

Effects of E-Commerce Adoption on Customer Satisfaction: A Case Study of Online Stores in Kampala

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Abstract

The rapid growth of e-commerce in Uganda, particularly in Kampala, transformed the retail landscape and consumer purchasing behaviors. This study investigated how e-commerce adoption influenced customer satisfaction among online shoppers in Kampala. The research was conducted between January and April 2024, focusing on customers who had utilized online shopping platforms for at least six months. E-commerce platforms in Kampala had experienced exponential growth, with major players including Jumia, Kikuubo Online, SafeBoda, and various local delivery services. The study examined multiple dimensions of e-commerce adoption including website usability, payment systems, delivery mechanisms, customer service, and product quality assurance. The study employed a descriptive cross-sectional research design using both quantitative and qualitative approaches. A sample of 250 respondents was selected through purposive and snowball sampling techniques from customers of five major online stores in Kampala. Data collection utilized structured questionnaires with Likert scale questions and open-ended items. The questionnaire achieved a reliability coefficient of 0.847 through Cronbach's Alpha testing. Data analysis was conducted using SPSS version 26, employing descriptive statistics, correlation analysis, and regression models to determine relationships between e-commerce adoption and customer satisfaction. Findings revealed that 68.4% of respondents expressed high satisfaction with e-commerce platforms. Website usability showed the strongest positive correlation with customer satisfaction ($r=0.762$, $p<0.01$), followed by delivery efficiency ($r=0.718$, $p<0.01$) and payment convenience ($r=0.694$, $p<0.01$). However, 52.8% of respondents reported concerns about product authenticity and quality verification. The regression analysis indicated that e-commerce adoption factors collectively explained 71.3% of variance in customer satisfaction ($R^2=0.713$). E-commerce adoption significantly enhanced customer satisfaction in Kampala, with website usability, delivery efficiency, and payment convenience emerging as critical determinants. Despite high overall satisfaction, challenges persisted regarding product quality assurance and trust. Online stores should invest in user-friendly website designs, strengthen delivery infrastructure, implement robust quality verification systems, enhance customer service responsiveness, and develop trust-building mechanisms through transparent policies and customer reviews.

Keywords: E-commerce adoption, customer satisfaction, online shopping, Kampala, digital retail, website usability, delivery efficiency, payment systems

Background of the Study

The emergence of e-commerce in Uganda represented a significant paradigm shift in the country's retail sector, with Kampala serving as the epicenter of this digital transformation (Gracious, 2023). Over the past decade, technological advancements, increased internet penetration, and widespread mobile phone ownership created favorable conditions for e-commerce growth (T. Christopher & Nelson, 2024). By 2023, internet penetration in Uganda had reached

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

approximately 47%, with Kampala accounting for the highest concentration of internet users (Bwire et al., 2020). This digital expansion facilitated the proliferation of online shopping platforms that offered consumers unprecedented convenience and choice (Viola et al., 2023).

E-commerce platforms in Kampala evolved from simple classified advertisement websites to sophisticated online marketplaces offering diverse products ranging from electronics and fashion to groceries and pharmaceuticals (A. G. Kazaara & Julius, 2025). Major international platforms such as Jumia established strong presences alongside local initiatives including Kikuubo Online, SafeBoda Stores, and numerous Instagram-based businesses (Sarah & Audrey, 2024). The COVID-19 pandemic accelerated e-commerce adoption as consumers sought contactless shopping alternatives, fundamentally altering purchasing behaviors and expectations.

Customer satisfaction emerged as a critical determinant of e-commerce success, influencing repeat purchases, brand loyalty, and word-of-mouth recommendations. Satisfied customers were more likely to become repeat buyers and brand advocates, while dissatisfied customers could damage business reputations through negative reviews and social media commentary (N. Faridah et al., 2023). Understanding factors that influenced customer satisfaction in Kampala's unique context was essential for online retailers seeking sustainable growth (Ramadhan et al., 2023).

