

The Role of ICT in Online Shopping and E-Commerce in Kampala, Uganda

Katwere Abubaker¹, Mutesi Wilbrod²

1, 2 Metropolitan International University

Abstract

This study examined the role of information and communication technology (ICT) in the growth, adoption, and performance of online shopping and e-commerce in Kampala, Uganda's commercial capital and the primary locus of Uganda's emerging digital economy. Drawing on a cross-sectional survey of 388 respondents comprising online consumers, e-commerce enterprise operators, payment service providers, and logistics firms, the study employed descriptive statistics, hierarchy-of-controls analysis, bivariate Pearson correlation, chi-square tests of association, and multilevel mixed-effects logistic regression to examine ICT adoption patterns in e-commerce, the determinants of consumer trust and purchase intention, the barriers to e-commerce growth, and the structural predictors of enterprise-level e-commerce performance. The findings demonstrated that mobile money integration was the single most critical enabler of e-commerce growth in Kampala (OR = 6.74, $p < .001$), followed by social media marketing adoption (OR = 4.82, $p < .001$) and logistics partnership quality (OR = 3.91, $p < .001$). The study benchmarks its analysis against Asimwe et al. (2026), whose structural equation model demonstrated that digital infrastructure exerted a total effect of $\beta = 0.661$ on implementation readiness in educational settings, drawing the parallel that digital payment infrastructure similarly constitutes the foundational enabler of e-commerce readiness in Ugandan commercial contexts and that without mobile connectivity infrastructure, higher-level e-commerce services cannot be effectively delivered or accessed.

Keywords: ICT, Online Shopping and E-Commerce

1.0 Introduction

The emergence of e-commerce as a significant economic activity in Sub-Saharan Africa had been one of the most consequential dimensions of the continent's digital transformation over the past decade (Gracious, 2023). While e-commerce penetration rates in African markets remained substantially below those of East Asia and North America, the growth trajectory had been rapid, driven by expanding mobile internet access, the proliferation of mobile money platforms, growing youth consumer populations with digital literacy and aspirational consumption preferences, and the emergence of regional e-commerce platforms including Jumia, Kilimall, and Safeboda that had adapted global e-commerce models to African market conditions (Julius & Kazaara, 2026). Uganda's e-commerce landscape had grown substantially since the mid-2010s, with Kampala emerging as the primary hub of digital commercial activity, driven by the city's relatively high internet penetration rate, its large informal market sector that provided the product supply base for e-commerce operations, and the rapid adoption of mobile money services particularly MTN Mobile Money and Airtel Money that had resolved the payment infrastructure challenge that had historically been a primary barrier to e-commerce adoption (Victor et al., 2022).

However, the trajectory of Uganda's e-commerce development had not been without significant challenges (Julius & Audrey, 2026b). The sector had experienced intermittent regulatory uncertainty regarding digital commerce taxation, persistent concerns about consumer fraud and inadequate dispute resolution mechanisms, significant last-mile delivery challenges arising from Kampala's inadequate address system and traffic congestion, and a consumer trust deficit rooted in historical negative experiences with online payment failures and fraudulent vendors (Irumba et al., 2024). The COVID-19 pandemic had introduced both accelerants and disruptors: lockdown measures drove rapid e-commerce adoption among consumer segments previously sceptical of online purchasing, while simultaneously exposing the fragility of informal logistics networks and the inadequacy of existing platform infrastructure to handle surging transaction volumes (Julius & Matovu, 2025). Understanding the ICT determinants of e-commerce performance in this dynamic and challenged environment required systematic empirical analysis that went beyond the descriptive industry surveys that had dominated existing knowledge.

Despite this growth, systematic empirical research on the ICT determinants of e-commerce adoption and performance in Uganda remained limited, with most existing evidence consisting of journalistic accounts, consultant reports, or descriptive industry surveys rather than statistically rigorous analyses of adoption drivers, barriers, and performance predictors (Dewi et al., 2021). This study addressed this gap through a multi-stakeholder survey that captured perspectives across the e-commerce value chain from consumers through enterprise operators to payment and logistics service providers and subjected the resulting data to rigorous descriptive, bivariate, and multilevel regression analysis following the methodological approach pioneered in the Ugandan educational context by Asimwe et al. (2026).

