MAKERERE UNIVERSITY

DIGITAL PAYMENT SERVICES, PRODUCT QUALITY AND FINANCIAL PERFORMANCE OF E-COMMERCE BUSINESSES IN UGANDA

A CASE OF JUMIA UGANDA LIMITED

BY

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A DISSERTATION SUBMITTED TO THE DIRECTORATE OF RESEARCH AND GRADUATE TRAINING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS DEGREE IN BUSINESS ADMINISTRATION OF MAKERERE UNIVERSITY

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DECLARATION

I, MICHAEL SSENDI, affirm that the content of this dissertation is a product of my personal research efforts. It has not been submitted or published in any academic institution for the purpose of earning a degree or any other award. Any material or ideas that have been borrowed from other authors have been fully recognized and cited accordingly.

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APPROVAL

This is to affirm that this dissertation titled ***Digital Payment Services, Product Quality and Financial Performance of E-Commerce Businesses in Uganda: A Case of Jumia Uganda Limited*** was submitted in partial fulfillment of the requirements for the award of a degree of Master of Business Administration and has been reviewed and approved by the undersigned University supervisors.

Signed: ..... **Date:** 17th Nov 2025

DR. MARTIN BAKUNDANA

Signed: ..... **Date:** 17/11/2025

DR. HANIFAH NANTALE

DEDICATION

This dissertation is dedicated to my dear parents, whose unwavering support, sacrifices, and patience provided me the strength and inspiration to pursue and complete this academic journey. I am deeply grateful for everything.

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I would like to extend my heartfelt thanks to all who contributed to the successful completion of this study. First and foremost, I am profoundly thankful to the Almighty God for His divine guidance, strength, and provision throughout this process. I am especially indebted to my supervisors for the invaluable mentorship and constructive feedback during every stage of the research. My sincere appreciation also goes to my family and friends for their constant encouragement and emotional support, without which this work would not have been possible. May you all be abundantly blessed.

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LIST OF ACRONYMS AND ABBREVIATIONS

AfDB – African Development Bank

ATMs – Automated Teller Machines

CFDR – Cancellations, Failed Deliveries, and Returns

COVID-19 – Coronavirus Disease 2019

CVI – Content Validity Index

EBITDA – Earnings Before Interest, Taxes, Depreciation, and Amortization

GSMA – Global System for Mobile Communications Association

KPLC – Kenya Power and Lighting Company

MVA – Missing Value Analysis

MSMEs – Micro, Small, and Medium-sized Enterprises

MTN – Mobile Telecommunications Network

NPS – National Payment Systems

QR – Quick Response (Code)

RBV -Resource-Based View

SPSS – Statistical Package for the Social Sciences

TAM – Technology Acceptance Model

TPV – Total Payment Volume

UCC – Uganda Communications Commission

UTAUT – Unified Theory of Acceptance and Use of Technology

UNCTAD – United Nations Conference on Trade and Development

USD – United States Dollar

SMEs – Small and Medium-sized Enterprises

ABSTRACT

The purpose of this study was to examine the relationship between digital payment services, product quality, and the financial performance of e-commerce businesses in Uganda, focusing on Jumia Uganda Limited. The study specifically assessed the influence of mobile money payments, online payments (Jumia Pay), and debit/credit card usage on financial performance and evaluated the combined effect of these digital payment methods. The study was grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM).

A correlational research design guided the study, employing a quantitative approach to test the hypothesised relationships. The study population consisted of 462 Jumia Uganda staff across various departments. Using Krejcie and Morgan's (1970) sample size determination table, a sample of 210 respondents was selected through stratified random and systematic sampling techniques, achieving a 79% response rate. Data were collected using structured questionnaires and analysed using descriptive statistics, correlation, and multiple regression.

The findings revealed that mobile money payments, Jumia Pay, and debit/credit card usage each had a positive and statistically significant effect on financial performance, with mobile money and Jumia Pay exerting the strongest influence. Product quality was also found to be a significant predictor of financial performance but did not significantly moderate the relationship between digital payment services and financial outcomes.

The study concludes that digital payment services are vital contributors to financial performance within Uganda's e-commerce sector. It recommends the wider adoption of digital payment systems, increased investment in product quality, and improvements in payment infrastructure. The study contributes to the growing literature on digital finance in emerging markets by providing empirical evidence on how digital payment systems influence financial performance. Future research should explore customer-level adoption factors, conduct comparative analyses across different e-commerce platforms, and apply longitudinal designs to assess changes over time.

CHAPTER ONE:
INTRODUCTION

1.0 Introduction

Globally, e-commerce has experienced exponential growth, driven by digital transformation and the increasing preference for online shopping (Rosario & Raismundo , 2021). According to (Statista, 2023), global e-commerce sales amounted to over $5.7 trillion in 2022 and are expected to surpass $8 trillion by 2026. The rise in digital payments has been a key contributor to this growth. Payment services such as mobile wallets, credit/debit cards, and digital platforms like PayPal and Apple Pay have become central to e-commerce success. A report by the World Bank (2022) states that digital payment systems have made cross-border e-commerce more accessible, reducing transaction costs and enhancing the global reach of e-commerce businesses. Despite this growth, the financial performance of e-commerce businesses is often impacted by factors such as customer acquisition costs, logistics efficiency, payment processing fees, and customer satisfaction. (Chaffey, Hemphill & Edmundson-Bird, 2019), highlights that operational inefficiencies, fraud, and logistical challenges can erode the profitability of e-commerce platforms, even in regions with robust digital payment systems.

In Africa, e-commerce is growing rapidly, driven by increasing internet penetration, mobile phone usage, and digital payment systems. According to the United Nations Conference on Trade and Development (UNCTAD, 2023), Africa's e-commerce market is projected to reach $75 billion by 2025, with Nigeria, South Africa, Kenya, and Egypt leading the market. The rise of mobile money services such as M-Pesa, MTN Mobile Money, and Airtel Money has facilitated online transactions, making digital payments more accessible. In 2022, mobile money transactions in Africa reached $836 billion, reflecting a 22% year-on-year increase (GSMA, 2023). Platforms like Jumia, Kilimall, and Takealot have faced profitability struggles despite increased sales volumes. Jumia, Africa's largest e-commerce platform, reported a negative Adjusted EBITDA of -$58.2 million in 2023, highlighting financial sustainability concerns (Jumia Annual Report, 2023). A key issue affecting financial performance is the high cost of logistics. The African Development Bank (AfDB, 2022) estimates that logistics costs in Africa are 75% higher than in developed regions, making e-commerce delivery expensive.

Additionally, unreliable internet infrastructure and low digital literacy levels in some regions hinder e-commerce adoption (Ariansyah, Sirait & Suryanegara, 2021).

In East Africa, e-commerce is witnessing significant growth, driven by increasing internet penetration and mobile money adoption. According to the Uganda Communications Commission (UCC, 2023), the number of internet users in Uganda reached approximately 22 million in 2022, up from 19 million in 2021. This increase has provided a larger customer base for e-commerce platforms. Additionally, mobile money services, such as MTN Mobile Money and Airtel Money, have facilitated smoother digital payments, leading to the expansion of online businesses (Munyegera & Matsumoto, 2016, Kimonye & Muchelule, 2024).

E-commerce companies in East Africa are increasingly focusing on digital payment systems to drive financial growth. In Kenya, platforms like Jumia, Kilimall, and Masoko have seen growth in consumer adoption due to the ease of mobile payment integration (UCC, 2023). However, regional challenges such as unreliable internet infrastructure, high transaction costs, and security concerns continue to affect e-commerce platforms' financial performance in the region (Adhiambo & Gatobu, , 2025)

In Uganda, e-commerce has seen steady growth over the past decade, with platforms such as Jumia Uganda Limited, SafeBoda, and Uber Eats emerging as key players in the market. The Uganda Communications Commission (UCC, 2023) reported that Uganda's e-commerce market size grew by 30% in 2022, as more consumers shifted towards online shopping for convenience and better pricing. Mobile money transactions, which represent a large portion of digital payments in Uganda, reached UGX 45 trillion ($12 billion) in 2022, up from UGX 35 trillion in 2021 (UCC, 2023).

Table 3.1: Jumia Annual Report, 2018-2023

Key Performance Indicators	2018	2019	2021	2022	2023
Annual Active Customers (in millions)	4.0	6.1	7	7.3	5.7
Orders GMV ($ in millions)	14.4	26.5	26.1	27.5	21.3
TPV ($ in millions)	869.6	1,152.5	902	932.5	749.8
JumiaPay Transactions ($ in millions)	2.0	7.6	242	256.2	192.2

Adjusted EBITDA ($ in millions)	-157.7	-191.8	-177.4	-182.1	-58.2

Source: Jumia Annual Report, 2018-2023).

Despite these positive trends, the financial performance of e-commerce businesses in Uganda remains a challenge. Jumia Uganda Limited, one of the largest e-commerce platforms in the country, continues to struggle with operational inefficiencies and profitability. According to Jumia's Annual Report (2023), the platform posted a negative Adjusted EBITDA of -$58.2 million in 2023, showing continued financial challenges despite efforts to expand its customer base. The report also indicated a 22% drop in annual active customers, from 7.3 million in 2022 to 5.7 million in 2023, largely due to declining customer satisfaction resulting from cancellations, failed deliveries, and returns (CFDR) rates.

One of the key contributors to the high CFDR rate is poor product quality, which leads customers to cancel orders before delivery or return them shortly after. Quality inconsistencies undermine trust and satisfaction, directly affecting repeat purchases and customer retention.

Jumia Uganda's financial performance is heavily influenced by digital payment systems and operational efficiency. As of 2023, Jumia Uganda Limited recorded a 25% decrease in JumiaPay transactions, dropping from $256.2 million in 2022 to $192.2 million in 2023 (Jumia Annual Report, 2023). This decline in payment volume indicates reduced consumer trust in the platform's payment solutions, which may be attributed to the impact of mobile money transfer taxes, payment service fees, and logistical challenges. Despite its efforts to adapt to new regulations, including the National Payment Systems Act of 2020, which aims to regulate mobile money transactions and improve financial systems in Uganda, Jumia Uganda's financial performance remains below expectations. The increase in Cancellations, Failed Deliveries, and Returns (CFDR), rising from 23% in 2022 to 25% in 2023, is another indicator of operational inefficiencies and product quality issues negatively affecting the platform’s performance (Jumia Annual Report, 2023).

This study will underpin the Technology Acceptance Model (TAM) theory, introduced by Davis (1986). This is one of the most widely used models to explain user acceptance behaviour. This theory helps assess how users in Uganda accept and use digital payment services in e-commerce. It focuses on perceived ease of use and perceived usefulness, which can influence the adoption of digital payments. In the context of Uganda's e-commerce sector, digital

payment adoption is influenced by factors such as trust, transaction security, and ease of integration with mobile money services (Munyegera & Matsumoto, 2016)

To address financial and operational challenges, e-commerce companies in Uganda have implemented several interventions. Jumia Uganda Limited has collaborated with local mobile money providers to enhance payment security and efficiency. Companies have also invested in logistics and last-mile delivery solutions to reduce operational costs, aligning with findings from the African Development Bank (2022) on the importance of supply chain improvements. Regulatory compliance, such as adherence to Uganda's National Payment Systems Act, ensures smoother transactions and protects consumer interests (Bank of Uganda, 2021). Additionally, customer experience enhancements such as improved return policies, better customer service, and stricter quality control aim to reduce cancellation, failed delivery, and return (CFDR) rates. Despite these efforts, financial sustainability and market growth remain challenges for Uganda's e-commerce businesses. This study aims to explore how digital payment systems and product quality influence the financial performance of these businesses, focusing on profitability, market share, and net worth.

1.1 Problem statement

Most e-commerce businesses in Uganda continue to struggle with sustaining growth and achieving strong financial performance Lule, E., & Tusiime, B. (2019). Although digital payment platforms, including mobile money, JumiaPay, and debit/credit cards, are increasingly being adopted, ongoing operational inefficiencies, concerns regarding product quality, and elevated rates of Cancellations, Failed Deliveries, and Returns (CFDR) continue to undermine business sustainability. Existing studies underscore several structural weaknesses: Lule and Tusiime (2019) emphasise the role of digital literacy in enabling e-commerce growth, while Emmanuel (2021) highlights the importance of efficient delivery agents in improving operational performance. The financial situation of leading players such as Jumia Uganda Limited illustrates these broad sector challenges, demonstrated by ongoing negative adjusted EBITDA and a drop in digital payment usage, with JumiaPay transactions falling from USD 256.2 million in 2022 to USD 192.2 million in 2023 (Jumia Annual Report, 2023). These patterns indicate that although digital payments enhance transactional convenience, broader determinants, including product quality, logistics efficiency, and regulatory compliance, play

a critical role in shaping financial outcomes. Accordingly, this study thus examines the relationship between digital payment services, product quality, and the financial performance of e-commerce businesses in Uganda, generating insights applicable across the industry.

1.2 Purpose of the Study

The primary purpose of this study was to investigate the relationship between digital payment services, and the financial performance of e-commerce businesses in Uganda, moderated by product quality specifically focusing on Jumia Uganda Limited.

1.3 Objectives of the study

i. To examine the relationship between mobile money payment and the financial performance of e-commerce businesses in Uganda.
ii. To examine the relationship between online payment and the financial performance of e-commerce businesses in Uganda.
iii. To examine the relationship between Debit/credit card usage and the financial performance of e-commerce businesses in Uganda.
iv. To assess the combined effect of digital payment services (mobile money, Jumia Pay, and debit/credit cards) on the financial performance of e-commerce businesses in Uganda.
v. To examine the moderating role of product quality on the relationship between digital payment services (Mobile money, Jumia Pay, Debit/credit cards) and the financial performance of e-commerce businesses in Uganda.

1.4 Hypothesis

H1: There is a positive relationship between mobile money payment and the financial performance of e-commerce businesses in Uganda.

H2: There is a positive relationship between online payment and the financial performance of e-commerce businesses in Uganda.

H3: There is a positive relationship between debit/credit card usage and the financial performance of e-commerce businesses in Uganda.

H4: Digital payment services (mobile money, Jumia Pay, and debit/credit cards) collectively have a positive effect on the financial performance of e-commerce businesses in Uganda.

