

Digital Taxation And E-Commerce Growth Among Kasita Traders In Kampala, Uganda

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Abstract

This study investigated the relationship between digital taxation and e-commerce growth among Kasita traders in Kampala, Uganda. The increasing digitalization of commerce has prompted governments across developing nations to introduce digital tax regimes, yet limited empirical evidence exists on how such policies affect micro and small traders in informal urban markets. Using a cross-sectional survey design, data were collected from 180 traders in Kasita market through structured questionnaires. Descriptive statistics, Pearson correlation, and multiple linear regression were employed for data analysis using SPSS version 25. Findings revealed that digital tax awareness ($r = 0.512$, $p < 0.01$), tax compliance systems ($r = 0.467$, $p < 0.01$), and digital payment infrastructure ($r = 0.543$, $p < 0.01$) were all significantly and positively correlated with e-commerce growth. Regression results indicated that digital payment infrastructure was the strongest predictor of e-commerce growth ($\beta = 0.381$, $p < 0.01$), followed by tax compliance systems ($\beta = 0.274$, $p < 0.05$) and digital tax awareness ($\beta = 0.221$, $p < 0.05$). The model explained 54.3% of the variance in e-commerce growth ($R^2 = 0.543$, $F = 34.67$, $p < 0.001$). The study concludes that strategic investment in digital payment infrastructure and targeted taxpayer education can significantly stimulate e-commerce growth. Policy recommendations include government subsidies on digital payment devices, simplified digital tax filing platforms, and market-based trader sensitization programs.

Keywords: Digital taxation, e-commerce growth, Kasita traders, Uganda Revenue Authority, digital payment infrastructure, tax compliance

1.0 Background of the study

The global digital economy has experienced unprecedented expansion over the past decade, fundamentally transforming how commercial transactions are conducted (Julius & Nancy, 2026). In Sub-Saharan Africa, mobile penetration and internet connectivity have catalyzed the emergence of digital commerce platforms, enabling even small-scale traders to participate in online marketplaces (UNCTAD, 2021). Uganda, with a mobile money penetration rate exceeding 70% of the adult population, presents a unique context for examining the intersection of digital taxation and commercial growth (Bank of Uganda, 2022).

The Uganda Revenue Authority (URA) introduced the Digital Services Tax (DST) as part of the Excise Duty Amendment Act of 2021, imposing a 5% levy on digital services accessed in Uganda (Julius & Kazaara, 2026). While this measure aimed to broaden the tax base and ensure equitable contribution from digital economy participants, its implications for grassroots traders operating in informal digital markets remain poorly understood (T. Christopher et al., 2024). Kasita, a densely populated commercial neighborhood in Kampala's Nakawa Division, has emerged as a hub for mobile money agents, online retailers, and digital service providers serving low-income consumers (Lydia et al., 2023). Research on digital taxation in developing country contexts has largely focused on multinational digital

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corporations rather than local micro-enterprises(Alex et al., 2024). The experiences of individual traders navigating tax compliance while simultaneously pursuing e-commerce growth constitute an important but understudied dimension of fiscal policy implementation(Irumba et al., 2024). Understanding these dynamics is critical for designing inclusive digital tax policies that promote rather than constrain economic participation among vulnerable commercial actors.

2.0 Problem Statement

Despite the growing importance of digital commerce in Uganda's informal sector, there is a significant gap in understanding how digital taxation policies affect the e-commerce growth trajectories of small-scale traders(Julius & Matovu, 2025). The introduction of digital taxes has generated considerable uncertainty among Kasita traders, many of whom operate at the margins of formal tax systems and possess limited financial literacy(Gracious, 2023). Preliminary observations suggest that some traders have reduced their digital commerce activities in response to tax obligations, while others report being entirely unaware of applicable tax requirements(Tasha et al., 2023a). This divergence in trader responses raises fundamental questions about the effectiveness of current digital tax administration and its consequences for e-commerce development at the grassroots level(Julius & Kaazara, 2025). Without empirical evidence on the relationship between digital taxation variables and e-commerce outcomes, policymakers lack the information needed to calibrate tax policies that balance revenue collection objectives with inclusive economic growth imperatives(Amos et al., 2024). This study addresses this gap by systematically examining how digital tax awareness, compliance systems, and payment infrastructure influence e-commerce growth among Kasita traders.