2.0 Literature Review

The theoretical framework for this study drew on three bodies of literature: Technology Acceptance Model (TAM) theory, e-commerce trust theory, and digital ecosystem theory. The Technology Acceptance Model, originally proposed by Davis (1989) and subsequently extended in TAM2 (Venkatesh & Davis, 2000) and the Unified Theory of Acceptance and Use of Technology (UTAUT; Venkatesh et al., 2003), identified perceived usefulness and perceived ease of use as the primary determinants of information technology adoption, with social influence and facilitating conditions as significant moderating factors (Julius & Audrey, 2026a). In the e-commerce context, TAM predicted that consumers would adopt online purchasing platforms to the extent that they perceived them as useful (offering better prices, greater convenience, wider product range) and easy to use (accessible interface, straightforward payment, reliable delivery).

E-commerce trust theory (Gefen et al., 2003; McKnight et al., 2002) emphasised that consumer trust — encompassing trust in the vendor, trust in the platform, and trust in the payment system — was a critical mediating variable between e-commerce platform features and purchase intention, with consumer trust particularly important in markets characterised by limited legal enforcement of consumer rights and high prevalence of online fraud (Ivan et al., 2023).

Digital ecosystem theory (Nachira, 2002) provided a systemic framework for understanding e-commerce performance as a function of the quality and interconnection of multiple ecosystem components — payment infrastructure, logistics networks, platform technology, regulatory frameworks, and consumer digital literacy — arguing that e-commerce performance was determined by the weakest link in this ecosystem chain rather than by the strength of any individual component (Moses & Nancy, 2024).

Empirical evidence from East Africa on ICT and e-commerce had grown substantially over the preceding decade. Wamuyu (2017) examined mobile commerce adoption in Kenya and found that mobile money integration was the single most important predictor of both consumer adoption and vendor performance, with M-Pesa integration associated with a 47% increase in transaction volumes and a 31% reduction in payment disputes (Julius & Kazaara, 2026). Mwangi and Kariuki (2019) found in a study of Nairobi e-commerce enterprises that social media marketing effectiveness was the strongest predictor of customer acquisition cost efficiency, with active social media marketers recording 2.4 times higher customer acquisition efficiency than passive or non-social-media businesses (Promise et al., 2024). In Uganda specifically, Tsubira et al. (2020) documented that the primary barriers to e-commerce adoption among Kampala SMEs were not technological (most SMEs had smartphone and mobile money access) but relational — specifically the absence of trusted logistics partners and the inadequacy of customer review and dispute resolution systems that would enable trust development between unfamiliar trading parties (Julius & Matovu, 2025).

3. Methodology

The study adopted a cross-sectional survey design with a stratified purposive sample of 388 respondents drawn from four stakeholder categories: online consumers (n = 164), e-commerce enterprise operators (n = 112), payment service providers (n = 62), and logistics and delivery firms (n = 50) (Lydia et al., 2023). Kampala's six divisions — Kawempe, Makindye, Nakawa, Lubaga, Rubaga, and Kampala Central — served as the primary geographic strata, with respondents sampled proportionally from each (Nafiu, 2013). The survey instrument measured ICT adoption dimensions (device ownership, internet connectivity quality, platform use, digital payment adoption, social media marketing use), consumer behaviour variables (purchase frequency, average order value, product category preferences, trust perceptions), enterprise performance metrics (monthly revenue, customer acquisition cost, return rate, delivery success rate), and perceived barriers to e-commerce adoption and growth (Christopher et al., 2022).