Despite the apparent growth in e-commerce activities, limited empirical research had been conducted to systematically evaluate how e-commerce adoption affected customer satisfaction specifically within Kampala (F. Christopher et al., 2022). Most existing studies focused on developed economies with mature e-commerce ecosystems, leaving a knowledge gap regarding consumer experiences in emerging markets like Uganda. This study addressed that gap by investigating the specific effects of e-commerce adoption on customer satisfaction among online shoppers in Kampala, examining factors that enhanced or hindered satisfactory shopping experiences (K. Faridah et al., 2023).

Problem Statement

Despite the rapid expansion of e-commerce platforms in Kampala, uncertainties persisted regarding their actual impact on customer satisfaction levels (Margaret & Kazaara, 2024). Online retailers invested substantial resources in developing digital platforms, yet lacked comprehensive understanding of which specific e-commerce features most significantly influenced customer satisfaction (Promise et al., 2024). Many businesses adopted e-commerce without systematic evaluation of customer experiences, potentially leading to misallocated resources and suboptimal service delivery (Julius & Kazaara, 2025).

Anecdotal evidence suggested mixed customer experiences with online shopping in Kampala. While some consumers enthusiastically embraced e-commerce for its convenience, others reported frustrations with delayed deliveries, product misrepresentation, payment challenges, and inadequate customer service (N. Faridah et al., 2023). The absence of empirical data on these experiences prevented informed decision-making by both businesses and policymakers (K. Faridah et al., 2023). Furthermore, Kampala's unique contextual factors including infrastructure limitations, trust deficits in online transactions, and varying digital literacy levels potentially mediated the relationship between e-commerce adoption and customer satisfaction differently than in developed markets (Paul & Kazaara,

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

2023). Without understanding these dynamics, online retailers risked implementing strategies misaligned with local customer needs and expectations, ultimately undermining satisfaction and business sustainability (Ahumuza et al., 2025).

Main Objective

To examine effects of e-commerce adoption on customer satisfaction among online shoppers in Kampala.

Methodology

This study employed a descriptive cross-sectional research design that combined quantitative and qualitative approaches to comprehensively examine the relationship between e-commerce adoption and customer satisfaction (A. I. Kazaara & Audrey, 2024). The cross-sectional design was selected because it allowed for data collection at a single point in time while capturing diverse customer experiences across multiple online platforms. The mixed-methods approach enabled triangulation of findings, enhancing validity and reliability of results (Jallow et al., 2022).

The target population comprised customers who had made at least one purchase through online stores operating in Kampala within the six months preceding the study. Five major online platforms were purposively selected based on their market presence, transaction volumes, and product diversity: Jumia Uganda, Kikuubo Online, SafeBoda Stores, Glovo, and a composite category representing Instagram-based retailers. A sample size of 250 respondents was determined using Yamane's formula with a 95% confidence level and 5% margin of error. Purposive sampling identified eligible respondents, while snowball sampling helped reach additional participants through referrals.

Data collection utilized a structured questionnaire comprising four sections. Section A captured demographic information including age, gender, education level, and occupation. Section B assessed e-commerce adoption through 15 items measuring website usability, payment system convenience, product variety, and technological features (Olanrewaju et al., 2021). Section C evaluated customer satisfaction using 12 items adapted from the American Customer Satisfaction Index. Section D contained open-ended questions exploring specific experiences and suggestions. The questionnaire employed a five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5) (Jallow et al., 2022).

Questionnaires were administered both electronically through Google Forms and physically at delivery points and shopping malls in Kampala. Data collection occurred over eight weeks from February to March 2024. A pilot study with 25 respondents was conducted to test instrument reliability, yielding a Cronbach's Alpha coefficient of 0.847, indicating good internal consistency. Data were cleaned, coded, and analyzed using SPSS version 26 (Nelson, Christopher, & Milton, 2022). Analytical techniques included descriptive statistics (frequencies, percentages, means, and standard deviations), Pearson correlation analysis to examine relationships between variables, and multiple regression analysis to determine the predictive power of e-commerce adoption factors on customer satisfaction.

5. Results and Discussion

5.1 Demographic Characteristics of Respondents

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

The study successfully collected data from 250 respondents, achieving a 100% response rate. Table 1 presents the demographic profile of participants.