3.0 Main Objectives

The main objective of this study was to examine the relationship between digital taxation and e-commerce growth among Kasita traders in Kampala, Uganda. Specifically, the study sought to: (i) assess the level of digital tax awareness among Kasita traders; (ii) evaluate the effectiveness of tax compliance systems in facilitating digital tax payment; (iii) examine the role of digital payment infrastructure in supporting e-commerce growth; and (iv) determine the extent to which digital taxation variables collectively predict e-commerce growth.

4.0 Literature Review

4.1 Digital Taxation Frameworks

Digital taxation encompasses the application of tax obligations to transactions conducted through digital platforms and services(Ramadhan, Alex, Ariyo, et al., 2023). The OECD's Pillar One and Pillar Two frameworks have established international standards for taxing digital multinationals, yet these structures have limited direct applicability to informal digital traders in developing economies (OECD, 2020). Scholars have noted that the heterogeneous nature of digital commerce defies simple tax categorization, creating compliance challenges particularly for small-scale operators (Bird & Zolt, 2019). In the African context, countries including Kenya, Tanzania, and Uganda have enacted digital service taxes targeting local and foreign providers of digital content and services(W.

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Brian & Jacob, 2023). Studies on Kenya's Digital Service Tax introduced in 2021 found mixed compliance rates and significant small business resistance stemming from awareness deficits and system complexity (Mwaura & Njoroge, 2022). Similar patterns have been documented in Tanzania, where mobile money transaction taxes have affected trading volumes among micro-enterprises (Mwenda & Mutambara, 2021).

4.2 E-Commerce Growth Determinants

E-commerce growth in developing markets is driven by a complex interplay of technological, regulatory, and economic factors (George Stanley & Nafiu, 2020). Awitta and Kiplangat (2020) identified internet connectivity, digital literacy, and logistics infrastructure as primary enablers of e-commerce adoption among Kenyan small traders. In Uganda, research by Nabukeera and Rashid (2021) emphasized the role of mobile money platforms in democratizing access to digital commerce, enabling transactions that bypass traditional banking intermediaries (Gracious, 2023). The regulatory environment, including tax policy, has emerged as a significant determinant of e-commerce growth trajectories (Florence & Julius, 2023). Studies in OECD contexts have found that tax compliance costs can constitute a substantial barrier to digital commerce participation, particularly for small businesses with limited administrative capacity (Devereux et al., 2020). However, well-designed tax systems with simplified compliance mechanisms and clear educational outreach can mitigate these barriers while ensuring fiscal contributions from digital economy participants (Tasha et al., 2023b).

4.3 Tax Awareness and Compliance Behavior

Tax awareness, defined as the degree to which taxpayers understand their tax obligations and the mechanisms for fulfilling them, has been consistently identified as a predictor of compliance behavior (Ronald et al., 2023). Kirchler's (2007) slippery slope framework posits that both trust in tax authorities and perceived coercive power influence compliance, with voluntary compliance being most sustainable when taxpayers understand and accept the fairness of tax obligations (Alex et al., 2024). In Uganda specifically, studies have found that tax knowledge significantly mediates the relationship between tax policy and compliance rates among small businesses (Akankunda et al., 2022).