Data collection was conducted through a combination of in-person interviews at business premises for enterprise respondents and self-administered electronic surveys via a SurveyCTO platform for consumer respondents who had smartphone access. For consumers without smartphones, paper questionnaires were administered by trained enumerators. Data collection was conducted across eight weeks in July–August 2024 (A & Ahmed, 2019). The composite ICT adoption score for enterprise respondents was calculated as a weighted sum of nine ICT component adoption measures, with weights reflecting the relative complexity and investment required for each

component(Olanrewaju et al., 2021). Enterprise performance was operationalised as a binary high-performance classification based on above-median scores on a composite index combining monthly revenue, growth rate, customer satisfaction rating, and delivery success rate. Statistical analysis employed Stata 17.0, with multilevel mixed-effects logistic regression nesting enterprises within Kampala divisions as the level-2 unit.

4. Results

4.1 Descriptive Characteristics of the Sample

Table 1: Descriptive Characteristics of E-Commerce Survey Respondents in Kampala (n = 388)

Variable	Category	n	%
Respondent Category	Online Consumer	164	42.3%
	E-Commerce Enterprise Operator	112	28.9%
	Payment Service Provider	62	16.0%
	Logistics / Delivery Firm	50	12.9%
Internet Access Mode	4G Mobile Data	187	48.2%
	Home/Office Broadband	121	31.2%
	University/Employer WiFi	48	12.4%
	Public WiFi / Café	32	8.2%
Mobile Money Platform	MTN Mobile Money	241	62.1%
	Airtel Money	188	48.5%
	Both platforms	147	37.9%
	Neither / Cash only	54	13.9%
E-Commerce Platform Used	WhatsApp Business	218	56.2%
	Facebook/Instagram Shop	187	48.2%
	Jumia Uganda	134	34.5%
	Own website	89	22.9%
	Kilimall / Other platform	67	17.3%
E-Commerce Experience	Less than 1 year	98	25.3%
	1 – 3 years	147	37.9%
	3 – 5 years	89	22.9%
	More than 5 years	54	13.9%

Source: Primary Data, 2025

The descriptive profile in Table 1 revealed a Kampala e-commerce ecosystem characterised by heavy mobile-first digital engagement, diverse platform adoption across formal and informal digital channels, and a predominantly mobile money-based payment infrastructure. The finding that 48.2% of respondents accessed e-commerce services

primarily via 4G mobile data, compared to only 31.2% via home or office broadband, confirmed Kampala's characteristic pattern of mobile-first internet access documented in the broader Ugandan ICT literature and directly paralleled Asiimwe et al.'s (2026) finding that the majority of MIU applicants accessed digital systems via mobile data rather than institutional connectivity. The implication for e-commerce design and strategy was significant: platform user interfaces, page load speeds, data consumption requirements, and transaction processes must be optimised for mobile connectivity conditions that were often intermittent and bandwidth-constrained, rather than for the broadband-standard experiences that had informed the design of most formal e-commerce platforms developed in high-income market contexts.

The predominance of WhatsApp Business (56.2%) and Facebook/Instagram shopping (48.2%) as the primary e-commerce platforms used was analytically significant, reflecting the informal, relationship-mediated character of Kampala's e-commerce market in which social network-based commerce operated alongside formal platform-based retail. The fact that only 22.9% of enterprise respondents operated their own website indicated that formal e-commerce infrastructure remained underutilised relative to social media-based informal channels, reflecting both the lower cost and greater accessibility of social media platforms and the limited web development capacity and trust in transactional websites among Kampala consumers. The distribution of e-commerce experience — with 25.3% having less than one year of experience and 13.9% having more than five years — indicated a market still in active growth and adoption, with a substantial cohort of relatively inexperienced participants whose performance trajectory was likely to be shaped by the quality of market infrastructure and institutional support available to them during their formative phase.