H5: Product quality moderates the relationship between digital payment services (mobile money, Jumia Pay, and debit/credit cards) and the financial performance of e-commerce businesses in Uganda.

1.5 Conceptual framework

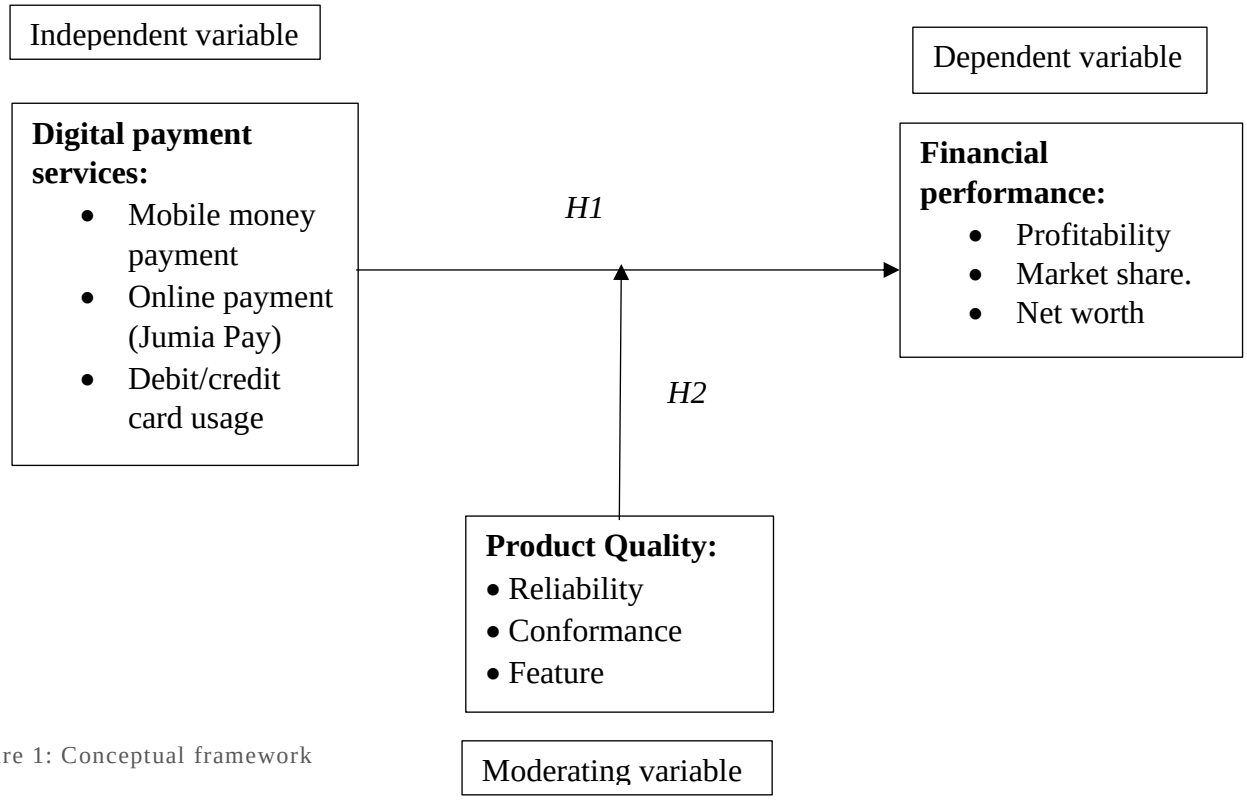

Figure 1: Conceptual framework

Source: Adopted from (Kumari & Nair,, 2022)*;* (Wijaya & Suasih, 2020)*;* (Asnawi, Sukoco and Fanani, 2019).

The conceptual framework for this study, as outlined by scholars such as *from* (Kumari & Nair,, 2022) and (Wijaya & Suasih, 2020), examined the relationship between digital payment services and the financial performance of e-commerce businesses in Uganda, specifically focusing on Jumia Uganda Limited. It posits that three types of digital payment services – mobile money, online payment, and debit/credit card usage – served as independent variables that influence the dependent variable, financial performance, measured through indicators such as revenue growth, profitability, and market share. A key addition to this framework is the

moderating role of product quality. The framework drew on the Technology Acceptance Model (TAM) (Davis, 1989) to explain how the perceived ease of use and usefulness of these payment systems enhanced their adoption, thereby improving business performance. Additionally, the Resource-Based View (RBV) (Barney, 1991) supported the idea that digital payment services were valuable resources that improved transaction efficiency, customer satisfaction, and overall business growth. Product quality defined by factors such as reliability, durability, and conformance to customer expectations is hypothesized to influence the strength and direction of the relationship between digital payment services and financial performance. High product quality amplified the positive effects of digital payment systems by fostering customer satisfaction, repeat purchases, and brand loyalty. Conversely, low product quality may weaken the perceived benefits of seamless payment options, thereby limiting financial gains. The study sought to explore how these digital payment methods impact Jumia Uganda's financial performance by increasing accessibility, trust, and transaction volume, leading to enhanced profitability and market success.

1.6 Significance of the Study

To the government, the findings will provide essential insights into the role of digital payment systems in promoting e-commerce growth. Through analyzing the financial performance of Jumia Uganda Limited, policymakers can better understand how digital payment services impact the overall e-commerce ecosystem. This research will help in the development of robust regulatory frameworks, such as the National Payment Systems Act of 2020, that ensure secure and efficient digital transactions. Furthermore, it will inform policies designed to increase digital literacy, a key factor for successful adoption of e-commerce services by the Ugandan population (Bank of Uganda, 2020; Lule & Tusiime, 2019). Additionally, the inclusion of product quality as a moderating variable will help government bodies and regulatory authorities understand how quality assurance mechanisms can support the success of digital payment infrastructure and enhance consumer trust in e-commerce platforms.

To the management, particularly Jumia Uganda Limited and other e-commerce platforms, the study will offer critical insights into the relationship between digital payment services (mobile money, Jumia Pay, and debit/credit card usage) and financial performance. By identifying the impact of these payment systems on revenue, customer satisfaction, and operational efficiency, management can refine their payment solutions, optimize customer experience, and strengthen product quality control. Recognizing the moderating role of product quality will help managers

ensure that digital convenience is matched by product reliability, leading to fewer cancellations, failed deliveries, and product returns. This contributes to improved profitability, customer retention, and long-term business success (Jumia Annual Report, 2023; Zhang, Malek, Hussain, & Liao, 2024).

To scholars, this study will significantly contribute to the academic literature on e-commerce and digital payment systems, especially in the context of Uganda. It will fill gaps in existing research regarding the moderating role of product quality in the relationship between digital payment methods and the financial performance of e-commerce businesses, with a focus on Jumia Uganda. The findings could stimulate further research on consumer behavior, e-commerce trust factors, product return policies, and comparative studies between different countries or regions (Asnawi, Sukoco, & Fanani, 2019; Ejiogu, Tasie, & Chimaobi, 2024).

1.7 Justification of the study

The rapid growth of e-commerce in Uganda has been largely driven by advances in digital technologies, increased internet penetration and expansion of mobile money and other digital payment platforms. However, despite this growth, many e-commerce businesses in Uganda continue to face challenges in achieving consistent financial performance. This situation raises questions about the extent to which digital payment services and product quality influence financial outcomes in the sector.

The persistent negative financial indicators such as declining JumiaPay transactions and high rates of cancellations, failed deliveries, and returns suggest that the relationship between digital payment systems and financial performance is more complex than previously understood.

Existing studies (e.g., Lule & Tusiime, 2019; Emmanuel, 2021) have primarily focused on factors such as digital literacy and delivery efficiency but have not adequately examined the combined influence of digital payment systems and product quality on the financial performance of e-commerce firms. This research therefore fills an essential gap by integrating both technological and operational dimensions to provide a comprehensive understanding of financial performance outcomes in the Ugandan e-commerce sector.

The study is also justified by the policy relevance it holds for Uganda's economic modernization agenda. The government's commitment to digital transformation reflected in initiatives such as the National Payment Systems Act (2020) and the Digital Uganda Vision (2023) requires empirical evidence to guide effective implementation. By evaluating how

digital payment adoption influences financial performance, the study provides data-driven insights that can support the formulation of policies aimed at improving financial inclusion, consumer protection, and e-commerce regulation.

Furthermore, the study is timely, given the post-pandemic shift toward digital economies. COVID-19 accelerated digital commerce adoption globally and in Uganda, increasing the need for efficient, secure, and consumer-friendly payment systems. Understanding how these payment systems interact with product quality to affect profitability will help e-commerce companies enhance competitiveness and long-term sustainability.

From a theoretical perspective, this research contributes to the Technology Acceptance Model (TAM) and Resource-Based View (RBV) by empirically examining how perceived ease of use, usefulness, and organizational resources (digital payment capabilities) translate into measurable financial outcomes in a developing-country context.

1.8 Scope of the Study

Content Scope

This research focused on investigating the relationship between digital payment services and the financial performance of e-commerce businesses in Uganda, with a particular emphasis on Jumia Uganda Limited. It explored three key digital payment systems: mobile money payments, JumiaPay, and debit/credit card usage, analyzing how these payment methods affect the financial outcomes of the company. The study also assessed the moderating role of product quality in this relationship, recognizing that the effectiveness of digital payment systems on financial performance may vary depending on the quality of products delivered to customers. Furthermore, the study will evaluate operational inefficiencies that affect customer experience, such as cancellations, failed deliveries, and returns, and how these factors impact consumer perceptions of Jumia Uganda (Jumia Annual Report, 2023). By integrating product quality as a critical moderating factor, this research aims to provide a more comprehensive understanding of how digital payment systems interact with product delivery standards to influence customer satisfaction, trust, and overall financial performance in the e-commerce sector.

Time Scope

The study covered data from 2018 to 2023, allowing for an analysis of recent trends and challenges affecting digital payment services and financial performance of Jumia Uganda

limited. This time-frame provided relevant insights into the impact of the National Payment Systems Act of 2020 and how Jumia Uganda limited has adapted to evolving market conditions (Bank of Uganda, 2020).

Geographical Scope

The research focused on Jumia Uganda Limited due to the persistent challenges in its financial performance, as reflected in its negative Adjusted EBITDA figures: -$157.7 million in 2018, -$191.8 million in 2019, -$177.4 million in 2021, -$182.1 million in 2022, and -$58.2 million in 2023 (Jumia Annual Report, 2023). This study sought to examine the role of digital payment systems including JumiaPay, mobile money, and debit/credit card usage in influencing these financial outcomes. Additionally, it considered the impact of product quality as a moderating factor in the relationship between digital payment services and overall business performance.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

This chapter presents the theoretical and reviewed literature regarding the study variables. It shows how this research relates to the existing body of knowledge and identifies the gaps existing in the current body of knowledge.

2.1. Theoretical foundation

This section explored two key theories that help understand consumer adoption of digital payment systems, particularly in the context of Jumia Uganda Limited. These theories include the Unified Theory of Acceptance and Use of Technology (UTAUT), the Technology Acceptance Model (TAM).

2.1.1 The Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) was introduced by Venkatesh et al. (2003) as a comprehensive model to explain technology adoption and usage behavior in organizational contexts. UTAUT consolidates constructs from eight prior models, including the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, and others, into a single framework. The theory posits that four key constructs performance expectancy, effort expectancy, social influence, and facilitating conditions directly influence behavioral intention and actual usage of technology. In addition, UTAUT incorporates moderating variables such as gender, age, experience, and voluntariness of use, which can affect the strength of these relationships (Pramudito, Ginting, & Baresi, 2023; Tulli, 2024).

The strength of UTAUT lies in its ability to explain a high percentage of variance in behavioral intention to use technology (up to 70%) and actual use (up to 50%), making it a robust model for understanding technology adoption (Xue, Rashid, & Ouyang, 2024). However, the original model focused primarily on organizational settings, limiting its direct applicability to consumer contexts such as e-commerce. To address this, the extended UTAUT model incorporates hedonic motivation, price value, and habit, which better capture consumer behavior in areas like mobile and online payments (Strzelecki, 2024).

In the context of e-commerce businesses in Uganda, UTAUT provides valuable insights into the adoption of digital payment systems such as mobile money and online payments (e.g., Jumia Pay). Performance expectancy suggests that consumers are more likely to adopt digital payment methods if they perceive that these solutions improve convenience, reduce transaction time, and enhance the overall shopping experience. Effort expectancy emphasizes the importance of simplicity and ease of use; users are more likely to adopt payment solutions that are intuitive and straightforward. Social influence highlights the role of peers, family, and community recommendations in shaping adoption behavior, while facilitating conditions, such as reliable internet infrastructure, mobile network coverage, and customer support, ensure smooth and secure transactions.

The extended UTAUT model further accounts for hedonic motivation, where enjoyment and satisfaction derived from using digital payment systems encourage repeated use; price value, which captures the cost-benefit perceptions of transaction fees; and habit, reflecting repeated usage patterns that strengthen behavioral intention over time. Collectively, these constructs help explain how digital payment adoption contributes to increased transaction volume, customer retention, and ultimately, enhanced financial performance of e-commerce businesses in Uganda (Pramudito et al., 2023; Tulli, 2024; Xue et al., 2024; Strzelecki, 2024).

In the context of e-commerce in Uganda, UTAUT provides valuable insights into digital payment adoption. Consumers are more likely to adopt mobile money, Jumia Pay, or card payments if they perceive these methods as convenient, time-saving, and beneficial (performance expectancy), easy to use (effort expectancy), and supported by social and infrastructural conditions (social influence and facilitating conditions). The extended UTAUT model also recognizes the role of enjoyment, cost considerations, and repeated usage habits, which drive sustained digital payment use. Together, these factors contribute to higher transaction volumes, increased customer satisfaction, and improved financial performance for e-commerce platforms like Jumia Uganda Limited.

2.1.2 The Technology Acceptance Model (TAM)

According to Uche, Osuagwu & Otika (2021), the Technology Acceptance Model (TAM) was developed by Fred Davis in 1989. TAM assumes that perceived ease of use and usefulness are the primary factors influencing technology adoption. As cited in According to Uche, Osuagwu

& Otika (2021), Davis (1989) and Venkatesh & Davis (2000) expanded on this model to include additional variables, including social influence and facilitating conditions. The strength of TAM lies in its predictive power, particularly in determining how users perceive technology and whether they will adopt it. In the context of Jumia Uganda, the TAM framework suggests that customers' perceptions of the ease of using digital payment systems like mobile money and Jumia Pay can directly influence their willingness to adopt these services. Scholars such as Hossain, Hussain & Akther (2023) have applied TAM to e-commerce, highlighting its relevance in predicting user adoption of online payment methods. A weakness of TAM is its narrow focus on individual perceptions, which may not fully capture broader social, economic, and cultural factors that also play a role in technology adoption. The implication of TAM for Jumia Uganda is that improving the perceived ease of use and usefulness of its digital payment services can increase consumer adoption, driving enhanced financial performance.