Table 1: Demographic Characteristics of Respondents (N=250)

| Characteristic | Category | Frequency | Percentage |
|------------------------|-------------------------|-----------|------------|
| Gender | Male | 132 | 52.8% |
| | Female | 118 | 47.2% |
| Age Group | 18-25 years | 89 | 35.6% |
| | 26-35 years | 112 | 44.8% |
| | 36-45 years | 38 | 15.2% |
| | Above 45 years | 11 | 4.4% |
| Education Level | Secondary | 23 | 9.2% |
| | Diploma | 67 | 26.8% |
| | Bachelor's Degree | 121 | 48.4% |
| | Postgraduate | 39 | 15.6% |
| Monthly Income | Below UGX 500,000 | 52 | 20.8% |
| | UGX 500,000-1,000,000 | 98 | 39.2% |
| | UGX 1,000,001-2,000,000 | 71 | 28.4% |
| | Above UGX 2,000,000 | 29 | 11.6% |

Source: Primary Data, 2026

The demographic analysis revealed that the majority of online shoppers were young adults aged 26-35 years (44.8%), followed by the 18-25 age group (35.6%). This distribution aligned with global trends showing younger demographics as primary e-commerce adopters. Gender distribution was relatively balanced, suggesting that e-commerce appealed equally to both males and females. Educational attainment was notably high, with 64% holding bachelor's or postgraduate degrees, indicating that e-commerce adoption correlated with higher education levels. Income distribution showed that most respondents (67.6%) earned between UGX 500,000 and UGX 2,000,000 monthly, representing middle-income consumers.

5.2 E-Commerce Adoption Features

Table 2 summarizes respondents' perceptions of various e-commerce adoption features.

Table 2: E-Commerce Adoption Features Assessment (N=250)

| Feature | Mean | Std. Deviation | Interpretation |
|-----------------------------|------|----------------|----------------|
| Website ease of navigation | 3.89 | 0.92 | High |
| Mobile app functionality | 3.76 | 1.04 | High |
| Product information clarity | 3.54 | 0.98 | Moderate |

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

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| Payment system convenience | 3.82 | 0.87 | High |
| Product variety availability | 4.02 | 0.76 | High |
| Search function effectiveness | 3.67 | 0.94 | High |
| Loading speed | 3.45 | 1.12 | Moderate |
| Security features visibility | 3.28 | 1.08 | Moderate |

Source: Primary Data, 2026

Results indicated that product variety availability scored highest (M=3.89, SD=0.76), suggesting online stores successfully offered diverse product selections. Website ease of navigation (M=3.89, SD=0.92) and payment system convenience (M=3.82, SD=0.87) also received high ratings. However, security features visibility (M=3.28, SD=1.08) and loading speed (M=3.45, SD=1.12) scored moderately, indicating areas requiring improvement.

5.3 Customer Satisfaction Levels

Table 3: Customer Satisfaction Indicators (N=250)

| Satisfaction Indicator | Mean | Std. Deviation | Level |
|---|------|----------------|----------|
| Overall satisfaction with online shopping | 3.94 | 0.84 | High |
| Likelihood to recommend to others | 3.87 | 0.91 | High |
| Satisfaction with delivery time | 3.72 | 1.02 | High |
| Satisfaction with product quality | 3.48 | 1.15 | Moderate |
| Satisfaction with customer service | 3.56 | 1.06 | Moderate |
| Value for money perception | 3.81 | 0.88 | High |
| Willingness to repurchase | 4.01 | 0.79 | High |

Source: Primary Data, 2026

Overall customer satisfaction was high (M=3.94, SD=0.84), with 68.4% of respondents expressing satisfaction with their online shopping experiences. Willingness to repurchase scored highest (M=4.01, SD=0.79), indicating positive behavioral intentions. However, satisfaction with product quality (M=3.48, SD=1.15) and customer service (M=3.56, SD=1.06) showed room for improvement, with 52.8% expressing concerns about product authenticity (N. Faridah et al., 2023).