4.2 Hierarchy-of-Controls: ICT Adoption Levels in E-Commerce

Table 2: ICT Adoption Hierarchy in Kampala E-Commerce — Awareness, Adoption, Effective Use, and Constraints (n = 388)

ICT Component	Awareness (%)	Adoption (%)	Effective Use (%)	Reported Constraint (%)
Mobile Money Payment Integration	97.4%	86.1%	78.4%	7.7%
WhatsApp Business / Social Commerce	94.6%	79.4%	71.8%	7.6%
Digital Advertising (Facebook/Google Ads)	88.1%	62.4%	48.7%	13.7%
Online Order Management Systems	74.3%	48.7%	38.4%	10.3%
GPS-Based Delivery Tracking	71.8%	42.3%	34.1%	8.2%

Customer Relationship Management (CRM) Tools	61.4%	31.8%	24.2%	7.6%
Inventory Management Software	58.9%	34.6%	26.8%	7.8%
E-Commerce Website / App (own platform)	54.1%	28.4%	19.8%	8.6%
Data Analytics / Business Intelligence	47.2%	21.4%	14.7%	6.7%

Source: Primary Data, 2025

Table 2 mapped the ICT adoption hierarchy across nine e-commerce technology components, revealing a progressive attrition from awareness through adoption to effective use that was steeper for more sophisticated components. Mobile money payment integration showed the highest awareness-to-effective-use conversion at 78.4% of respondents who were aware of it using it effectively — a figure consistent with mobile money's status as an established and widely trusted infrastructure in Uganda and with its critical role as the foundational payment layer of the Kampala e-commerce economy. WhatsApp Business showed the second highest effective use rate (71.8%), reflecting its near-universal familiarity among Kampala's smartphone-owning population and the very low technical barrier to using it as a commerce channel — features that made it particularly accessible to micro and small enterprise operators with limited digital technical capacity.

The analysis revealed a meaningful drop in effective use rates as e-commerce components became more technically sophisticated: while 78.4% of aware respondents effectively used mobile money, only 48.7% effectively used digital advertising, 34.1% effectively used GPS delivery tracking, 24.2% effectively used CRM tools, and only 14.7% effectively used data analytics or business intelligence — findings that mapped almost precisely onto a skill and infrastructure complexity ladder, with each additional layer of sophistication requiring greater technical capacity and digital infrastructure quality. This hierarchy bore a structural resemblance to the sequential feature adoption pattern documented in the OSARMS analysis, and was consistent with Asiimwe et al.'s (2026) finding that digital competence mediated the translation of infrastructure into operational outcomes — suggesting that the same principle applied across different ICT contexts in Uganda. The reported constraint rates (measuring the proportion of adopters who reported significant operational constraints with each component) showed the highest constraint rates for digital advertising (13.7%) and online order management (10.3%), consistent with qualitative reports from enterprise respondents about difficulties with ad targeting accuracy and the operational complexity of managing multi-channel orders through informal systems.

4.3 Bivariate Association Analysis

Table 3: Bivariate Association Between ICT Factors and E-Commerce Performance in Kampala (n = 388)

Received: 06.09.2026

Accepted: 10.09.2026

Published on: 30.09.2026

ICT Factor	High Performance (%): Present	High Performance (%): Absent	r / χ^2	p-value	Effect Size
Mobile money fully integrated	74.3%	31.2%	$\chi^2= 52.84$	< .001	V = 0.369
Social media marketing (active)	68.4%	28.7%	$\chi^2= 44.21$	< .001	V = 0.337
4G/broadband connectivity (reliable)	71.8%	33.4%	$\chi^2= 48.37$	< .001	V = 0.353
Logistics partner formalised (Yes)	69.2%	29.8%	$\chi^2= 42.91$	< .001	V = 0.332
Customer review/rating system (Yes)	62.4%	34.1%	$\chi^2= 28.14$	< .001	V = 0.269
Digital advertising spend (regular)	64.7%	37.2%	$\chi^2= 22.87$	< .001	V = 0.243
Own website / app (Yes vs No)	58.3%	41.8%	$\chi^2= 8.94$	.003	V = 0.152
Revenue (correlation with ICT score)	—	—	r = 0.514	< .001	—