For Jumia Uganda Limited, this means that when customers find digital payment systems secure, reliable, and easy to use, their likelihood of using them repeatedly increases leading to greater sales volumes and improved financial outcomes. However, TAM's limitation is its narrow focus on individual cognitive factors, with less attention to broader contextual influences such as infrastructure quality, social norms, and product trust.

2.2 Conceptual review

2.2.1 Digital payment services

The term digital payment refers to a process of making some payment for certain sum of amount through using mobile application or website round the clock across the globe (Singhal & Gupta, 2021). This involves direct transfer of money from debtor's bank account to creditor's bank account without having any physical transaction between parties. Digital payment refers to e commerce, including online business-to-consumer transactions, consumer-to-consumer transactions, and in-store online transactions (Zhuoer, 2023). Digital payment refers to the digital payment method achieved by means of communication technology, artificial intelligence, and information technology with the help of computer, intelligent equipment, and other hardware equipment (Zhou, 2022). These digital means mainly include electronic payment, electronic money, and digital money. In this study Digital payment services will be measured in form of Mobile money payment, online payment, and Debit/credit card usage.

Mobile money platforms, such as MTN Mobile Money and Airtel Money, have been transformative in Uganda, particularly for financial inclusion. According to Turyatemba and Turyasingura (2023), these systems have significantly expanded access to financial services, especially for rural populations that are typically under-served by traditional banks. The ease of use, widespread agent networks, and accessibility through mobile phones have contributed to mobile money's success in reaching Uganda's unbanked. As noted by Domingo et al. (2023), mobile money has become the most widely used payment solution in Uganda, reshaping how people conduct financial transactions, from paying bills to transferring funds.

The integration of mobile banking services by local banks, such as Stanbic Bank and Centenary Bank, has enhanced the accessibility of banking services. As highlighted by Bakashaba et al. (2024), mobile bank transfers allow Ugandans to manage their finances and perform transactions via mobile phones, reducing the need to visit bank branches. This has been particularly beneficial for those living in remote areas, as mobile banking provides a convenient alternative to traditional banking, contributing to greater financial inclusion in Uganda's banking sector. Mutya (2024) emphasizes that this development bridges the urban-rural divide, allowing even those with limited access to physical banks to conduct financial transactions.

The URA e-tax payment system has revolutionized tax collection in Uganda. Besigomwe (2025) discusses how this system enables businesses and individuals to file and pay taxes online, streamlining the tax process and reducing administrative costs. This shift has not only improved tax compliance but also enhanced efficiency in the tax collection process. However, Besigomwe also points out challenges, particularly in integrating mobile money platforms with the e-tax system, which would further improve the accessibility and ease of tax payments for a wider population.

PayWay, a digital platform for paying utility bills, school fees, and other services, has become increasingly popular in Uganda's urban areas. According to Mutenyo et al. (2022), PayWay allows users to manage multiple bill payments through their mobile phones or online platforms, making it a convenient tool for everyday transactions. However, while it has proven to be efficient in urban settings, its reach in rural areas remains limited. Turyatemba and Turyasingura (2023) note that low digital literacy in these regions presents a barrier to the widespread adoption of platforms like PayWay, highlighting the need for increased digital education to fully realize the potential of these systems.

Uganda has witnessed significant growth in digital payment services, primarily driven by the widespread adoption of mobile money. According to the Bank of Uganda (2023), mobile money services provided by telecom companies such as MTN and Airtel have transformed financial transactions by enabling money transfers, bill payments, and merchant transactions. Jumia Uganda, as a leading e-commerce platform, has integrated digital payment options such as Jumia Pay and debit/credit card payments to enhance transaction efficiency and security. However, a key challenge in Uganda's digital payment landscape is the lack of interoperability between mobile money, bank transfers, and other digital platforms. Domingo et al. (2023) discuss the need for cross-platform integration to streamline transactions and increase efficiency in the payment ecosystem. The separation between systems like mobile money and traditional banking often complicates transactions for businesses and consumers. However, ongoing initiatives aim to address these issues, working toward greater interoperability, which would enable seamless transactions across different platforms. As Kembabazi et al. (2024) explain, improving interoperability could significantly enhance the user experience and contribute to a more integrated digital payment infrastructure in Uganda.

2.2.2 Financial Performance

According to Moin, Abu Bakar & bin Samat (2023) describe the business performance as the firm's ability to create acceptable outcomes and actions. Recent scholars have suggested the use of both non-financial and financial metrics to measure firm performance (Dobrovic & Lambovska, 2018). Financial measures include; total sales, liquidity, and profitability (Varadarajan, 2020). While non-financial measures include, customer service, marketing effectiveness, human capital, innovation, customer loyalty, assets, and corporate culture (Maziriri, 2020). Non-financial measures are used to supplement the financial measures by providing data on customer requirements or competitors aimed at achieving profitability (Kori, Muathe, & Maina, 2020). Performance is the accomplishment of a given task measured against set known standards of accuracy, completeness, cost, and speed. High performance reflects management effectiveness and efficiency in making use of the company's resources and this in turn contributes to the country's economy at large (Egbunike & Okerekeoti, 2018). This is in line with previous scholars (Nkundabanyanga, 2016; Kaawaase, Bananuka, Kwizina, & Nabaweesi, 2019).

2.2.4 Product quality

Product quality refers to the ability of a product, service, or a combination of both to satisfy customer needs and meet necessary user and industry standards (Bhowmick & Seetharaman, 2023). This definition emphasizes both functional performance and compliance with expectations, which are central to consumer satisfaction and market competitiveness.

Hanaysha and Abdullah (2016) expand on this by defining product quality as the total attributes and features intentionally built into a product to meet the needs of business customers. These attributes may include functionality, design, durability, and consistency each playing a critical role in shaping customer perceptions and contributing to brand equity.

From a systems and process perspective, Lotfi et al. (2013) describe product quality as fitness for purpose, indicating that a product is considered high-quality when it performs its intended function reliably and efficiently. This view links quality with production variability, suggesting that consistency in manufacturing and delivery processes is essential for maintaining product standards.

Furthermore, Liu et al. (2017) underscore that traditional product quality also includes characteristics such as performance, longevity, reliability, safety, appearance, and color all of which contribute to consumer evaluations. In the digital and e-commerce context, these characteristics remain critical as consumers often base purchasing decisions on perceived quality in the absence of physical product interaction.

Finally, according to Ţurcan and Ţurcan (2023), product quality can be evaluated by how well a product performs its intended function and how closely it meets customer expectations making it a central driver of entrepreneurial success and competitive advantage.

2.3 Empirical review

2.3.1 The relationship between Mobile money payment and financial performance of e-commerce businesses

In recent years, numerous studies have explored the impact of mobile payment systems on business performance, particularly focusing on small and medium enterprises (SMEs) in various African countries. For instance, Kingu and Kiwango (2021) examined the influence of mobile money payments on the financial performance of micro-businesses in Monduli District, Tanzania. Similarly, Khorow (2023) explored the effect of mobile money services on SMEs in

Garissa County, Kenya. These studies suggest that mobile payments are likely to enhance the financial performance of businesses, but the exact nature and magnitude of these effects are often nuanced and dependent on contextual factors such as local market conditions and the type of mobile payment system adopted.

Additionally, research on mobile money and electronic payment systems has extended into other sectors, including the banking industry. For instance, Momoh-Musa and Nwaiwu (2021) examined the role of electronic payment systems in the performance of deposit money banks in Nigeria. They found that the adoption of mobile and electronic payment systems positively influenced financial outcomes, such as profitability and operational efficiency. Similarly, Aluoch (2021) studied the impact of mobile money transfers on the financial performance of hospitality businesses in Nakuru County, Kenya. In-depth interviews with hotel managers, as well as the analysis of financial records, revealed how the hospitality industry in Kenya is leveraging mobile payments to improve revenue generation. Further supporting this line of research, Tiwasing, Addae, and Naab (2024) investigated the effects of mobile money on business performance in Kenya. Their study analyzed the impact of mobile money on both financial and non-financial business outcomes, such as customer satisfaction and operational efficiency. These diverse studies reveal a broad consensus that mobile payment systems have a positive influence on the financial performance of businesses across different industries, contributing unique perspectives on how these systems are implemented and the outcomes they produce.

In addition to these studies, other research has focused on mobile money's impact on SMEs' operations and financial growth. Onyango, Wanyama, and Singoro (2021) explored the effect of mobile money transfer services on the financial growth of SMEs in Busia Town, Kenya. Their study revealed that mobile money services significantly improved financial growth indicators before and after their adoption. Similarly, Tiwasing, Addae, and Naab (2024) analyzed how mobile money affects business operations, with an emphasis on both financial and non-financial outcomes. Their research indicated that mobile payments have a significant impact on business operations, profitability, and overall performance. Khorow (2023) assessed how mobile money services have enhanced operational efficiencies and financial outcomes for SMEs in Kenya. The results from these studies suggest that mobile payments are significantly enhancing the financial growth and operational performance of SMEs by improving transaction efficiency, lowering transaction costs, and increasing access to broader customer bases. These findings underscore the importance of mobile payments in driving business performance,

particularly for resource-constrained small businesses that need efficient, scalable solutions to manage their financial operations.

Further research has demonstrated the varying methodologies used to assess the role of mobile payments in different sectors, providing critical insights into the long-term financial outcomes of such technologies. Akinyi and Benjamin (2021) studied the impact of mobile payments on revenue performance within the Kenya Power and Lighting Company (KPLC), focusing on the company's operations in the Western Region of Kenya. Their findings showed that the adoption of mobile payments led to positive effects on corporate financial performance, particularly revenue generation. Similarly, Kingu and Kiwango (2021) examined the impact of mobile money services on profitability and operational growth in micro-businesses in Monduli District, Tanzania. Momoh-Musa and Nwaiwu (2021), in their study of Nigerian banks, explored how the adoption of mobile payments affected key financial metrics such as profitability and customer satisfaction. The diverse range of methodologies applied across these studies reveals the robustness of mobile payment systems as an instrument for improving business performance in both the public and private sectors, reinforcing the positive outcomes identified in other studies across different regions and industries.

2.3.2 The relationship between online payment and financial performance of e-commerce

The integration of online payment systems has significantly transformed the financial performance of e-commerce businesses. Digital payment methods, such as mobile banking and online payment gateways, have revolutionized the way transactions are processed, improving operational efficiency and customer satisfaction (Awale, 2023). In a study conducted in Somalia, Awale (2023) highlighted how digital payment systems contribute to business growth, emphasizing the importance of secure, efficient transactions. Similarly, Noor et al. (2023) examined the role of online payment technologies in e-commerce adoption, focusing on businesses in Kenya and Uganda. Their research underlined the benefits of adopting digital payment methods, such as increased business success, enhanced customer trust, and higher engagement.

Hassan (2023) emphasized the critical relationship between e-commerce and payment solutions, noting that digital payment platforms facilitate smoother transactions that foster business growth. He demonstrated that adopting digital payment systems leads to higher customer satisfaction and repeat purchases, which in turn boosts e-commerce performance.

Awale (2023) further explored how transaction speed and security of digital payments positively influence sales and customer satisfaction, reinforcing the link between e-commerce success and payment solutions.

The adoption of electronic payment methods in Kenya has been shown to improve financial performance, particularly in the banking sector. Okonkwo and Ekwueme (2022) found that digital payments positively impacted customer satisfaction, operational costs, and profitability in Kenya's banking sector. Similarly, Lamidi et al. (2025) studied the effects of payment gateway adoption on micro, small, and medium-sized enterprises (MSMEs) in Uganda. Their findings emphasized the role of digital financial literacy and financial inclusion in enhancing business performance, especially within MSMEs.

The shift toward electronic banking and digital payments has also been essential for enhancing operational efficiency and profitability. Studies by Awale (2023), and Hassan (2023) suggest that the adoption of digital payment systems by financial institutions leads to greater efficiency, reduced costs, and increased profitability. These findings demonstrate the essential role that digital payments play in the growth of e-commerce businesses and the broader financial sector.

As e-commerce grows, the demand for secure and efficient payment systems has prompted innovations in payment technologies. Hassan (2023) and Awale (2023) both noted that new technologies, such as biometric authentication and blockchain-based solutions, have emerged to address the need for secure, fast, and reliable transactions. These advancements not only improve operational efficiency but also enhance the customer experience, positioning digital payment platforms as crucial drivers of success in the competitive e-commerce landscape.

2.3.3 The relationship between Debit/credit card usage and financial performance of e-commerce businesses

The use of debit and credit cards in e-commerce has a significant impact on the financial performance and sustainability of businesses in the digital space. Numerous studies have explored how digital payment methods, including debit and credit cards, influence the operational and financial outcomes of e-commerce platforms.

AAGB Udayana and AS Fatmawaty (2023) highlighted the vital role of e-commerce applications and digital marketing in enhancing business performance, particularly for small enterprises. They noted that payment systems, including pay-later options and credit cards, provide consumers with more accessible and convenient ways to make purchases, improving

revenue generation and business sustainability. Their study showed a positive correlation between the adoption of digital payments and business growth.

Similarly, N. Elizabeth Mathew, N. Raj, and R. Riju (2023) investigated the role of debit and credit card systems in reducing operational costs for private-sector banks. They demonstrated that debit and credit card payments streamline transactions and reduce costs related to cash handling, contributing to improved financial performance. Their findings confirmed that e-commerce platforms integrating digital payments are positioned to reduce transaction costs and enhance profitability.

