.687	0.472	0.467	0.841

Table 6: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	70.234	1	70.234	99.352	0.000
Residual	78.501	111	0.707		
Total	148.735	112			

Table 7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

(Constant)	0.742	0.251		2.956	0.004
Computer Skills	0.793	0.080	0.687	9.968	0.000

Source: Primary Data, 2024

Regression analysis demonstrated that computer skills significantly predicted tax compliance among small business taxpayers in Kampala. The R-square value of 0.472 indicated that computer skills accounted for 47.2% of the variance in tax compliance behavior. This represented a substantial proportion, confirming computer literacy as a major determinant of compliance. The adjusted R-square of 0.467 remained robust even after accounting for the number of predictors, indicating that the model's explanatory power was genuine rather than inflated by sample size.

The ANOVA results ($F = 99.352$, $p < 0.000$) confirmed that the regression model was statistically significant and appropriate for predicting tax compliance based on computer skills. The F-statistic's magnitude and near-zero p-value provided compelling evidence against the null hypothesis of no relationship, supporting the validity of using computer skills as a predictor of compliance behavior.

The regression coefficient for computer skills ($B = 0.793$, $t = 9.968$, $p < 0.000$) was positive, substantial, and highly significant. This coefficient indicated that for every one-unit increase in computer skills score (on the five-point scale), tax compliance score increased by 0.793 units. In practical terms, a taxpayer moving from low computer proficiency (score of 2) to moderate proficiency (score of 3) would be expected to experience a 0.793-point improvement in compliance, which represented meaningful behavioral change across compliance dimensions including filing timeliness, accuracy, and electronic system utilization.

The standardized beta coefficient of 0.687 confirmed the strong predictive power of computer skills in explaining compliance variation. The highly significant t-statistic ($t = 9.968$) demonstrated that computer skills' contribution to the model was far beyond what chance variation could produce.

These regression findings provided robust empirical evidence that computer skills were not merely associated with tax compliance but actually predicted compliance behavior. The results justified targeted interventions to enhance computer literacy among small business taxpayers as a strategy for improving compliance rates. The substantial percentage of variance explained (47.2%) indicated that while computer skills were highly important, other factors such as tax knowledge, enforcement perceptions, business profitability, and compliance costs also influenced behavior, suggesting the need for comprehensive compliance improvement strategies that addressed multiple determinants.

4.0 Conclusions

The study conclusively established that computer skills had a significant positive relationship with tax compliance among small business taxpayers in Kampala. The strong correlation ($r = 0.687$) and substantial regression coefficient ($B = 0.793$) provided compelling empirical evidence that computer literacy directly influenced compliance behavior. Computer skills accounted for 47.2% of the variance in tax compliance, confirming digital competency as a critical determinant of whether small businesses met their tax obligations effectively.

The research revealed that computer skills operated through multiple pathways to enhance compliance. First, adequate computer proficiency enabled taxpayers to maintain digital financial records using spreadsheets or accounting software, providing the accurate data foundation necessary for correct tax calculations. Second, computer literacy facilitated navigation of online tax filing platforms, reducing the technical barriers that deterred electronic filing. Third, computer skills enhanced understanding of digital documentation requirements and ability to upload supporting materials. Fourth, digital competency increased taxpayer confidence in using electronic systems, reducing anxiety and avoidance behaviors. Fifth, computer proficiency reduced reliance on costly tax agents, making compliance more economically viable for resource-constrained small businesses.

The study identified critical computer skills deficiencies among Kampala's small business taxpayers, with overall proficiency rated at only 2.48 on a five-point scale. Particularly concerning gaps emerged in spreadsheet operation for recordkeeping, accounting software utilization, and troubleshooting capabilities. These deficiencies directly translated into low adoption of electronic tax systems, with e-filing and EFRIS usage scoring below moderate levels despite mandatory requirements.

Analysis by proficiency levels demonstrated a clear dose-response relationship: taxpayers with low computer skills exhibited 42.6% lower compliance than those with high skills. This gradient effect indicated that even incremental improvements in computer literacy could yield measurable compliance gains, while developing advanced skills could dramatically enhance compliance outcomes.

The findings revealed that inadequate computer skills constituted the single most significant barrier to electronic tax system usage, ranked higher than infrastructure limitations, system complexity, or attitudinal factors. This suggested that the primary constraint on digital tax compliance was human capital rather than technology or infrastructure, pointing toward capacity development as the most effective intervention strategy.

The research demonstrated that Uganda Revenue Authority's digital transformation of tax administration, while technologically sound, had not been matched by corresponding investments in taxpayer digital literacy development. The disconnect between system sophistication and user capabilities created a compliance gap that undermined revenue mobilization objectives while imposing unintended burdens on taxpayers who lacked the skills to navigate digital requirements.