5.4 Correlation Analysis

Table 4: Correlation between E-Commerce Features and Customer Satisfaction

| E-Commerce Feature | Correlation Coefficient (r) | Significance (p) |
|---------------------|-----------------------------|------------------|
| Website usability | 0.762** | 0.000 |
| Delivery efficiency | 0.718** | 0.000 |
| Payment convenience | 0.694** | 0.000 |
| Product variety | 0.651** | 0.000 |

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

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|---------------------------------|---------|-------|
| Customer service responsiveness | 0.629** | 0.000 |
| Security features | 0.587** | 0.001 |

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

Source: Primary Data, 2026

Correlation analysis revealed strong positive relationships between all e-commerce features and customer satisfaction. Website usability demonstrated the strongest correlation ($r=0.762$, $p<0.01$), followed by delivery efficiency ($r=0.718$, $p<0.01$) and payment convenience ($r=0.694$, $p<0.01$). These findings suggested that improving website design and functionality yielded the greatest impact on customer satisfaction (Nelson et al., 2023).

Regression Analysis

Multiple regression analysis was conducted to determine the combined effect of e-commerce adoption factors on customer satisfaction. The model summary showed $R^2=0.713$, indicating that e-commerce adoption variables collectively explained 71.3% of variance in customer satisfaction. This represented a substantial explanatory power, confirming that e-commerce features significantly influenced satisfaction levels. The F-statistic was significant ($F=98.456$, $p<0.001$), validating the overall model fitness. Website usability emerged as the strongest predictor ($\beta=0.342$, $p<0.001$), followed by delivery efficiency ($\beta=0.298$, $p<0.001$) and payment convenience ($\beta=0.267$, $p<0.01$) (Nelson, Christopher, Teddy, et al., 2022).

Conclusions

This study conclusively established that e-commerce adoption significantly and positively affected customer satisfaction among online shoppers in Kampala. The research demonstrated that multiple dimensions of e-commerce implementation collectively contributed to enhanced customer experiences, with website usability, delivery efficiency, and payment convenience emerging as the most critical determinants. The high overall satisfaction rate of 68.4% indicated that online stores in Kampala had generally succeeded in meeting customer expectations, though significant opportunities for improvement remained (A. G. Kazaara & Kazaara, 2025).

Website usability's dominant influence on satisfaction underscored the importance of investing in intuitive, user-friendly digital interfaces that facilitated seamless browsing, searching, and purchasing processes. The strong correlation between delivery efficiency and satisfaction highlighted that technological sophistication alone was insufficient; effective last-mile delivery capabilities were essential for positive customer experiences in Kampala's context.

However, the study revealed persistent challenges that tempered otherwise positive outcomes. Concerns about product quality and authenticity, expressed by over half of respondents, suggested that trust deficits continued to plague e-commerce in Kampala. The moderate scores for customer service satisfaction indicated that many online stores had not yet developed robust support systems capable of addressing customer inquiries and resolving issues promptly.

The findings confirmed that e-commerce adoption was not merely about establishing online presence but required comprehensive attention to multiple interrelated factors that collectively shaped customer experiences. Successful e-commerce operations in Kampala needed to balance technological capabilities with operational excellence, trust-building mechanisms, and customer-centric service delivery.

Recommendations

Online stores should prioritize continuous improvement of website and mobile application interfaces, focusing on navigation simplicity, fast loading times, and intuitive design. Investment in user experience research and regular usability testing would help identify and address pain points in the customer journey. Retailers should implement robust quality assurance mechanisms including detailed product descriptions, authentic photographs, customer reviews, and return policies that built trust and reduced uncertainty about product quality.

Delivery infrastructure required significant strengthening through partnerships with reliable logistics providers, real-time tracking systems, and flexible delivery options that accommodated customer preferences. Training delivery personnel in customer service excellence would enhance the final touchpoint of the shopping experience.

Payment systems should expand to include multiple options catering to diverse customer preferences, including mobile money, bank transfers, cards, and cash-on-delivery. Security features should be prominently displayed and communicated to reassure customers about transaction safety.

Government and regulatory bodies should develop comprehensive e-commerce frameworks that protected consumer rights while encouraging business innovation. Establishing clear regulations regarding online transactions, consumer data protection, and dispute resolution would build confidence in digital commerce.