Kimonye and Muchelule (2024) conducted a study examining the relationship between electronic payment systems and the financial performance of commercial banks in Kenya. Specifically, they analyzed the impact of electronic cards and bank agents on financial performance. Their research was grounded in Agency Theory and employed a cross-sectional study design. The study targeted Information Technology, Operations, and Finance Management staff from 24 fully Kenyan-owned commercial banks. The findings revealed a significant relationship between electronic payment systems and financial performance. Notably, electronic card usage and bank agents positively influenced financial performance, while the impact of automated teller machines (ATMs) was also statistically significant. These findings highlight the strategic importance of electronic payment systems in enhancing financial performance within the banking sector.

Research by Al-Arsy and Afian (2022) in Indonesia examined the widespread use of debit and credit cards, along with other digital payment methods, in the rapidly growing e-commerce sector. They found that digital payment systems significantly improve user experience and contribute to increased business revenue.

In India, Singh, Duggal & Ahluwalia (2023) assessed the financial performance of Flipkart, a leading e-commerce company, with a focus on debit and credit card usage. Their study revealed that integrating debit and credit card payments led to a more efficient payment process, essential for scaling operations. The findings highlighted that offering multiple payment options, including debit and credit cards, increased sales volume and customer satisfaction, critical components of financial success in competitive e-commerce markets.

However, research by Nopiah et al. (2024) explored the impact of digital payments on Indonesia's e-commerce sector during the COVID-19 pandemic. While digital payments, including debit and credit cards, facilitated access to goods and services, the financial

performance of e-commerce businesses fluctuated due to market instability. They revealed that while debit and credit cards play an essential role in digital economic growth, long-term sustainability depends on factors such as security, consumer trust, and technological infrastructure.

Additionally, Tony (2025) investigated the relationship between debit/credit card usage and supply chain sustainability in e-commerce businesses. His research found that businesses using digital payments, including debit and credit cards, experience higher operational efficiency and reduced costs. Moreover, companies that successfully integrate digital payment solutions can better manage supply chain disruptions and maintain customer loyalty.

2.3.4 The moderating role of product quality on the relationship between digital payment services (Mobile money, Jumia Pay, Debit/credit cards) and the financial performance of e-commerce businesses

Nor et al. (2024) emphasized that product quality is not merely a supporting aspect of e-commerce operations, but a critical success factor that can either amplify or undermine the benefits of digital payment systems. When businesses offer high-quality products, digital payment tools are more likely to lead to improved financial outcomes by encouraging customer trust, satisfaction, and repeat purchases. On the other hand, if product quality is poor or inconsistent, even the most advanced digital payment platforms may fail to deliver financial value, as customers may be dissatisfied post-purchase and less likely to return. In this sense, product quality acts as a moderating variable one that determines the strength and direction of the relationship between digital payment usage and business performance.

Furthermore, Mauki et al. (2025) found that inconsistencies in product quality can significantly erode the competitive advantages offered by electronic payments. For instance, if customers frequently receive defective or misrepresented products, their willingness to engage in future transactions regardless of how smooth or secure the payment process is declines sharply. This loss of consumer trust can lead to higher return rates, increased operational costs, and a negative brand reputation, thereby reducing the overall effectiveness of digital payment systems in driving profitability.

Product quality also plays a central role in shaping consumer perceptions on online platforms such as Jumia. Dzogbenuku et al. (2022) argued that in developing economies, where consumer protection and product standards may vary, the perceived quality of products delivered through

e-commerce platforms greatly influences purchasing decisions and brand loyalty. They suggest that digital payment systems must be complemented by reliable and consistent product offerings to foster lasting consumer relationships and ensure long-term financial sustainability for online businesses. Without this alignment, the trust built through secure digital payments may be easily lost due to dissatisfaction with the end product.

2.3.4 Research Gaps

Despite the extensive research on digital payment services and their impact on financial performance across various industries, several gaps remain that justify this study on Jumia Uganda's digital payment services and financial performance. There is limited focus on E-Commerce Businesses in Uganda. Most studies have examined mobile money and digital payments in SMEs, banks, and other industries in Kenya, Tanzania, Nigeria, and Indonesia (Smith & Karanja, 2020; Adegbite et al., 2019; Yusuf, 2021). However, there is limited empirical research focusing on e-commerce businesses in Uganda, particularly on Jumia Uganda limited. Given that Jumia Uganda operates in a unique digital ecosystem, a study specific to its financial performance and digital payment services is necessary (Nabukeera, 2022).

There is also insufficient analysis of Jumia Pay's role on financial performance. Studies on online payment systems have focused on general digital payment adoption but have not assessed Jumia Pay's specific impact on financial performance in Uganda (Okello & Mugisha, 2021; Chibanda, 2020). Since Jumia Pay is an in-house payment system, understanding its effectiveness in reducing transaction costs, improving trust, and boosting revenue requires further investigation (Mwangi & Kimani, 2023).

Additionally, many studies focus on internal benefits such as efficiency and cost reduction but do not fully consider external factors affecting digital payments in Uganda. These include government regulations (Mwesigwa, 2020), mobile money transaction fees and their impact on Jumia Uganda's profitability (Kakembo & Nsubuga, 2021), and consumer behavior, particularly preferences for cash-on-delivery vs. digital payments (Tumwine et al., 2019).

This study aims to fill the identified gaps by examining how digital payment services, product quality influence Jumia Uganda's financial performance, with a specific focus on Jumia Pay,

mobile money, and debit/credit card transactions. It will provide new insights into the Ugandan e-commerce sector, contributing to both academic literature and practical business strategies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research design, approach, area of study, target population, sample size, and sampling techniques. It also discusses data quality, data collection instruments, procedures, data analysis methods, and ethical considerations.

3.1 Research design

Kiwala (2017) defines research design as a structured plan to obtain answers to research questions or problems, outlining everything from hypothesis formulation to final data analysis. This study adopted quantitative approach to gain a comprehensive understanding of the subject. (Why). A correlational design was used to statistically examine the relationship between digital payment services, product quality, and the financial performance of e-commerce businesses in Uganda, focusing on Jumia Uganda Limited.

3.2 Research approach

According to Creswell (2014), there are three main research approaches: quantitative, qualitative, and mixed methods. This study primarily adopted a quantitative research approach, which involves collecting and analyzing numerical data to examine the relationships between variables in this case, digital payment services, product quality, and the financial performance of e-commerce businesses in Uganda.

3.3. Study population

According to Malhotra and Birks, (2016), population is the group of elements that possesses the information sought and about which inferences were made. The study population included 390 staff members from various departments of Jumia (Finance, Marketing, Sales, Operations, Distributors, Sales Agents, and Senior Management). (Jumia internal report, 2025).

3.4 Sampling technique

Omair (2025) defines a sampling technique as the strategy used to select representative respondents from a target population. This study employed a combination of sampling methods to ensure a diverse and representative sample of Jumia Uganda Limited staff. For the quantitative data, stratified random sampling was used to select participants from accessible

departments such as Finance, Marketing, Operations, and Distributors. This non-probability method includes respondents based on their accessibility, geographical proximity, availability, and willingness to participate (Etikan, Musa, & Alkassim, 2016). Its practical nature allows efficient data collection from readily available individuals. In the Sales Agents department, systematic sampling was applied by selecting individuals at regular intervals, ensuring a more structured and unbiased selection process to enhance sample representativeness.

3.5 Sample size

A sample size refers to the specific number of respondents selected from a larger population to participate in a study (Omair, 2025). In this study, a total sample of 210 participants was determined using Krejcie and Morgan's (1970) sample size determination table. This approach ensured that the selected sample was statistically representative of the target population while remaining feasible for effective data collection and analysis. The sample comprised 210 respondents, providing both breadth and depth of information necessary to achieve the study objective.

Table 3.1: List of the population

The table below presents a summary of the respondent categories included in a research study, detailing the population size, sample size, and the sampling method applied for each group.

Category of respondents	Population	Sample Size	Sampling Method
Finance Department	15	7	Stratified random sampling
Marketing Department	45	25	Stratified random sampling
Sales Department	100	55	Stratified random sampling
Operations Department	80	35	Stratified random sampling
Distributors	40	23	Stratified random sampling
Sales Agents	110	48	Stratified random sampling
Total Population	390	193	

Jumia internal report, 2025, under guidance of Krejcie Table 1970

3.6. Sources of Data

There were two main types of data source: secondary data and primary data sources. A primary data source was used for this study. Primary data were data that were collected by a researcher from firsthand sources, using methods like surveys, interviews, or experiments (Dorsten & Hotchkiss, 2018). The researcher chose to collect primary data because information was needed directly from the Jumia Uganda Limited head office. Primary data allowed the researcher to gather specific and relevant information that was tailored to the research objectives. Also, secondary data were used. This source provided already existing information related to digital payments and e-commerce performance. The researcher used Jumia Uganda's financial reports, industry reports and publications, academic journals, and articles to provide additional insight into the primary data.

3.7 Data Collection Methods

Data collection methods are the techniques used by researchers to gather information from respondents or sources in a structured way (Mazhar, Anjum & Khan, 2021). In research, methods can vary based on the type of data being sought and the goals of the study. Common data collection methods include surveys, experiments, and interviews. This study employed surveys as a method of data collection.

Data collection tools

A structured questionnaire survey served as the primary quantitative data collection tool. Questionnaires allow the systematic collection of numerical data through standardised questions, making them appropriate for large samples and enabling the generalisation of findings (Nardi, 2018). They are also cost-effective and time-efficient for reaching wide audiences (Wyse, 2012). This study adopted a self-administered questionnaire with a five-point Likert-type scale, scoring from 5 (strongly agree) to 1 (strongly disagree), in line with Russo, Tomei, Serra, and Mello (2021).

3.9 Data collection procedures

An introductory letter was obtained from the Dean of the School of Business to ensure compliance with ethical guidelines throughout the data collection process. Data collection began with a pilot study, during which the questionnaires were administered to 20 participants. Based on the feedback, modifications were made to the questionnaire. In the main survey, self-administered questionnaires were entered into Google Forms, and the link was sent to respondents.

3.10. Measurement of the variables

The study utilized the established measurement items by earlier researchers to operationalize and measure the variables under the study.

The study examined the relationship between digital payment services and the financial performance of e-commerce businesses in Uganda, specifically focusing on Jumia Uganda limited. It posits that three types of digital payment services like mobile money, online payment , and debit/credit card usage serve as independent variables that influence the dependent variable, financial performance, measured through indicators such as, profitability, market share and net worth.

3.11 Reliability and validity of instrument

Reliability

Sürücü & Maslakci (2020) argued that reliability is the extent to which the research instrument contains no variable errors and appears to be inconsistent from observation to observation during any measurement attempt or that vary any time that a given unit is measured using the same instrument. Reliability (internal consistency and stability) of the instruments were tested using Cronbach's Alpha Coefficient, acceptable if the threshold is 0.7.

In this study, the internal consistency and stability of the instruments were assessed using Cronbach's Alpha Coefficient, which is an established measure of reliability.

$$\rho_{KR20} = \frac{k}{k-1}\left(1 - \frac{\sum_{j=1}^{k} p_j q_j}{\sigma^2}\right)$$

Where k = number of questions

p_j = number of people in the sample who answered question *j* correctly

q_j = number of people in the sample who didn't answer question *j* correctly

σ^2 = variance of the total scores of all the people taking the test = VARP (R1)

Where R1 = array containing the total scores of all the people taking the test.

Values range from 0 to 1. A high value indicates reliability, while too high a value (in excess of .90) indicates a homogeneous test.

Validity

Validity of the instrument was measured through seeking for views from experts both academicians and practitioners in the area of e-commerce who assisted on the relevance of the scales in the instrument. The questionnaires were designed in accordance with specific research objectives. According to (Ahmed & Ishtiaq, 2021), validity is the measure of precision, accuracy, and relevance refers to the ability to produce findings that agree with theoretical or conceptual values. The validity, therefore, is the ability of the instruments to measure what they are supposed to measure entailing accuracy and precision. The resulting feedback was used to improve the research tool. The validity of the questionnaire was established using the expert judgment method (Fernández-Gómez, 2020). The researcher computed the score using the Content Validity Index formula below:

$$CVI = \frac{Items\ rated\ as\ very\ rlevant\ and\ relevant\ (2\ and\ )}{Total\ number\ of\ items}$$

For the instrument to be valid, the CVI had to fall within the accepted statistical range of 0.7 to 1. CVI = 7(9): CVI = 0.7777.

3.12 Data Processing and Analysis

Data from the field were compiled, sorted, edited and coded to have the required quality, accuracy and completeness. Then it was entered into the computer using the Statistical Package for Social Sciences (SPSS) version 27 for analysis. During the analysis of the data, descriptive statistics were used to understand the results of the sample characteristics. The researcher used correlation analysis to test the relationship between the independent variable and the dependent variable. Regression analysis was used to show the combined effect of the independent variable on the dependent variable.

Besides, factor analysis was done for consequent analysis. According to the study objectives, Spearman's correlation analysis was used for associations and moderator contributions.

3.12.1 Data cleaning

Data cleaning refers to the process of identifying and addressing missing values and outliers in the data (Corrales, Corrales, & Ledezma, 2018). This is essential because data analysis cannot be conducted effectively unless the data is free from outliers, and any missing values must be handled appropriately. One way to address missing values is through linear interpolation, while errors caused by data entry can also be corrected.

3.12.2 Missing value analysis (MVA)

Missing value analysis (MVA) is a crucial step in addressing concerns related to incomplete data, which has the potential to distort the analysis and results (Roni & Djajadikerta, 2021). In this study, MVA was conducted to identify any missing values and assess the extent of missing data, as well as to determine the appropriate approach for handling these missing values. It is important to address missing data because it can lead to reduced precision in calculated statistics due to the decreased amount of available information. After performing descriptive statistics, the missing data were identified, and it was determined that respondents had left these values blank while filling out the questionnaire, rather than the missing values being a result of data entry errors. The percentage of missing data was found to be less than 1% of the entire dataset, which was considered negligible and unlikely to significantly impact the standard deviation (Kambach, Bruelheide & Seppelt, 2020). Nonetheless, to ensure a more complete dataset, the missing values were replaced using the linear interpolation method. By replacing missing values with interpolated values, you maintain the overall structure and integrity of the dataset. Linear interpolation is a simple and intuitive method that doesn't introduce any complex assumptions about the missing data.

3.13. Ethical Considerations

The study adhered to strict ethical standards throughout the research process to ensure the protection of participants and the integrity of the data. Approval to conduct the study was obtained from the Dean of the School of Business, Makerere University, allowing the researcher to seek permission from relevant respondents.