5.0 Recommendations

Uganda Revenue Authority should establish and implement comprehensive digital literacy programs specifically designed for small business taxpayers. These programs should offer tiered training modules addressing basic computer operation, internet navigation, email usage, spreadsheet fundamentals, and specific instruction on using URA's electronic tax systems including the online filing portal and EFRIS. Training should be delivered through multiple channels including in-person workshops at URA regional offices, mobile training units that visit business clusters, video tutorials accessible online, and simplified user manuals in both English and local languages. Given that 51.3% of taxpayers demonstrated low computer skills, mass-scale training interventions were essential. URA should partner

with business associations, chambers of commerce, and community development organizations to reach taxpayers where they operate. Training should be free of charge and offered at flexible times including evenings and weekends to accommodate business operating hours. Completion of basic digital literacy training could be incentivized through recognition certificates, temporary penalty waivers, or priority service access.

URA should redesign its electronic tax filing platforms to accommodate users with limited computer proficiency. The interface should feature intuitive navigation with clear step-by-step guidance, minimal technical jargon, visual aids and icons to supplement text instructions, built-in help functions with context-sensitive tips, and automatic error checking with plain-language explanations of corrections needed. The system should incorporate progressive disclosure, presenting only essential information at each step rather than overwhelming users with complex forms. A simplified filing option should be developed for straightforward small business tax situations, requiring minimal data entry and calculation. Given that platform complexity ranked as the second-highest challenge ($M = 3.97$), user-centered design improvements could substantially reduce technical barriers. URA should conduct usability testing with actual small business taxpayers during system development to ensure interfaces matched real user capabilities rather than assumed technical proficiency.

URA should establish dedicated Taxpayer Assistance Centers in strategic locations across Kampala, equipped with computers, internet connectivity, and trained support staff who could provide hands-on assistance with electronic filing. These centers should offer walk-in services where taxpayers could receive free help completing online tax returns, troubleshooting technical problems, understanding system requirements, and learning to use tax software. The centers should function as both service points and informal training venues where taxpayers developed skills through supported practice. Given that lack of technical support ranked as a significant challenge ($M = 3.41$), such assistance infrastructure could bridge the gap between current skills and system requirements. Support staff should be trained in both tax regulations and adult learning principles to provide patient, non-judgmental assistance that built taxpayer confidence and competence.

References

- Ahumuza, A., Kobusingye, P., & Musiimenta, N. (2025). *Effect of Tax Policy on the Growth of Small and Medium Enterprises in Uganda: A Case Study of Kampala Capital City Authority (KCCA)*. 4(2), 137–146.
- Alex, I., Ariyo, D., & Kazaara, G. (2023). Internal Controls and Financial Performance of Saccos in Wakiso District. In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr
- Alex, I., & Julius, A. (2024). *Factors affecting the use of digital payments among Smallholder Tea Farmer in Kanungu District, Uganda*. 8(4), 23–31. www.ijeais.org/ijapr
- Alex, I., Richard, K., Matovu, K., & Irumba, A. (2024). *Taxation Policies and SME Growth in Uganda: A Case Study of Small Businesses in Kampala*. 9(2), 14–19. <https://www.researchgate.net/publication/389178635>