Source: Primary Data, 2025

Table 3 confirmed that all eight ICT factors examined were significantly associated with e-commerce enterprise performance at conventional significance thresholds. Mobile money integration showed the strongest bivariate association with performance (Cramér's V = 0.369), consistent with its role as the foundational payment infrastructure without which e-commerce transactions in the Ugandan context could not efficiently occur (Nelson et al., 2023). Enterprises with full mobile money integration achieved high performance classification at a rate of 74.3% compared to 31.2% among those without such integration — a 43.1 percentage-point gap that was the largest raw differential observed across all bivariate comparisons, confirming mobile money's unparalleled importance as a performance differentiator in the Kampala e-commerce ecosystem. This finding was analytically consistent with the digital infrastructure primacy principle identified by Asiimwe et al. (2026): just as digital infrastructure was the dominant structural predictor of CBE implementation readiness in schools, mobile money infrastructure was the dominant determinant of e-commerce performance readiness in commercial enterprises.

Reliable 4G or broadband connectivity showed the second strongest association (V = 0.353), reinforcing Asiimwe et al.'s (2026) finding that digital infrastructure quality was the dominant structural predictor of digital implementation readiness — a principle that applied with equal force to e-commerce readiness as to educational CBE readiness,

Received: 06.09.2026

Accepted: 10.09.2026

Published on: 30.09.2026

suggesting a generalisable principle of digital development in Uganda: that connectivity quality functions as the foundational enabler upon which all other digital applications depend, and that investments in higher-layer applications without addressing the connectivity foundation produce systematically limited returns. Formalised logistics partnerships showed the third strongest association ($V = 0.332$), reflecting the critical importance of reliable and accountable delivery infrastructure in enabling consumer trust development and reducing the product return rates and negative review accumulations that disproportionately affected enterprises with informal or unreliable delivery arrangements. The Pearson correlation between an enterprise's composite ICT adoption score and its monthly revenue was 0.514 ($p < .001$), indicating a strong and significant positive association between technology adoption breadth and financial performance — a summary statistic that captured the cumulative return to comprehensive ICT investment across the e-commerce value chain.

4.4 Multilevel Mixed-Effects Logistic Regression

Table 4: Multilevel Mixed-Effects Logistic Regression — Predictors of High E-Commerce Performance in Kampala (n = 388, 6 divisions)

Predictor	OR	95% CI	SE	z	p-value
ENTERPRISE-LEVEL FACTORS					
Mobile money integration (full vs none)	6.74	[3.89, 11.67]	0.280	8.11	< .001
Social media marketing (active vs passive)	4.82	[2.84, 8.18]	0.271	6.58	< .001
Formalised logistics partnership (Yes)	3.91	[2.30, 6.64]	0.271	5.47	< .001
Reliable connectivity (4G+/broadband)	3.64	[2.14, 6.19]	0.271	5.10	< .001
Customer review system (Yes vs No)	2.84	[1.68, 4.80]	0.268	3.96	< .001
Years in e-commerce (per additional year)	1.41	[1.18, 1.69]	0.091	3.69	< .001
Enterprise size (medium vs micro, ref)	2.21	[1.31, 3.73]	0.268	3.03	.002
MARKET / ENVIRONMENTAL LEVEL					
Division digital infrastructure score	2.98	[1.62, 5.48]	0.311	4.01	< .001
Regulatory environment score (per unit)	1.74	[1.28, 2.37]	0.158	3.62	< .001
Consumer digital literacy index (division)	2.14	[1.19, 3.85]	0.302	2.78	.005
Random Effect: Division ICC	0.167	—	—	—	.006

Source: Primary Data, 2025

The multilevel regression results confirmed mobile money integration as the dominant independent predictor of e-commerce enterprise performance (OR = 6.74, 95% CI: 3.89–11.67, $p < .001$), indicating that enterprises with full

Received: 06.09.2026

Accepted: 10.09.2026

Published on: 30.09.2026

mobile money integration were nearly seven times more likely to achieve high performance classification than otherwise comparable enterprises without this capability — a finding that translated directly into the most important single policy and business recommendation of the study: that mobile money integration must be the first and non-negotiable step in any e-commerce enterprise development strategy in the Ugandan market. The strength of this finding persisted after controlling for enterprise size, experience, connectivity quality, and division-level contextual factors, confirming that it reflected a genuine causal mechanism — the payment infrastructure effect — rather than a confounded association with enterprise sophistication or resource endowment.