To ensure anonymity and confidentiality, participants were not required to provide their names on the questionnaires. Participation was entirely voluntary, and respondents were provided with

a clear explanation of the study's purpose before consenting to participate. Informed consent was obtained from all participants, emphasizing that the information provided would be used solely for research purposes and not for any other activities.

All sources of literature were properly acknowledged through accurate citation and referencing, avoiding plagiarism. During data processing and analysis, ethical procedures were strictly followed. This included careful coding, entry, cleaning, and verification of data to maintain accuracy and reliability. Personal bias was consciously avoided to ensure objectivity in both analysis and reporting of findings. All data were handled securely, and access was restricted to the researcher to protect confidentiality. By explicitly incorporating these procedures, the study ensured that ethical standards governed not only data collection but also data processing and analysis, enhancing the validity and credibility of the research findings.

CHAPTER FOUR:

PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

4.0. Introduction

This chapter covered the analysis, presentation, and discussion of the results according to the objectives of the study. This chapter presented findings of the study which was conducted to find out the relationship between digital payment services, product quality and the financial performance of e-commerce businesses in Uganda, moderated by product quality specifically focusing on Jumia Uganda Limited. The data were first entered into Microsoft Excel for initial organization, then exported to the Statistical Package for the Social Sciences (SPSS) version 27 for cleaning and analysis. Data cleaning was performed in SPSS after reviewing initial descriptive statistics. Subsequently, correlation and regression analyses were conducted to address the study objectives

4.1 Response Rate

In this study, a total of 193 questionnaires were administered, with 110 filled and returned, resulting in a 57% response rate. The respondents were from various categories, including the Finance, Marketing, Sales, Operations departments, Distributors, Sales Agents. Therefore, the response rate in this study was considered relatively better than the previous studies mentioned above. The above response rate results are in line with Amin (2007) argument that a response rate >= 50 is good enough to be representative of a survey

population.

4.2 Demographic Characteristics of Respondents

The demographic characteristics of the respondents were analyzed to understand the composition of the sample population in terms of gender, age, educational level, work experience, and frequency of interaction with digital payment systems at Jumia Uganda Limited.

Table 4.1: Demographic Characteristics of Respondents

The table below presents a summary of demographic and work related characteristics of 110 respondents working at Jumai Uganda Limited. The data include five key categories; Gender,

Age group, Educational level, work experience with Jumia Uganda Limited and frequency of interaction with Digital Payment System.

1. Gender

		Frequency	Percent
Valid	Female	37	33.6
	Male	73	66.4
	Total	110	100.0

2. Age Group

		Frequency	Percent
Valid	18-24 years	18	24.5
	25-34 years	45	40.9
	35-44 years	27	24.5
	45-54 years	18	16.4
	55 years and above	2	1.8
	Total	110	100.0

3. Educational Level:

		Frequency	Percent
Valid	Master's Degree	16	14.5
	Bachelors	27	24.5
	Diploma	54	49.1
	High School	10	9.1
	Other (Please specify)	3	2.7
	Total	110	100.0

4. How long have you been working with Jumia Uganda Limited?

		Frequency	Percent
Valid	1-3 years	66	60.0
	3-5 years	31	28.2
	Less than 1 year	7	6.4
	Over 5 years	6	5.5

	Total	110	100.0

5. How frequently do you handle or interact with digital payment systems as part of your work at Jumia Uganda Limited?

		Frequency	Percent
Valid	Daily	37	33.6
	Monthly	26	23.6
	Weekly	47	42.7
	Total	110	100.0

Source: Primary Data 2025

1. Gender

The sample consisted of 73 male respondents (66.4%) and 37 female respondents (33.6%). This indicates a significant overrepresentation of males within the organization. In the context of this study, which explores the relationship between digital payment services, product quality, and financial performance of e-commerce businesses in Uganda, the gender composition is relevant because roles traditionally occupied by men such as technical, managerial, and operations positions are critical for the implementation, management, and monitoring of digital payment systems. According to Jumia's Annual Report (2023), male employees accounted for approximately 68% of the workforce, supporting the reliability of this sample in reflecting the organization's actual composition. The disparity with the national gender distribution (Male: 49%, Female: 51%) from the 2024 Uganda National Population and Housing Census suggests that sector-specific hiring practices and occupational stereotypes may influence workforce composition. This gender distribution may also have implications for engagement with digital payment systems and operational efficiency, which in turn can affect the financial performance of Jumia Uganda Limited, the focus of this study.

2. Age Group

The age distribution of respondents shows that the majority (40.9%) fall within the 25–34-year range, indicating that Jumia Uganda Limited has a predominantly youthful workforce. In the context of this study, which investigates the relationship between digital payment services, product quality, and financial performance of e-commerce businesses in Uganda, this demographic is particularly relevant. Younger employees are often more adaptable, innovative, and proficient with digital tools, which are essential qualities for managing and utilizing digital

payment systems effectively. Their familiarity and comfort with technology can enhance operational efficiency, reduce errors in payment processing, and improve customer satisfaction, thereby positively influencing the financial performance of the organization. According to Kee et al. (2023), youth with digital skills have a competitive advantage in tech-centric sectors, supporting the observed age distribution. However, the minimal representation of employees aged 55 and above suggests that the experience and institutional knowledge of older staff may be underutilized, which could limit the strategic oversight of operations and payment systems. Olarinde, Idem, and Obieze (2024) emphasize the value of inclusive age diversity in achieving sustainable growth, particularly in digitally driven industries.

3. Educational Level

The educational background of respondents shows that 49.1% hold a Diploma, 24.5% a Bachelor's degree, 14.5% a Master's degree, 9.1% completed High School, and 2.7% reported other qualifications. In relation to this study, which investigates the relationship between digital payment services, product quality, and financial performance of e-commerce businesses in Uganda, this distribution has practical implications. The high proportion of diploma holders suggests that operational roles within Jumia Uganda Limited are staffed by individuals with hands-on, practical skills, which are crucial for managing daily digital payment transactions and ensuring service quality. Chen et al. (2021) note that in fast-moving sectors like e-commerce, practical experience is often more valued than formal academic credentials, supporting this observation. Similarly, Kasozi and Asiimwe (2023) argue that diploma holders in Uganda are often better prepared for operational roles due to their focused, applied training. However, the lower representation of Master's degree holders may indicate a gap in strategic management and leadership capacity, which could affect decision-making on enhancing product quality and optimizing digital payment systems. Baluku, Otto, and Matagi (2022) emphasize that advanced education contributes to leadership, innovation, and long-term strategic growth in digital businesses. Therefore, integrating professional development and advanced training programs may help Jumia Uganda balance operational efficiency with strategic growth, ultimately supporting improved financial performance.

4. Years of Employment with Jumia Uganda Limited

The respondents' tenure at Jumia Uganda Limited shows that 66 respondents (60.0%) have worked there for 1-3 years, 31 respondents (28.2%) have been employed for 3-5 years, 7 respondents (6.4%) have been with the company for less than one year, and 6 respondents

(5.5%) have worked for over five years. The concentration in the 1–3-year range suggests either high turnover or rapid organizational expansion. Namazzi and Akankwasa (2021) suggest that high turnover in Ugandan firms is often due to job dissatisfaction or limited internal growth opportunities. Ngoma and Mwebesa (2022) support this, stating that lack of structured career progression contributes to short tenures, especially among youth. On the other hand, Kangave et al. (2023) argue that shorter tenure in tech firms is natural due to shifting skill demands and project-based work. Jumia may benefit from enhancing employee retention through mentorship programs, internal promotions, and continuous skills development.

5. Frequency of Interaction with Digital Payment Systems

Respondents reported varying levels of engagement with digital payment systems, with 33.6% using them daily, 42.7% weekly, and 23.6% monthly. In the context of this study, which examines the relationship between digital payment services, product quality, and financial performance of e-commerce businesses in Uganda, this data highlights the operational reliance on digital payment platforms at Jumia Uganda Limited. Frequent interaction with these systems suggests that employees are well-integrated into digital processes, which is critical for efficient transaction management, timely order processing, and overall service delivery—key factors that can influence financial performance.

Tuyishime and Mutesi (2023) emphasize that regular engagement with digital tools enhances operational efficiency and employee competence in e-commerce environments. Similarly, Obonyo and Wandera (2021) note that staff familiar with digital payment systems are better equipped to deliver effective customer service and ensure smooth payment transactions. However, uneven exposure to digital platforms across different roles can create skill gaps, potentially affecting service consistency and operational performance (Nanfuka & Namubiru, 2022). To mitigate this, periodic digital upskilling and training programs are recommended, ensuring all staff maintain the necessary competencies to support financial performance.

Therefore, the findings on frequency of interaction provide valuable insight into the adoption and usage of digital payment services within Jumia Uganda, highlighting their contribution to operational efficiency and the potential impact on the company's financial outcomes. Descriptive statistics in this section offer a concise overview of the key variables relevant to the study, establishing a foundation for subsequent analysis on how digital payment services and product quality influence financial performance.

4.3 Descriptive Statistics

Descriptive statistics were computed to summarize the main characteristics of the study variables. These include digital payment services (mobile money payment, online payment through JumiaPay, and debit/credit card usage), product quality dimensions (reliability, conformance, and feature), and financial performance indicators (profitability, market share, and net worth). The results are presented in Table 4.2.

Table 4.2 Showing Descriptive Statistics

This table presents descriptive statistics for a set of variables related to digital payment systems, product quality and financial performance based on a sample size of 110 respondents. Each variable was measured on a Likert scale ranging from 1 to 5, with 1 indicating the lowest of agreement and 5 the highest. The statistics include the number of observations (N), minimum and maximum values mean scores and standard deviations.

Variable	N	Min	Max	Mean	Std. Dev.
Digital payments	110	1	5	4.1568	.53024
Mobile money payment	110	1	5	4.1923	.59343
Online payment jumiapay	110	1	5	4.1553	.71559
Debit/credit card usage	110	1	5	4.1227	.57779
Product quality	110	1	5	4.0980	.56486
Reliability	110	1	5	4.0800	.59883
Conformance	110	1	5	4.1345	.69907
Feature	110	1	5	4.0795	.62263
Financial performance	110	1	5	4.1114	.54905
Profitability	110	1	5	4.1013	.57941
Market share	110	1	5	4.1518	.61796
Net worth	110	1	5	4.0809	.59463
Valid N (listwise)	110				

Source: Primary Data 2025

The results revealed that digital payment services are widely adopted among users of Jumia Uganda. On average, respondents reported a high mean value of 4.1568 with a standard deviation of 0.53024 for digital payment services, indicating that these platforms are well-

integrated into their purchasing behavior. The responses suggest that customers find digital payments convenient and efficient, contributing to smooth transaction processes.

Among the specific payment methods, mobile money payments were the most frequently used by customers. The mean value for mobile money payments was 4.1923 with a standard deviation of 0.59343, and the skewness of -1.498 suggests a strong preference for this payment method. Customers find mobile money a reliable and straightforward option when transacting on Jumia Uganda. This highlights the need for Jumia to continue strengthening mobile money platforms and ensuring their security and reliability.

Online payments through Jumia Pay were also commonly used, with a mean value of 4.1553 and a standard deviation of 0.71559. Although responses showed some variation, with skewness of -1.311, many customers appreciated the convenience of Jumia Pay. However, the positive mean score suggests that Jumia Uganda should continue improving the performance and user-friendliness of its own payment platform to boost customer confidence and satisfaction.

Debit and credit card usage also received positive responses, with a mean value of 4.1227 and a standard deviation of 0.57779. While slightly lower than the other methods, this still suggests that customers are open to using cards, but there might be barriers such as accessibility or perceived inconvenience. Jumia Uganda could benefit from running awareness campaigns or offering incentives to encourage the use of debit and credit cards, diversifying payment options and catering to different customer preferences.

When it comes to product quality, the findings showed that customers generally perceive the products sold on Jumia Uganda as high quality, with a mean value of 4.0980 and a standard deviation of 0.56486. This positive perception cuts across dimensions such as product reliability with a mean of 4.0800 and a standard deviation of 0.59883, compliance with a mean of 4.1345 and a standard deviation of 0.69907, and features with a mean of 4.0795 and a standard deviation of 0.62263. These results underline the importance of product quality in building customer trust, which in turn supports the growth of digital payment adoption.

In terms of financial performance, the findings showed a generally high mean score of 4.1114 with a standard deviation of 0.54905. This reflects the company's strong position in the e-commerce sector in Uganda. The positive customer perceptions of both digital payment systems and product quality are likely contributing to this favorable financial performance. Key indicators of financial performance such as profitability with a mean of 4.1013 and a

standard deviation of 0.57941, market share with a mean of 4.1518 and a standard deviation of 0.61796, and net worth with a mean of 4.0809 and a standard deviation of 0.59463 show that Jumia Uganda enjoys strong financial health.

4.4 Analyses and Results

4.4.1 Zero-Order Correlations

This section presents the Spearman's rho correlation analysis to establish the bivariate relationships among the study variables. The analysis is based on 110 respondents and investigates the direct relationships between digital payment services (mobile money, online payment Jumia Pay, debit/credit card usage) and financial performance metrics of e-commerce businesses in Uganda.

Table 4.3: Zero-Order Correlations

This table presents a Pearson correlation matrix showing the strength and direction of relationships among 12 key variables related digital payments, service quality and financial performance, based on data collected from 110 respondents at Jumai Uganda Limited.