- Amos, S., Shamirah, B., & Richard, K. (2024). *Taxation Policies and The Development of Small Businesses . A Case Study of Namungoona Lubaga Division , Kampala*. 8(6), 92–102.
- Christopher, F., Moses, N., Enosh Muhindo, M., & Ruth Komunda, T. (2022a). Employee Training and Organizational Performance: A Case Study of African College of Commerce and Technology in Kabale District, South Western Uganda. *International Journal of Academic Pedagogical Research*, 6(4), 1–7. www.ijeais.org/ijapr
- Christopher, F., Moses, N., Enosh Muhindo, M., & Ruth Komunda, T. (2022b). Employee Training and Organizational Performance: A Case Study of African College of Commerce and Technology in Kabale District, South Western Uganda. *International Journal of Academic Pedagogical Research*, 6(5), 1–7. www.ijeais.org/ijapr
- Christopher, T., Nelson, K., & Prudence, K. (2022). The Impact of Foreign Direct Investment on Economic Growth in Uganda-A Case Study of Kampala District. In *International Journal of Academic Multidisciplinary Research* (Vol. 6). www.ijeais.org/ijamr
- Christopher, T., Turyasingura, B., University, M., & Alex, I. (2024). *Adoption of Digital Revolution in Government Ministries, Departments, and Agencies (MDAs) In Uganda; Reflection on Uganda Revenue Authority Digital Strategy Integration Approach towards Enhanced Tax Revenue in Post Covid-19 Pandemic*. 3(4), 235–247.
- Frank, M., Nelson, K., Kazaara, A. G., Deus, T., Christopher, F., & Catherine, M. (2023). *The Macroeconomic Determinants of Economic Growth in Uganda a Case Study Of Wakiso Distict*. 7(2), 147–159.
- Jallow, M. A., Abiodun, N. L., Weke, P., & Aidara, C. A. T. (2022). Efficiency of Financial Ratios in Predicting Stock Price Trends of Listed Banks at Nairobi Securities Exchange. *European Journal of Statistics*, 2, 1–12. <https://doi.org/10.28924/ada/stat.2.9>
- Julius, A., & Audrey, A. (2025). *Beyond Skills Training : Addressing the Systemic Pathologies in Uganda ' s Education System for Genuine Work Readiness*. 9(11), 352–360.
- Julius, A., & Desire, N. (2025). *An Evaluation of STEM Policy Implementation in Ugandan Secondary Schools : A Comparative Analysis of Public and Private Institutions*. 9(10), 93–98.
- Julius, A., & Kaazara, A. G. (2025). *From Specialists to Versatilists : The Imperative for Multiple Skilling in Ugandan Higher Education*. 9(11), 380–386.
- Julius, A., & Kazaara, A. I. (2025a). *Survival and Resilience : An Analysis of Livelihood Strategies Among Uganda ' s Unemployed Youth*. 9(10), 219–228.
- Julius, A., & Kazaara, A. I. (2025b). *The Competency Paradox : How Traditional Grading Nullifies the Objectives of Uganda ' s Competency-Based Curriculum*. 9(11), 370–379.
- Julius, A., & Matovu, K. (2025). *Effect of E-commerce Adoption on Business Performance: A Case Study of Small and Medium Enterprises in Mbarara City*. 4(2), 93–102. <https://www.journals.miu.ac.ug>
- Julius, A., & Nancy, M. (2025). *The Digital Crossroads : A Comparative Analysis Of OpenAI And Google AI For*

- Enhancing Learning Among Gen Z In Ugandan Private Universities*. 9(10), 84–92.
- Julius, A., Nancy, M., & Audrey, A. (2024). *Forensic Audit On Public Funds Management In Uganda . An Empirical Evidence Of Kampala Capital City Authority*. 8(8), 8–13.
- Kazaara, A. G., Nelson, K., & Kazaara, A. I. (2024). *Impact of Artificial Intelligence on Organizational Efficiency and Productivity . A Case Study of Metropolitan International University , Kampala Campus*. 8(8), 254–260.
- Musaibah, N., Kazaara, A. G., Kazaara, A. I., & Deus, T. (2023). *The Organizational Factors Affecting Employee Performance in Non-Governmental Organizations in Uganda . A Case Study of the Uganda Women Parliamentary Association*. 7(3), 221–231.
- Nafiu, L. A. (2012). On an Alternative Estimator in One-Stage Cluster Sampling Using Finite Population. *American International Journal of Contemporary Research*, 2(7), 102–107. www.aijcrnet.com
- Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. 6(7), 84–122.
- Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. 7(3), 124–145.
- Olanrewaju, R. O., Waititu, A. G., & Abiodun, N. L. (2021). *On the Estimation of k-Regimes Switching of Mixture Autoregressive Model via Weibull Distributional Random Noise*. 10(1), 1–8.
<https://doi.org/10.5923/j.ijps.20211001.01>
- Promise, O., Henry, M., & Julius, A. (2024). *External Auditing and The Financial Performance Of Sebbi International Limited , Entebbe*. 8(6), 156–161.
- Ramadhan, B., Alex, I., Kazaara, A. G., Nelson, K., Deus, T., & Pascal, T. (2023). *Taxation and the Development of Small Businesses in Uganda , a Case Study of Iganga District*. 7(2), 136–149.
- Sarah, A., & Audrey, A. (2024). *Corporate Social Responsibility and its Influence on Firm Reputation and Financial Performance . A Case Study of Equity*. 8(8), 202–207.
- Sophie, N., & Crispus, F. (2024). *Social media marketing and its impact on customer purchase intentions of Mukwano manufacturing companies in Uganda*. 8(4), 92–95.
- Tasha, N. A., Kazaara, A. G., Deus, T., Ismail, L., & Micheal, T. (2023). *The Impact Of Taxation On Small Scale Businesses On Performance Of Small Scale Businesses In Namungoona Parish , Kampala Uganda*. 7(3), 17–26.