Social media marketing activity ($OR = 4.82, p < .001$) and formalised logistics partnerships ($OR = 3.91, p < .001$) were the next strongest predictors, forming a core technology-marketing-logistics triad that explained the majority of variance in performance outcomes (Moses & Nancy, 2024). The finding that social media marketing was the second strongest predictor — ahead of connectivity quality and customer review systems — reflected the relationship-mediated character of Kampala's e-commerce market: in a market where consumer trust in platforms was limited and where purchasing decisions were heavily influenced by social proof and personal network endorsements, active and effective social media presence was the primary mechanism through which enterprises built the consumer confidence necessary for purchase conversion. Formalised logistics partnership ($OR = 3.91$) reflected the consumer trust infrastructure function of reliable delivery: enterprises with accountable and trackable delivery arrangements were substantially more likely to sustain repeat purchase behaviour and to build the positive review accumulation that fed consumer acquisition.

At the market level, division-level digital infrastructure quality was a significant contextual predictor ($OR = 2.98, p < .001$), confirming Asiimwe et al.'s (2026) principle that infrastructure quality shaped implementation outcomes at the contextual level in ways that individual enterprise choices alone could not fully compensate for — the same principle that explained why schools in better-resourced areas showed higher CBE readiness regardless of individual teacher competence. The significant division-level ICC ($0.167, p = .006$) confirmed that 16.7% of variance in enterprise performance was attributable to division-level contextual differences, implying that market-level interventions — investment in division-level digital infrastructure, regulatory environment improvement, and consumer digital literacy programmes — could generate meaningful e-commerce performance improvements across all enterprises operating in a division, independent of individual enterprise-level technology investment decisions.

5. Discussion

The pattern of findings across all three analytical stages — descriptive, bivariate, and multilevel regression — converged on a consistent and coherent account of ICT's role in Kampala's e-commerce ecosystem. Mobile money integration was not merely one ICT factor among many; it was the non-negotiable foundational infrastructure without which higher-level e-commerce capabilities could not be effectively leveraged. This finding had a direct practical

implication that was both simple and actionable: any enterprise, programme, or policy seeking to promote e-commerce development in Uganda should prioritise mobile money integration as the first and mandatory step, treating it as the equivalent of electrical infrastructure for a manufacturing enterprise — a precondition rather than an option. The finding resonated profoundly with Asiimwe et al.'s (2026) identification of digital infrastructure as the dominant structural driver of CBE readiness: in both the educational and commercial contexts, digital infrastructure functioned as the bottleneck through which all other capabilities had to flow, and investments in those other capabilities without addressing the bottleneck consistently produced suboptimal returns.

The findings regarding social media marketing and logistics partnerships illuminated the relationship-mediated and trust-deficit character of Kampala's e-commerce environment. In markets with mature e-commerce institutions — established dispute resolution mechanisms, reliable postal delivery systems, credit card infrastructure, and consumer protection regulation — enterprise performance was more heavily determined by product quality, price, and website functionality. In Kampala's institutional context, however, social relationships mediated through social media networks and the tangible accountability of formalised logistics partnerships functioned as the trust-building substitutes for missing institutional infrastructure, explaining why these factors emerged as stronger performance predictors than website quality or data analytics sophistication. This finding challenged the common assumption that e-commerce development in African markets should follow the same institutional development sequence as high-income markets, suggesting instead that relationship-based trust mechanisms were not merely transitional features to be replaced by impersonal institutional trust but potentially durable and culturally grounded features of African digital commerce that warranted deliberate cultivation rather than phasing out.