Correlations	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Digital payments (1)	1											
Mobile money payment (2)	.841**	1										
Online payment jumiapay (3)	.874**	.609**	1									
Debit credit card usage (4)	.807**	.535**	.542**	1								
Product quality (5)	.741**	.573**	.662**	.631**	1							
Reliability (6)	.613**	.473**	.566**	.499**	.904**	1						
Conformance (7)	.698**	.539**	.641**	.574**	.876**	.692**	1					
Feature (8)	.643**	.499**	.536**	.593**	.869**	.723**	.595**	1				
Financial performance (9)	**.846****	**.678****	**.785****	.661**	.849**	.756**	.711**	.785**	1			
Profitability (10)	.850**	.687**	.827**	.609**	.799**	.719**	.674**	.727**	.942**	1		
Market share (11)	.756**	.663**	.725**	.502**	.738**	.611**	.630**	.715**	.919**	.824**	1	
Networth (12)	.730**	.519**	.614**	.716**	.805**	.759**	.658**	.722**	.898**	.777**	.702**	1
N	110	110	110	110	110	110	110	110	110	110	110	110

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

Source: Primary Data 2025

4.4.1 Mobile Money Payment and Financial Performance

The study found a strong, significant positive relationship between mobile money payment and financial performance among e-commerce businesses in Uganda ($r = 0.678$, $p \leq .01$), confirming H1. This demonstrates that increased adoption of mobile money enhances profitability, revenue growth, and market share, validating the hypothesis that mobile money is a strategic enabler of financial success. This means that as the use of mobile money increases, financial outcomes such as profitability, revenue growth, and market share also improve. Given that mobile money is a widely adopted and trusted payment method in Uganda, its convenience and accessibility make it easier for customers to complete transactions, thereby boosting sales volumes and enhancing cash flow for businesses. Furthermore, mobile money is not merely a payment channel but a strategic enabler of financial success, suggesting that greater integration and promotion of mobile money services can directly strengthen the financial performance of firms like Jumia Uganda Limited.

Mobile money enhances financial performance by improving transaction speed, accessibility, and market reach, while operational challenges require mitigation. These findings align with Kingu & Kiwango, 2021; Ibrahim et al., 2021; Onyango, Wanyama, & Singoro, 2021, who showed that mobile money enhances business financial performance through increased convenience, security, and efficiency, particularly in contexts with limited access to formal banking services. The study confirms that mobile money adoption positively contributes to financial outcomes in the Ugandan e-commerce sector. H1 is supported, showing that mobile money positively influences financial performance, while operational challenges and transaction costs can moderate this effect.

4.4.2 Online Payment and Financial Performance

The study found a strong significant positive relationship between Online Payment and financial performance among e-commerce businesses in Uganda ($r = 0.785^{**}$, $p \leq .01)^{*}$, supporting H2. The results highlight that JumiaPay facilitates convenient, secure, and efficient transactions, contributing directly to improved business outcomes. This indicates that as customers increasingly adopt JumiaPay for their transactions, businesses experience improvements in key financial outcomes such as profitability, revenue growth, and market share. The strength of this relationship suggests that JumiaPay enhances customer convenience, trust, and transaction efficiency, which in turn boosts sales volumes and overall business

performance. Therefore, JumiaPay serves not only as a secure payment method but also as a strategic tool for driving financial growth in the e-commerce sector, underscoring the importance of continued investment and promotion of platform-integrated digital.

4.4.3 Debit/Credit Card Usage and Financial Performance

The study found a significant strong positive relationship between debit/credit card usage and financial performance among e-commerce businesses in Uganda ($r = 0.661^*$, $p \leq .01)^*$, confirming H3. Despite lower adoption compared to mobile money and JumiaPay, debit/credit cards improve customer convenience and enable higher-value transactions, positively impacting financial outcomes. This suggests that greater reliance on debit and credit card payments contributes to improved financial outcomes such as profitability, revenue growth, and market expansion. Although debit and credit card usage is not as widespread as mobile money or JumiaPay in Uganda due to limited card penetration and banking access, its adoption still plays an important role in enhancing customer convenience, attracting middle- and high-income consumers, and facilitating larger transaction values. Therefore, the use of debit and credit cards remains a valuable payment option that supports the overall financial performance of e-commerce firms like Jumia Uganda Limited.

4.4.4 **Combined effect of digital payment services on financial performance**

The hierarchical multiple regression results (Table 4.4, Section 4.5) demonstrate that digital payment services collectively have a strong and significant effect on overall financial performance ($R^2 = 0.734$ to 0.826 across models), supporting H4. This indicates that integrating multiple digital payment channels enhances transaction efficiency, customer satisfaction, and profitability for e-commerce platforms.

4.4.5 Moderating Role of Product Quality on the Relationship between digital payment services and Financial Performance

Product quality is significantly correlated with digital payments ($r = .741$, $p \leq .01$) and financial performance ($r = .849$, $p \leq .01$). High product quality strengthens the impact of digital payment adoption on financial outcomes, validating H5. These results suggest that product quality is an important factor that can influence the strength of the relationship between digital payment adoption and financial outcomes.

4.5 The multiple regression analysis

This table presents the results of three hierarchical multiple regression models designed to examine the predictive influence of digital payment methods and service quality on performance outcomes at Jumia Uganda Limited. Each model progressively incorporates additional variables to assess their incremental impact.

Table 4.4: Multiple regression results

	Model 1					Model 2					Model 3				
	B	Std. Error	Beta	t	Sig.	B	Std. Error	Beta	t	Sig.	B	Std. Error	Beta	t	Sig.
(Constant)	0.627	0.223		2.812	0.006	0.268	0.19		1.413	0.161	2.357	1.299		1.814	0.073
Mobile money payment	0.218	0.061	0.238	3.583	0.001	0.153	0.051	0.167	3.011	0.003	-0.013	0.114	-0.014	-0.111	0.911
Online payment jumiapay	0.4	0.051	0.526	7.891	0.000	0.272	0.045	0.358	6.006	0.000	0.097	0.117	0.128	0.831	0.409
Debit credit card usage	0.221	0.059	0.235	3.748	0.000	0.078	0.052	0.083	1.486	0.146	-0.106	0.125	-0.113	-0.851	0.397
Product quality						0.427	0.059	0.445	7.191	0.000	-0.144	0.357	-0.154	-0.404	0.687
int_1											0.141	0.087	1.035	1.624	0.107
Model summary R^2 =	.734					.822					.826				

Adjusted R^2 =	.727	.815	.818
F-values: F(5, 101)	97.636	121.187	98.991
Durbin Watson	1.712		

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

a. Dependent Variable: financial performance

b. Predictors: (Constant), debit credit card usage, mobile money payment, online payment (jumiapay)

c. Predictors: (Constant), debit credit card usage, mobile money payment, online payment (jumiapay), product quality

d. Predictors: (Constant), debit credit card usage, mobile money payment, online payment (jumiapay), product quality, int_1

Table 4.4 presents hierarchical regression analysis results that examine the contribution of digital payment services such as mobile money payment, online payment , debit/credit card usage, and product quality on the financial performance of e-commerce businesses in Uganda. The hierarchical approach enabled sequential testing of direct predictors (digital payment services), the moderating role of product quality, and their combined effects on financial performance.

Model 1

Model 1 tested the influence of digital payment services, including mobile money payments, online payments (Jumia Pay), and debit/credit card usage, on financial performance. The model accounted for 73.4% of the variance in financial performance ($R^2 = 0.734$, Adjusted $R^2 = 0.727$, $F = 97.636$, $p < 0.001$), indicating strong explanatory power.

The results revealed that mobile money payments ($B = 0.218$, $\beta = 0.238$, $t = 3.583$, $p = 0.001$), online payments ($B = 0.400$, $\beta = 0.526$, $t = 7.891$, $p < 0.001$), and debit/credit card usage ($B = 0.221$, $\beta = 0.235$, $t = 3.748$, $p < 0.001$) were all positive and significant predictors of financial performance. These findings suggest that increased adoption of mobile money, Jumia Pay, and debit/credit card usage contributes significantly to improved financial outcomes in e-commerce.

These results align with the work of Kingu and Kiwango (2021), Ibrahim et al. (2021), and Onyango et al. (2021), who found that mobile money services enhance financial management, efficiency, and inclusion, thereby improving business performance. Similarly, Noor et al. (2023), Awale (2023), and Onya (2022) reported that online payment platforms increase convenience and trust, supporting better financial performance. Debit/credit card usage findings are consistent with Al-Arsy and Afian (2022), Singh et al. (2023), and Nopiah et al. (2024), who highlighted that card payments improve customer satisfaction, expand sales, and boost financial outcomes. H1, H2, and H3 are accepted in Model 1. The collective effect of digital payment services (H4) is also accepted.

Model 2

Model 2 introduced product quality to examine its additional contribution to financial performance. The model's explanatory power increased to 82.2% ($R^2 = 0.822$, Adjusted $R^2 = 0.815$, $F = 121.187$, $p < 0.001$), indicating a substantial incremental impact.

In this model, mobile money payments ($B = 0.153$, $\beta = 0.167$, $t = 3.011$, $p = 0.003$) and online payments ($B = 0.272$, $\beta = 0.358$, $t = 6.006$, $p < 0.001$) remained significant, though their effects slightly reduced compared to Model 1. Debit/credit card usage became non-significant ($B = 0.078$, $\beta = 0.083$, $t = 1.486$, $p = 0.140$). Product quality emerged as a strong positive predictor

(B = 0.427, β = 0.445, t = 7.191, p < 0.001), suggesting that beyond digital payment services, offering high product quality significantly enhances financial performance.

These findings are supported by Nor et al. (2024), Dzogbenuku et al. (2022), and Mauki et al. (2025), who emphasized that product quality builds consumer trust, satisfaction, and repeat purchases, complementing the benefits of digital payment adoption. The results also align with Nopiah et al. (2024), who cautioned that technological solutions alone do not guarantee performance if not paired with quality products.

H1 and H2 remain accepted; H3 is partially rejected (non-significant for debit/credit card usage); H4 is accepted; H5 is yet to be tested.

Model 3

Model 3 included an interaction term (int_1) between product quality and digital payment services to test the moderating hypothesis (H5). The model showed only a marginal increase in explanatory power ($R^2 = 0.826$, Adjusted $R^2 = 0.818$, F = 98.991), and the interaction term was not significant (B = 0.141, t = 1.624, p = 0.107).

In this model, mobile money (B = –0.013, β = –0.014, t = –0.111, p = 0.911), Jumia Pay (B = 0.097, β = 0.128, t = 0.830, p = 0.409), and debit/credit card usage (B = –0.106, β = –0.113, t = –0.851, p = 0.397) were all non-significant. Product quality also lost significance when combined with the interaction (B = –0.144, β = –0.150, t = –0.404, p = 0.687). These results indicate that product quality does not significantly moderate the relationship between digital payment services and financial performance.

This finding contrasts with Nor et al. (2024) and Dzogbenuku et al. (2022), who argued that high product quality enhances digital transaction benefits by reducing consumer risk perceptions. Mauki et al. (2025) similarly suggested that poor quality could negate digital payment advantages. However, in this study, product quality and digital payments appear to exert independent effects, H5 is rejected.

Summary of Hypotheses Testing

Hypothesis	Result
H1: Mobile money payments positively affect financial performance	Accepted
H2: Online payments positively affect financial performance	Accepted
H3: Debit/credit card usage positively affects financial performance	Accepted (Model 1); Partially rejected in Models 2 & 3
H4: Digital payment services collectively positively affect financial performance	Accepted
H5: Product quality moderates the relationship between digital payments and financial performance	Rejected

CHAPTER FIVE:

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter presents a detailed discussion of the study findings in relation to the research objectives and the existing literature. It interprets the results gathered from the analysis, highlighting their implications for practice, policy, and future research. The discussion also connects the study outcomes with theoretical perspectives and prior empirical studies to provide a comprehensive understanding of the issues investigated.

5.1.1 The Relationship between Mobile Money Payment and Financial Performance

The study found that mobile money payment has a strong, positive, and statistically significant effect on the financial performance of e-commerce businesses in Uganda. Correlation analysis revealed a strong positive relationship ($r = 0.678$, $p \leq 0.01$), with a coefficient of determination $R^2 = 0.460$, indicating that approximately 46% of the variation in financial performance is explained by mobile money usage. Regression analysis confirmed this effect ($B = 0.293$, Beta $= 0.316$, $t = 2.256$, $p = 0.026$), supporting Hypothesis H1. Mobile money enhances financial performance by improving transaction speed, accessibility, and market reach, while operational challenges require mitigation. These findings align with Kingu & Kiwango, 2021; Ibrahim et al., 2021; Onyango, Wanyama, & Singoro, 2021, who showed that mobile money enhances business financial performance through increased convenience, security, and efficiency, particularly in contexts with limited access to formal banking services. The study confirms that mobile money adoption positively contributes to financial outcomes in the Ugandan e-commerce sector. H1 is supported, showing that mobile money positively influences financial performance, while operational challenges and transaction costs can moderate this effect. These results align with the work of Kingu and Kiwango (2021), Ibrahim et al. (2021), and Onyango et al. (2021), who found that mobile money services enhance financial management, efficiency, and inclusion, thereby improving business performance. Similarly, Noor et al. (2023), Awale (2023), and Onya (2022) reported that online payment platforms increase convenience and trust, supporting better financial performance. Debit/credit card usage findings are consistent with Al-Arsy and Afian (2022), Singh et al. (2023), and Nopiah et al. (2024), who highlighted that card payments improve customer satisfaction, expand sales, and boost financial outcomes

5.1.2 The Impact of Online Payment on Financial Performance

The findings indicate that the use of online payment platforms, specifically Jumia Pay, significantly enhances financial performance. Correlation analysis showed $r = 0.612$ ($p \leq 0.01$) with $R^2 = 0.374$, while regression analysis demonstrated a robust positive effect ($B = 0.370$, Beta = 0.482, $t = 5.988$, $p < 0.001$). These results confirm Hypothesis H2. Results suggested that Jumia Pay reduces reliance on third-party payment providers, lowers transaction costs, streamlines reconciliation processes, and promotes customer retention through loyalty programs and promotions. The platform's convenience and trustworthiness were cited as key drivers of improved financial outcomes. The findings suggest that Jumia Pay enhances financial performance by reducing reliance on external payment intermediaries, lowering transaction charges, and enabling smooth payment reconciliation. Jumia Pay's loyalty programs, secure payment environment, and promotional incentives contribute to customer retention and repeat purchases. These results align with the conclusions of Singh et al. (2023), who argue that secure online payment systems increase customer trust and transactional efficiency. Similar observations by Al-Arsy and Afian (2022) show that dedicated e-commerce payment systems foster customer confidence, improve order completion rates, and support financial stability.

Moreover, the convenience of Jumia Pay addresses customer concerns about fraud, enhances checkout speed, and supports integrated record-keeping, which are critical factors in improving financial outcomes. According to Nopiah et al. (2024), reliable online payment systems reduce administrative costs and improve operational transparency, enabling firms to make strategic financial decisions.