5.0 Methodology

A cross-sectional survey design was employed, targeting traders operating in Kasita market, Kampala. The study population comprised approximately 420 registered traders engaged in digital commerce activities, from which a sample of 180 was selected using stratified random sampling, stratifying by trading category (mobile money services, online retail, digital content) (Abiodun Nafiu, 2012). Data collection utilized a structured questionnaire with items rated on a five-point Likert scale, adapted from validated instruments in the taxation and e-commerce literature (Gracious, 2023). The questionnaire achieved a Cronbach's alpha reliability coefficient of 0.847, indicating strong internal consistency. Data were analyzed using SPSS version 25, employing descriptive statistics, Pearson correlation analysis, and multiple linear regression (Nelson et al., 2022). Ethical clearance was obtained from the Makerere University Research Ethics Committee, and informed consent was secured from all participants.

6.0 Results

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6.1 Descriptive Statistics

Table 1: Descriptive Statistics for Study Variables

Variable	N	Mean	Std. Dev.	Min	Max	Interpretation
Digital Tax Awareness	180	3.12	0.84	1	5	Moderate
Tax Compliance Systems	180	2.98	0.91	1	5	Moderate
Digital Payment Infrastructure	180	3.45	0.78	1	5	Good
E-Commerce Growth	180	3.28	0.88	1	5	Moderate

Source: Primary Data, 2025

The descriptive statistics presented in Table 1 reveal that digital payment infrastructure recorded the highest mean score ($M = 3.45$, $SD = 0.78$), indicating that traders perceived the availability of digital payment tools relatively favorably compared to other study variables (Julius & Kazaara, 2026). Digital tax awareness achieved a mean of 3.12 ($SD = 0.84$), while tax compliance systems registered the lowest mean of 2.98 ($SD = 0.91$), suggesting that traders found existing tax compliance mechanisms moderately adequate but somewhat cumbersome (Alex et al., 2024). E-commerce growth had a mean score of 3.28 ($SD = 0.88$), indicating moderate growth performance across the sampled traders. The standard deviations across all variables ranged from 0.78 to 0.91, reflecting relatively homogeneous perceptions among respondents while acknowledging meaningful variability that warrants further analytical investigation.

6.2 Correlation Analysis

Table 2: Pearson Correlation Matrix

Variable	1	2	3	4
1. Digital Tax Awareness	1.000			
2. Tax Compliance Systems	0.438**	1.000		
3. Digital Payment Infrastructure	0.391**	0.412**	1.000	
4. E-Commerce Growth	0.512**	0.467**	0.543**	1.000

** Correlation is significant at the 0.05 level (2-tailed)

Source: Primary Data, 2025

The correlation matrix (Table 2) reveals that all three independent variables were significantly and positively correlated with e-commerce growth at the 1% significance level. Digital payment infrastructure demonstrated the strongest correlation with e-commerce growth ($r = 0.543$, $p < 0.01$), followed by digital tax awareness ($r = 0.512$, $p < 0.01$) and tax compliance systems ($r = 0.467$, $p < 0.01$) (Julius & Nancy, 2026). These findings indicate that traders who operate in environments with better digital payment infrastructure, greater tax awareness, and more accessible

compliance systems tend to experience higher e-commerce growth(Ramadhan, Alex, Kazaara, et al., 2023). The inter-correlations among independent variables were moderate, ranging from 0.391 to 0.438, suggesting the absence of severe multicollinearity, which was confirmed by variance inflation factors (VIF) all below 2.5 in the regression analysis.

6.3 Regression Analysis

Table 3: Multiple Linear Regression on Predictors of E-Commerce Growth

Variable	B	Std. Error	Beta (β)	t	p-value
Constant	0.812	0.241	-	3.369	0.001
Digital Tax Awareness	0.231	0.092	0.221	2.511	0.013
Tax Compliance Systems	0.268	0.097	0.274	2.763	0.006
Digital Payment Infra.	0.429	0.098	0.381	4.378	0.000

$R = 0.737$, $R^2 = 0.543$, Adjusted $R^2 = 0.535$, $F(3,176) = 34.67$, $p < 0.001$