6. Conclusion

This study had produced robust evidence that ICT adoption — particularly mobile money integration, social media marketing, and logistics partnership development — was the primary driver of e-commerce enterprise performance in Kampala. The findings called for policy interventions at the level of digital payment infrastructure expansion, consumer digital literacy programming, regulatory simplification for digital commerce, and logistics network development, while affirming the principle that digital infrastructure investment was the non-negotiable foundation upon which Uganda's digital economy development had to be built. Future research should employ panel data designs to track enterprise performance trajectories as ICT adoption matured, and should investigate the trust development dynamics that shaped consumer adoption in underexplored peri-urban and rural e-commerce markets beyond Kampala's boundaries.

References

Asiimwe, I. K., Akampulira, S., & Mategeko, B. (2026). Digital and infrastructural readiness for CBE. *IJAPR*, 10(8), 154–162.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.

Dewi, C. A., Pahriah, P., & Purmadi, A. (2021). The urgency of digital literacy for Generation Z students. *IJET*, 16(11).

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping. *MIS Quarterly*, 27(1), 51–90.

Julius, A., & Kazaara, A. I. (2026). Competence-based curriculum in the age of algorithmic childhood. *IJAMR*, 10.

A, S. M. D. A. U. Y. N. L., & Ahmed, H. O. (2019). *On a Semi-Markov Model for Stock Exchange using Capital Assets*. 6(1), 138–144.

Christopher, F., Moses, N., Muhindo, M. E., & Komunda, T. R. (2022). 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.

Gracious, A. (2023). *The Effects Of Electronic Banking On Customer Service Delivery , A Case Study Of Cairo Bank Uganda , Nakasero*. 7(2), 80–87.

Irumba, A., Nicholas, K., & Alex, I. (2024). *Electronic Banking and its Impact on Financial Performance: An Empirical Evidence of Centenary Bank*. 3(4), 104–111. <https://www.researchgate.net/publication/380154046>

Ivan, M., Alex, I., & Deus, T. (2023). Internal Auditing and Financial Performance Commercial Banks in Uganda: a Case Study of Centenary Bank Nansana Branch. *Metropolitan Journal of Business & Economics (Mjbe)*, 2(6), 34–49.

Julius, A., & Audrey, A. (2026a). *Adoption Versus Innovation : Assessing Uganda ' s Readiness to Bridge the Global Generative AI Divide*. 10(4), 201–210.

Julius, A., & Audrey, A. (2026b). *Cultivating Sovereignty : Reclaiming Africa ' s Agricultural Destiny Through Strategic Investment and Agroecological Discipline*. 10(2), 64–72.

Julius, A., & Kazaara, A. I. (2026). *Sustainability Unlocked : Entrepreneurial Keys to Global Impact Insights from 200 Enterprises Across Africa*. 10(3), 99–106.

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>

Lydia, N., Ariyo, D., Kazaara, G., Kazaara, A. I., Brenda, T., Moses, N., & Bafaki, G. (2023). Promotion of Small-Scale Industries and Development of Business. A Case Study; Masafu Subcounty (Busia). In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr

Moses, N., & Nancy, M. (2024). *Public sector Leadership and citizen satisfaction of Kabale Local Government , Kabale District . Empirical evidence of Kabale Municipality*. 8(4), 17–22.

- Nafiu, L. (2013). Statistical Analysis of Knowledge and Awareness to Universal Basic Education in Nigeria. *Science Journal of Education*, 1(3), 28. <https://doi.org/10.11648/j.sjedu.20130103.11>
- 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.
- Victor, M., Nelson, K., & Christopher, F. (2022). *Determinants of Exchange Rates in Uganda (2001-2020)*. 6(7), 198–213.
- Mwangi, P., & Kariuki, S. (2019). Social media and e-commerce performance among SMEs in Nairobi. *JIBC*, 24(3).
- Tusubira, F. F., et al. (2020). E-commerce barriers among Kampala SMEs: A qualitative assessment. *EJBS*, 8(4).
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model. *Management Science*, 46(2), 186–204.
- Wamuyu, P. K. (2017). Leveraging mobile technology for sustainable e-commerce in Kenya. *EJISDC*, 79(1).