5.1.3 The Relationship between Debit/Credit Card Usage and Financial Performance

Debit and credit card usage was also found to positively influence financial performance, although its impact is less pronounced compared to mobile money and Jumia Pay. Correlation analysis yielded $r = 0.661$ ($p \leq 0.01$) with $R^2 = 0.437$, and regression results confirmed significance ($B = 0.215$, Beta = 0.226, $t = 2.859$, $p = 0.005$), supporting Hypothesis H3.

Findings revealed that card payments are predominantly used by international and corporate customers, while individual consumers preferred mobile money and Jumia Pay due to concerns about fraud and security.

The findings revealed that credit/debit card usage is mainly favored by international and corporate clients, which is consistent with studies by Al-Arsy and Afian (2022) and Singh et al. (2023). These scholars argue that card payments enhance customer satisfaction, support larger transaction values, and expand business revenue streams. However, many individual Ugandan consumers continue to prefer mobile money due to perceived risks related to online card fraud, echoing the observations of Nopiah et al. (2024).

The lower adoption rate of card payments in Uganda is partly due to limited card penetration, inadequate digital literacy, and concerns about cybersecurity. Yet, businesses that adopt card payment systems still benefit from increased access to international markets and high-value customers. Literature by Karema and Mutua (2022) supports this by stating that card payments improve transaction reliability and reduce cash-handling risks.

5.1.4 Collective Effect of Digital Payment Services on Financial Performance

The combined effect of digital payment services mobile money, Jumia Pay, and debit/credit cards was examined through hierarchical regression analysis. Model 1 indicated a strong collective positive impact on financial performance ($R^2 = 0.734$, Adjusted $R^2 = 0.727$, $F = 97.636$, $p < 0.001$), supporting Hypothesis H4**.** The results suggest that e-commerce businesses that adopt a diverse range of digital payment methods experience higher financial performance due to increased transaction efficiency, customer convenience, and broader market reach.

This aligns with theoretical perspectives such as the Technology Acceptance Model (TAM) and Innovation Diffusion Theory (Rogers, 2003), which emphasize that diversified technological adoption increases user acceptance, customer satisfaction, and operational efficiency. Multiple payment options accommodate varied customer preferences and reduce transactional bottlenecks, leading to increased sales volumes and broader market penetration.

Noor et al. (2023), Onya (2022), and Awale (2023) highlight that businesses with multiple digital payment platforms experience higher customer engagement, fewer abandoned carts, and improved revenue generation. Similarly, Nopiah et al. (2024) argue that integrating payment systems enhances financial monitoring and improves overall organizational performance.

5.1.5 Moderating Role of Product Quality on the Relationship between Digital Payment Services and Financial Performance

Hierarchical regression (Model 2) showed that product quality is a significant predictor of financial performance (B = 0.427, Beta = 0.445, t = 7.191, $p < 0.001$). However, interaction analysis (Model 3) indicated that product quality did not significantly moderate the relationship between digital payments and financial performance (interaction term: B = 0.141, t = 1.624, p = 0.107), suggesting independent effects. H5 (moderating role of product quality) is not statistically supported, indicating that while product quality is important for financial performance, it does not significantly strengthen the relationship between digital payment services and business outcomes in this context.

These findings are supported by Nor et al. (2024), Dzogbenuku et al. (2022), and Mauki et al. (2025), who emphasized that product quality builds consumer trust, satisfaction, and repeat purchases, complementing the benefits of digital payment adoption. The results also align with Nopiah et al. (2024), who cautioned that technological solutions alone do not guarantee performance if not paired with quality products.

This finding contrasts with Nor et al. (2024) and Dzogbenuku et al. (2022), who argued that high product quality enhances digital transaction benefits by reducing consumer risk perceptions. Mauki et al. (2025) similarly suggested that poor quality could negate digital payment advantages. However, in this study, product quality and digital payments appear to exert independent effects, H5 is rejected.

CHAPTER SIX

6.0 CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATION

6.1 Conclusions

Based on the findings presented above, the following conclusions are drawn in accordance with the study objectives.

6.1.1 The Relationship between Mobile Money Payment and Financial Performance

The study concluded that mobile money payment significantly improved the financial performance of e-commerce businesses in Uganda. Increased adoption of mobile money enhanced cash flow, reduced payment delays, and facilitated access to previously underserved markets. Despite challenges such as transaction fees, system downtimes, and fraud risks, mobile money remained a critical tool for financial inclusion and business growth. Therefore, mobile money was a key driver of improved financial outcomes in the Ugandan e-commerce sector.

6.2.2 The Relationship between Online Payment and Financial Performance

The study concluded that the use of Jumia Pay as an online payment method positively affected the financial performance of e-commerce businesses. Jumia Pay reduced reliance on third-party payment providers, lowered transaction costs, and improved payment reconciliation efficiency. Additionally, it encouraged customer loyalty through promotions and in-app incentives. This indicated that secure and convenient online payment platforms were essential for enhancing business performance in Uganda's e-commerce sector.

6.2.3The Relationship between Debit/Credit Card Usage and Financial Performance

The study concluded that debit and credit card usage positively contributed to financial performance, although its impact was relatively smaller compared to mobile money and Jumia Pay. Card payments primarily served international and corporate clients, offering convenience and reducing cash-handling risks. However, concerns over fraud and customer preference for alternative digital payments limited their broader adoption. Nonetheless, card payment options remained a valuable complement to other digital payment methods in supporting business growth.

6.2.4 Moderating Role of Product Quality on Digital Payment Services and Financial Performance

The study concluded that product quality significantly influenced the financial performance of e-commerce businesses independently of digital payment services. High product quality enhanced customer trust, satisfaction, and loyalty, which encouraged repeat purchases and the use of digital payment methods. However, product quality did not significantly moderate the relationship between digital payment adoption and financial performance. This indicated that, although product quality was important for overall business success, it did not strengthen the effect of digital payments on financial outcomes in this context.

6.2 Contribution of the Study

6.2.1 Policy Contributions

Strengthening Mobile Money Regulation

Since mobile money strongly improved financial performance, policymakers (e.g., Bank of Uganda, Uganda Communications Commission) should strengthen regulations that reduce transaction costs, prevent fraud, and minimize system downtimes. This will sustain the positive financial outcomes for e-commerce businesses highlighted in this study.

Support for Online Payment Platforms

Findings show Jumia Pay significantly boosts efficiency and loyalty. Government policy can encourage interoperability of online payment platforms and promote digital infrastructure that enables low-cost, secure transactions. This supports Uganda's Digital Financial Services Strategy.

Consumer Protection in Card Usage

Debit/credit card adoption remains limited due to fraud risks. Policies promoting cybersecurity frameworks and enforcing strict anti-fraud measures can encourage wider use of card payments, particularly among SMEs in the e-commerce sector.

Quality Assurance Policies in E-commerce

Although product quality did not moderate digital payments, it independently improved financial performance. This suggests policymakers should enforce stricter consumer protection and e-commerce product quality standards (e.g., UNBS certifications), boosting consumer trust in digital trade.

6.2.2 Practical Contributions

Strategic Payment Mix for E-commerce Firms

Managers should prioritize mobile money and Jumia Pay adoption, as both had the strongest effects on financial performance, while maintaining debit/credit card options for corporate and international clients.

Investment in Product Quality

Since product quality strongly predicted financial performance, e-commerce firms should invest in rigorous product vetting, supplier monitoring, and after-sales support to complement digital payment gains.

Customer Education and Trust-Building

Given fraud concerns around card payments and mobile money, businesses should run customer awareness campaigns on safe digital transactions and provide transparent refund policies to enhance trust.

Operational Efficiency Through Digital Payments

Firms can leverage Jumia Pay and mobile money to improve reconciliation, reduce cash-handling risks, and streamline financial management systems, directly translating into better financial performance.

6.2.3 Contribution to Extant Literature

Extension of Digital Payment Research in Africa

This study empirically confirms that mobile money and online payments significantly enhance financial performance in Uganda, supporting and extending findings from Kingu & Kiwango (2021), Noor et al. (2023), and Awale (2023).

Nuanced Understanding of Product Quality

While past studies (e.g., Nor et al., 2024; Dzogbenuku et al., 2022) suggested quality moderates digital payment outcomes, this study found no significant moderation. Instead, product quality and digital payments have independent effects, offering a fresh contribution to the debate.

Practical Insights on Payment Diversity

The study adds to literature by showing that debit/credit cards, though weaker, still provide value in niche market segments (international and corporate customers), complementing mobile money and online payment dominance.

6.3 Recommendations

6.3.1 The Relationship between Mobile Money Payment and Financial Performance

Since mobile money payment significantly improved financial performance ($r = 0.678$; $\beta = 0.238$, $p = 0.001$), e-commerce businesses should integrate mobile money as a primary payment option and incentivize its use through discounts or loyalty points. Policymakers and telecom operators should invest in stronger mobile money infrastructure, including backup systems to minimize downtimes, and improve fraud prevention mechanisms to address customer trust issues identified in the study. Additionally, reducing transaction charges through regulatory intervention would encourage wider adoption, especially among low-income consumers who form a large share of the e-commerce market.

6.3.2 The Relationship between Online Payment and Financial Performance

Because Jumia Pay showed the strongest effect on financial performance ($r = 0.785$; $\beta = 0.526$, $p < 0.001$), e-commerce platforms should expand customer awareness campaigns that emphasize the security and convenience of Jumia Pay. Businesses should also introduce incentives such as cashback, promotional vouchers, and referral bonuses tied to Jumia Pay usage to encourage repeat transactions. At the same time, platform developers should strengthen real-time reconciliation features and integrate advanced fraud detection systems,

ensuring smooth transactions that build long-term customer trust. Regulators should create supportive fintech policies that promote the growth of indigenous online payment solutions like Jumia Pay, which reduce reliance on third-party providers and lower transaction costs.

6.3.3 The Relationship between Debit/Credit Card Usage and Financial Performance

Although debit/credit card usage had a weaker but significant contribution in Model 1 ($r = 0.661$; $\beta = 0.235$, $p < 0.001$), its effect diminished when product quality was added (Model 2). This implies that while cards are valuable, especially for international and corporate clients, their broader adoption remains constrained. E-commerce businesses should retain card payment options to serve premium customer segments and larger-value transactions. Banks and payment providers should focus on strengthening card security systems (e.g., OTP verification, fraud alerts) to reduce consumer fears, and regulators should push for wider card penetration programs, such as affordable issuance and merchant sensitization on card handling.

6.3.4 Moderating Role of Product Quality on Digital Payment Services and Financial Performance

The study found that product quality was a strong and independent predictor of financial performance ($\beta = 0.445$, $p < 0.001$), even stronger than some digital payment variables. Therefore, e-commerce businesses must prioritize quality assurance systems, including stricter vendor screening, periodic supplier audits, and robust return-and-refund policies to safeguard customer trust. Introducing customer feedback loops and rating systems can help detect and address quality issues quickly. While product quality did not moderate the digital payment–performance relationship in Model 3, it independently enhanced financial outcomes by driving customer loyalty and repeat purchases. Hence, businesses should view digital payments and product quality as complementary pillars rather than expecting quality to amplify the impact of digital payments.

6.4 Limitations of the study

Limited Range of Digital Payment Methods

The analysis concentrated on three digital payment options such as mobile money, Jumia Pay, and debit/credit cards. Other relevant innovations such as Visa, which are used in certain

customer segments, were excluded. This narrowed scope may have overlooked alternative payment methods that could influence financial performance.

Time

Time constraints significantly impacted various aspects of this study. Due to a limited time-frame for data collection, analysis, and interpretation, the scope of the research had to be narrowed.

6.5 Areas for Further Study

i. Future research could examine the impact of emerging digital payment technologies such as crypto currency, block chain-based solutions, and QR code payments on the financial performance of e-commerce businesses in Uganda, building on this study's evidence that digital payments strongly enhance performance.

ii. Further studies may investigate consumer behavior, trust, and security concerns in the adoption of digital payment methods, since this study confirmed a strong positive effect of mobile money, Jumia Pay, and debit/credit card usage but did not capture customer-side influences in depth.

iii. Research could explore the long-term influence of product quality improvements on customer loyalty, retention, and sustainability of e-commerce businesses, especially given that product quality did not significantly moderate the relationship between digital payments and financial performance in this study.

iv. Comparative studies across different industries (e.g., retail, hospitality, or manufacturing) could extend the findings, testing whether the positive financial performance effects of digital payment adoption observed in e-commerce also hold true in other sectors.

v. Additional research may focus on how external environmental factors such as regulatory frameworks, telecom infrastructure, and macroeconomic fluctuations shape the relationship between digital payments and business performance, particularly in developing economies.

vi. Future studies could test the moderating effects of other organizational factors (e.g., customer service quality, brand reputation, marketing strategies, or innovation capacity) on the

link between digital payments and financial performance, given that product quality alone was not significant in this study.

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APPENDICES

APPENDIX I: QUESTIONNAIRE TO RESPONDENTS

Dear Respondent,

I am Michael Ssendi, currently pursuing master of Business Administration at Makerere University. I am conducting a study titled "Digital Payment Services, Product quality and Financial Performance of E-commerce Businesses in Uganda: A Case of Jumia Uganda Limited". The information you provide will contribute to a better understanding of how digital payment services affect the financial performance of e-commerce businesses in Uganda.

Your responses will remain confidential and will only be used for academic purposes. Kindly take a few minutes to complete the questionnaire below.

I sincerely appreciate your cooperation and willingness to share your perspectives on how digital payment services impact the financial performance of e-commerce businesses in Uganda. Your input is essential for providing a better understanding of the subject matter. Thank you once again for your participation and support in this academic endeavor.

A. BACKGROUND INFORMATION

Please provide the following background information about yourself to help me better understand your responses.

1. Gender:

   A. ☐ Male
   B. ☐ Female

2. Age Group:

   A. ☐ 18-24 years
   B. ☐ 25-34 years
   C. ☐ 35-44 years
   D. ☐ 45-54 years

E. ☐ 55 years and above

3. Educational Level:

A. ☐ High School

B. ☐ Diploma

C. ☐ Bachelor's Degree

D. ☐ Master's Degree

E. ☐ Other (Please specify) _____

4. How long have you been working with Jumia Uganda Limited?

A. ☐ Less than 1 year

B. ☐ 1-3 years

C. ☐ 3-5 years

D. ☐ Over 5 years

5. How frequently do you handle or interact with digital payment systems as part of your work at Jumia Uganda Limited?

A. ☐ Daily

B. ☐ Weekly

C. ☐ Monthly

D. ☐ Rarely

SECTION B: Digital payment services and financial performance of Jumia Uganda limited.