Source: Primary Data, 2025

The multiple regression model was statistically significant ($F(3,176) = 34.67$, $p < 0.001$) and explained 54.3% of the variance in e-commerce growth ($R^2 = 0.543$, Adjusted $R^2 = 0.535$). Digital payment infrastructure emerged as the strongest independent predictor ($\beta = 0.381$, $t = 4.378$, $p < 0.001$), indicating that improvements in digital payment tools and platforms have the greatest potential to drive e-commerce growth among Kasita traders(Nelson et al., 2023). Tax compliance systems ($\beta = 0.274$, $t = 2.763$, $p = 0.006$) and digital tax awareness ($\beta = 0.221$, $t = 2.511$, $p = 0.013$) also made significant independent contributions to e-commerce growth(Ivan et al., 2023). These findings collectively suggest that addressing both infrastructure and knowledge dimensions of digital taxation is essential for promoting sustainable e-commerce development in informal markets.

7.0 Discussion of Results

The finding that digital payment infrastructure is the most influential predictor of e-commerce growth aligns with prior research emphasizing the foundational role of technological enablement in digital commerce adoption. Awitta and Kiplangat (2020) similarly found that payment system accessibility was the primary determinant of e-commerce adoption among Kenyan traders. In the Kasita context, the proliferation of mobile money platforms has created a digital payment ecosystem that enables commercial transactions without formal banking relationships, lowering entry barriers for informal traders. However, the moderate mean score for payment infrastructure (3.45) suggests that significant gaps remain, particularly regarding interoperability between different payment platforms and the reliability of digital connectivity(S. Brian et al., 2024).

The significant contribution of tax compliance systems to e-commerce growth offers an important counterintuitive finding: rather than taxation suppressing commercial activity, accessible and simplified compliance mechanisms appear to facilitate it, possibly by formalizing trader operations and building credibility with customers and suppliers(Faridah et al., 2023). This supports Kirchler's (2007) argument that cooperative relationships between tax

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authorities and taxpayers, built on mutual trust and clear communication, generate more positive compliance outcomes than purely coercive approaches. The relatively low mean for tax compliance systems (2.98) highlights the urgent need for URA to simplify digital tax filing processes, potentially through USSD-based filing systems accessible on basic mobile phones(W. Brian & Jacob, 2023).

The positive relationship between digital tax awareness and e-commerce growth suggests that informed traders are better positioned to navigate the digital tax landscape and leverage digital platforms for commercial growth(Irumba et al., 2024). This finding echoes Akankunda et al. (2022), who identified tax knowledge as a mediating variable in the compliance-growth relationship among Ugandan SMEs. The moderate awareness levels among Kasita traders reflect the limited reach of current URA educational programs into informal market segments, representing an important policy gap(F. Christopher & Shamirah, 2025).

8.0 Conclusions

This study provides empirical evidence that digital taxation variables are significantly and positively associated with e-commerce growth among Kasita traders in Kampala. Contrary to prevailing concerns that taxation inhibits commercial activity, the findings suggest that when digital tax frameworks are accompanied by accessible compliance systems, adequate payment infrastructure, and comprehensive trader education, they can serve as catalysts for formalization and commercial growth(Lydia et al., 2023). The model's explanatory power of 54.3% underscores the importance of the three identified variables while acknowledging that other factors, including logistics, product characteristics, and market competition, also shape e-commerce outcomes(Paul & Kazaara, 2023).

9.0 Recommendations

Based on the findings, the study recommends that: (i) the Uganda Revenue Authority should develop simplified USSD-based digital tax filing systems accessible on basic mobile phones to lower compliance barriers among informal traders; (ii) the Ministry of ICT should prioritize digital payment infrastructure investment in informal market areas, including subsidized point-of-sale devices and improved mobile network coverage; (iii) URA should establish market-based tax education programs in partnership with trader associations to increase digital tax awareness at the grassroots level; and (iv) the National Payments Policy should facilitate interoperability among mobile money platforms to reduce transaction fragmentation and lower e-commerce operating costs for small traders.

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