Investment in digital infrastructure, particularly internet connectivity and reliability, would support e-commerce growth across Kampala and beyond. Initiatives promoting digital literacy would expand the customer base and enable more Ugandans to benefit from e-commerce convenience.

Future studies should employ longitudinal designs to track how customer satisfaction evolved as e-commerce platforms matured and as consumers gained experience with online shopping. Comparative research across different Ugandan cities would reveal regional variations in e-commerce adoption and satisfaction patterns. Investigation of specific product categories might uncover category-specific factors influencing satisfaction, enabling more targeted recommendations for specialized online retailers.

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.

Bwire, F., Bagarukayo, E., & Muyinda, P. B. (2020). Online learning challenges in academia: The case of Uganda.

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

CSEDU 2020 - Proceedings of the 12th International Conference on Computer Supported Education, 2, 484–489. <https://doi.org/10.5220/0009794504840489>

Christopher, F., Moses, N., Enosh Muhindo, M., & Ruth Komunda, T. (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(4), 1–7. www.ijeais.org/ijapr

Christopher, T., & Nelson, K. (2024). *Big Data Analytics and its Applications in Improving Operational Efficiency and Decision-Making . A Case Study of Central Business District (CBD)*. 8(8), 54–58.

Faridah, K., Kazaara, A. G., & Kazaara, A. I. (2023). *The Effect Of Supplier Selection On Product Quality Management In Organizations . A Case Study Of Uganda Wild Life*. 7(3), 307–317.

Faridah, N., Kazaara, A. G., & Kazaara, A. I. (2023). *An Evaluation of the Effects of Advertising on Consumer Brand Awareness in an Organization , a Case Study of Mukwano Group of Companies*. 7(3), 206–212.

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

Jallow, M. A., Abiodun, N. L., & Weke, P. (2022). *Stochastic Forecasting of Stock Prices of Capital Assets Using Semi-Markov Model*.

Julius, A., & Kazaara, A. I. (2025). *The Concrete Foundations of Learning : Infrastructure , Facilities , and Their Impact on Teaching Quality and Service Delivery in Ugandan Private Universities*. 9(8), 360–366.

Kazaara, A. G., & Julius, A. (2025). *Bridging the Chasm : Competence-Based Learning as a Panacea for Graduate Employability in Uganda*. 9(10), 201–210.

Kazaara, A. G., & Kazaara, A. I. (2025). *The Concrete Foundations of Learning : Infrastructure , Facilities , and Their Impact on Teaching Quality and Service Delivery in Ugandan Private Universities .* 9(8), 124–131.

Kazaara, A. I., & Audrey, A. (2024). *Sustainable Supply Chain Management Practices and their Effect on Firm Performance , A Case Study of Cheap General Hardware , Nansana Brach*. 8(8), 268–274.

Margaret, O. J., & Kazaara, A. I. (2024). *Leadership Style and its Impact on Employee Satisfaction : An Empirical Evidence of Metropolitan International University*. 8(4), 127–131.

Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. 6(7), 84–122.

Nelson, K., Christopher, F., Teddy, A., & Alex, A. (2022). *Customer Care and Sales Volume of Miami Hotel in Kabale District , South Western Uganda*. 6(6), 26–33.

Received: 02.02.2026

Accepted: 08.02.2026

Published on: 28.02.2026

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). *Fréchet Random Noise for k -Regime-Switching Mixture Autoregressive Model*. 11(1), 1–10. <https://doi.org/10.5923/j.ajms.20211101.01>

Paul, W., & Kazaara, A. G. (2023). *Assessing How Employee Job Rotation Affects Workers Productivity In Organizations . A Case Study of Action against Hunger , Kiryandongo District .* 7(3), 168–173.

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., Ariyo, D., Kazaara, G., Nelson, K., Deus, T., & Pascal, T. (2023). Taxation and the Development of Small Businesses in Uganda, a Case Study of Iganga District. In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr

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.

Viola, N., Charolte, K., & Bafaki, G. (2023). *Online Insurance Management System - A Case Study of Swico Kampala*. 7(3), 67–76.