For each statement in the following section, please indicate the extent to which you agree or Disagree.

Please use the scale below to tick under the appropriate box your view on the following statements below;

5	4	3	2	1
Strongly Agree (SA)	Agree (A)	Not sure (N)	Disagree (D)	Strongly disagree (SD)

Statement	SA	A	NS	D	SD
Digital payment services					
Mobile Money Payment:					
Mobile money helps us make payments quickly.					
Mobile Money works well most of the time, so we can trust it.					
Mobile Money saves us money compared to other payment methods.					
People in many places, even villages, can use it.					
Mobile Money is easy to use anytime on the phone.					
Online Payment :					
Online payments are fast, so we don't waste time.					
Jumia Paywork well and don't often fail.					
Jumia Pay help us spend less on business costs.					
Customers can use them from anywhere with the internet.					
Jumia Pay is simple and make payments easy.					
Debit/Credit Card Usage:					

Card payments are quick for both us and customers.					
Debit/Credit Card are safe and usually work without problems.					
Debit/Credit Card help us save money by avoiding handling cash.					
Many people in towns and cities can easily use them.					
Paying by card is easy and comfortable for most people.					
Product Quality:					
Reliability					
Orders placed via digital payments are consistently delivered on time.					
The system rarely experiences breakdowns during online payment transactions.					
Our digital payment platform ensures smooth order fulfillment without errors.					
Customers rarely complain about failed transactions on our e-commerce platform.					
The reliability of our payment system enhances customer trust and repeat purchases.					
Conformance					
The products delivered match the specifications listed on the website.					
Quality standards are maintained regardless of the payment method used.					
Products paid for digitally meet the promised service levels.					
We adhere to product quality standards across all online orders.					
Customer expectations are consistently met in terms of order accuracy and quality.					
Feature					
Our e-commerce products have features that align with modern customer needs.					
The product variety and options available match what is advertised online.					

Digital payments support the purchase of feature-rich and innovative products.					
We regularly update product offerings to include competitive features.					
Staff are trained to highlight product features that improve customer satisfaction.					
Financial performance:					
Profitability:					
Net Profit Margin (NPM)					
We keep our operating costs under control to maintain good profit margins.					
Our profit margin has improved over the past five years.					
Gross Profit Margin (GPM)					
We work hard to keep our gross profit margin high.					
We focus on reducing costs to improve our gross profit margin.					
Return on Assets (ROA)					
We use our assets efficiently to make a good profit.					
Our return on assets has improved over the last few years.					
We have been able to generate more profit from our assets.					
Return on Total Assets (ROTA)					
Our return on Total Assets has increased over the last 5 years					
We have improved our return on assets by managing them better.					
Our return on assets meets shareholder expectations.					
Return on Capital Employed (ROCE)					
We focus on increasing our return on capital employed.					
We manage capital well to ensure good profits for the business.					

Over the past few years, our capital growth has helped increase profits.					
Cash Collections					
Increasing cash collections has allowed us to grow the business.					
Market share:					
Sales Revenue:					
We are a market leader in terms of sales revenue within our industry.					
Sales Volume					
We have the highest market share in terms of the number of units sold.					
Customer Market					
We serve a higher proportion of the total customers in our market compared to our competitors.					
Net Worth:					
Assets					
The value of our company's assets has been increasing over time.					
Our company has successfully expanded its assets.					
Liabilities					
We have successfully reduced our liabilities over the years.					
Our company manages its liabilities effectively to maintain financial health.					
We are able to handle our liabilities without negatively impacting our net worth.					
Owner's Equity (OE)					
Our owner's equity has been growing steadily.					
The growth in owner's equity reflects the strong financial position of our business.					

We have been able to increase our equity by reinvesting profits into the business.					

Thank you

APPENDIX II: KREJCIE TABLE 1970

Morgan, Krejcie Table 1970 used to determine sample size.

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

APPENDIX III: INTRODUCTION LETTER

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COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES
School of Business
Office of the Dean

16/04/2025

TO WHOM IT MAY CONCERN

Dear Sir/Madam

INTRODUCING Mr. MICHAEL SSENDI TO YOUR ORGANISATION FOR RESEARCH SUPPORT.

This is to introduce to you Mr. Michael Ssendi, a Master of Business Administration student, **registration number-2023/HD06/22862U** who is currently conducting a research study on **"Digital Payment Services and Financial Performance of E-Commerce Businesses in Uganda. A Case of Jumia Uganda Limited"** for research support. Your support towards Michael will enable him fulfil a key requirement for the award of the Degree of Master of Business Administration of Makerere University.

While the research being pursued is mainly for academic purposes, upon its completion is expected to inform policy and contribute to the overall operations of orgnisations. Therefore, Michael is reaching out to your organization for assistance in the realization of the aforementioned endeavors.

Any research assistance extended to him will be our pleasure, and we look forward to your continued support.

Yours sincerely,

Dr. Christopher Alioni,
Lecturer and Coordinator-Masters Programmes, Training and Research.

Telephone: 0741746339
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APPENDIX IV: Normality Tests

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Digital payments	.173	110	.000	.883	110	.000
Mobile money payment	.205	110	.000	.872	110	.000
Online payment jumia pay	.189	110	.000	.882	110	.000
Debit credit card usage	.161	110	.000	.923	110	.000
Product quality	.180	110	.000	.871	110	.000
Reliability	.192	110	.000	.925	110	.000
Conformance	.196	110	.000	.880	110	.000
Feature	.204	110	.000	.918	110	.000
Financial performance	.174	110	.000	.871	110	.000
Profitability	.186	110	.000	.866	110	.000
Market share	.158	110	.000	.911	110	.000
net worth	.239	110	.000	.883	110	.000

a. Lilliefors Significance Correction

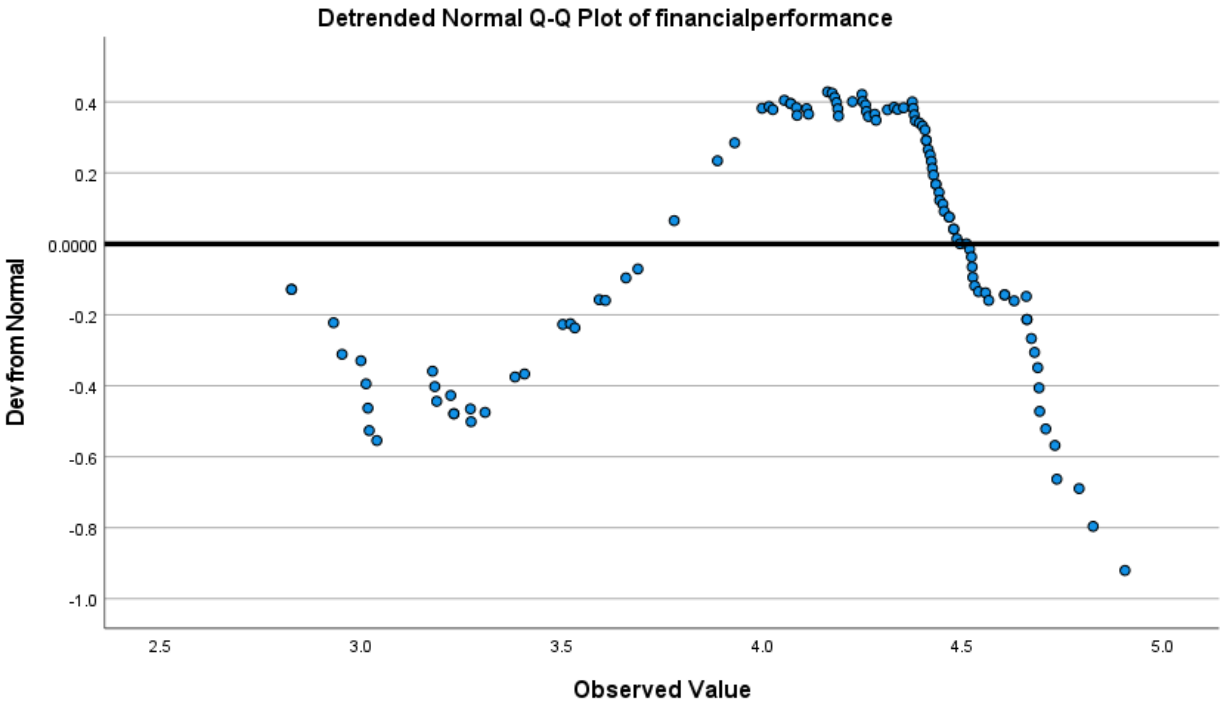
Source: Primary Data 2025

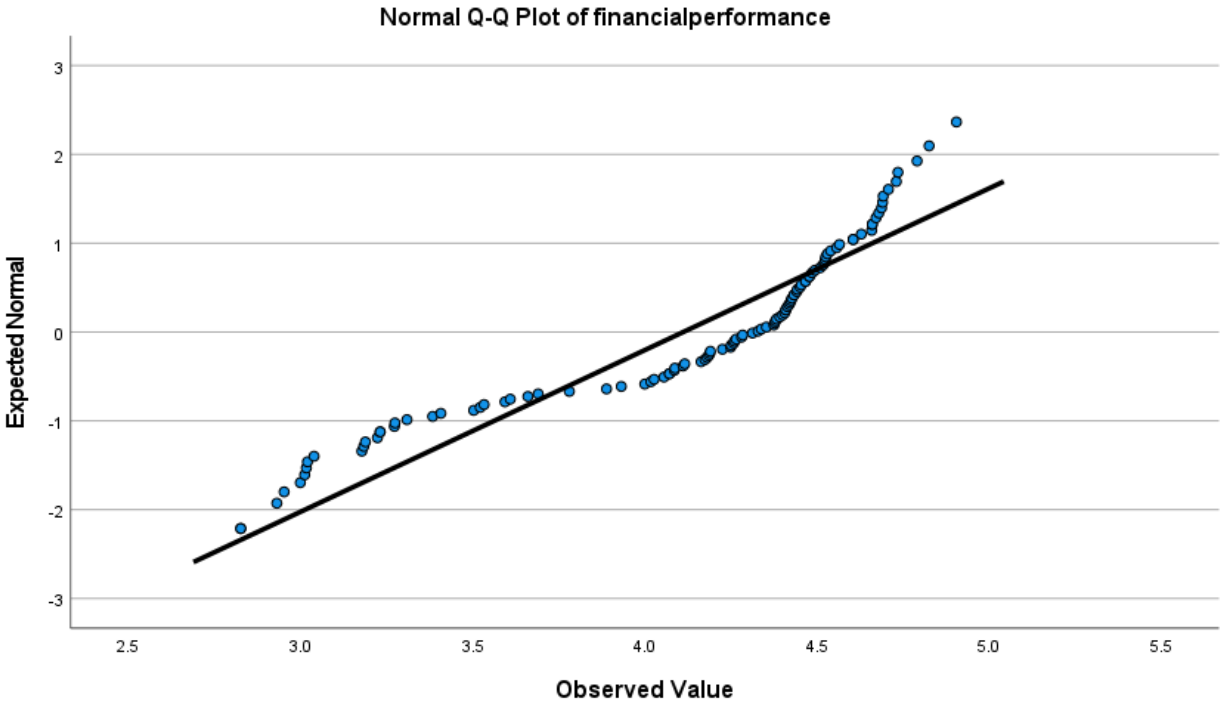
Skewness and Kurtosis

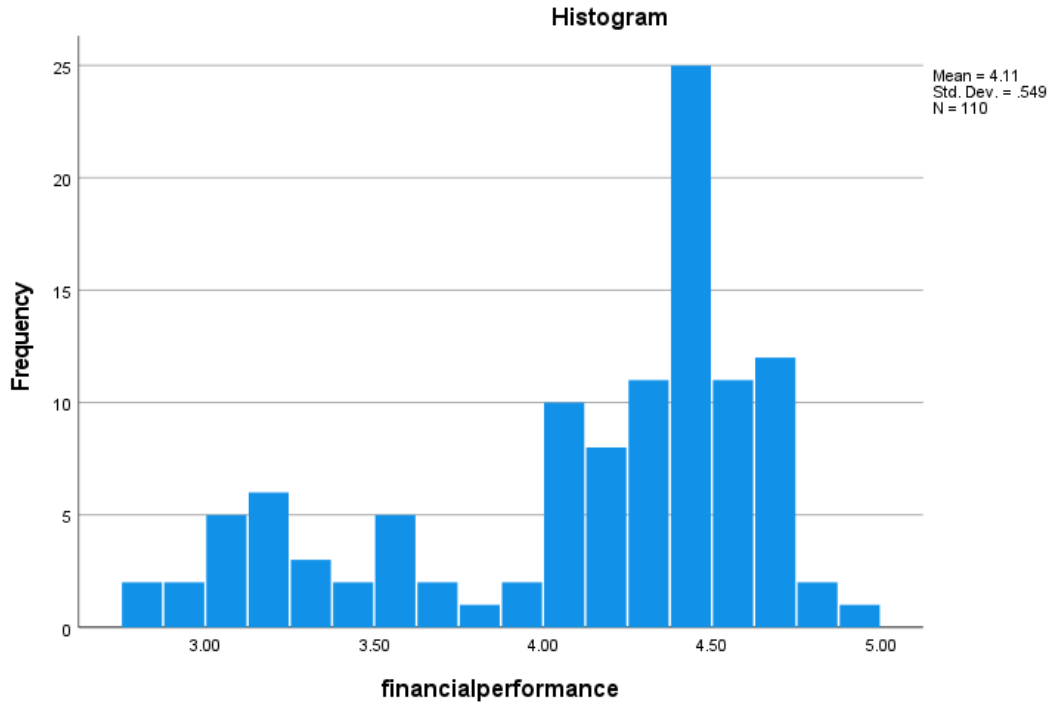
Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Mobile money payment	110	-1.498	.230	3.322	.457
Online payment jumiapay	110	-1.311	.230	1.715	.457
Debit credit card usage	110	-.988	.230	.784	.457
Digital payment services	110	-1.049	.230	.183	.457
Product quality	110	-.966	.230	-.246	.457
Financial performance	110	-1.012	.230	-.260	.457
Valid N (list wise)	110				

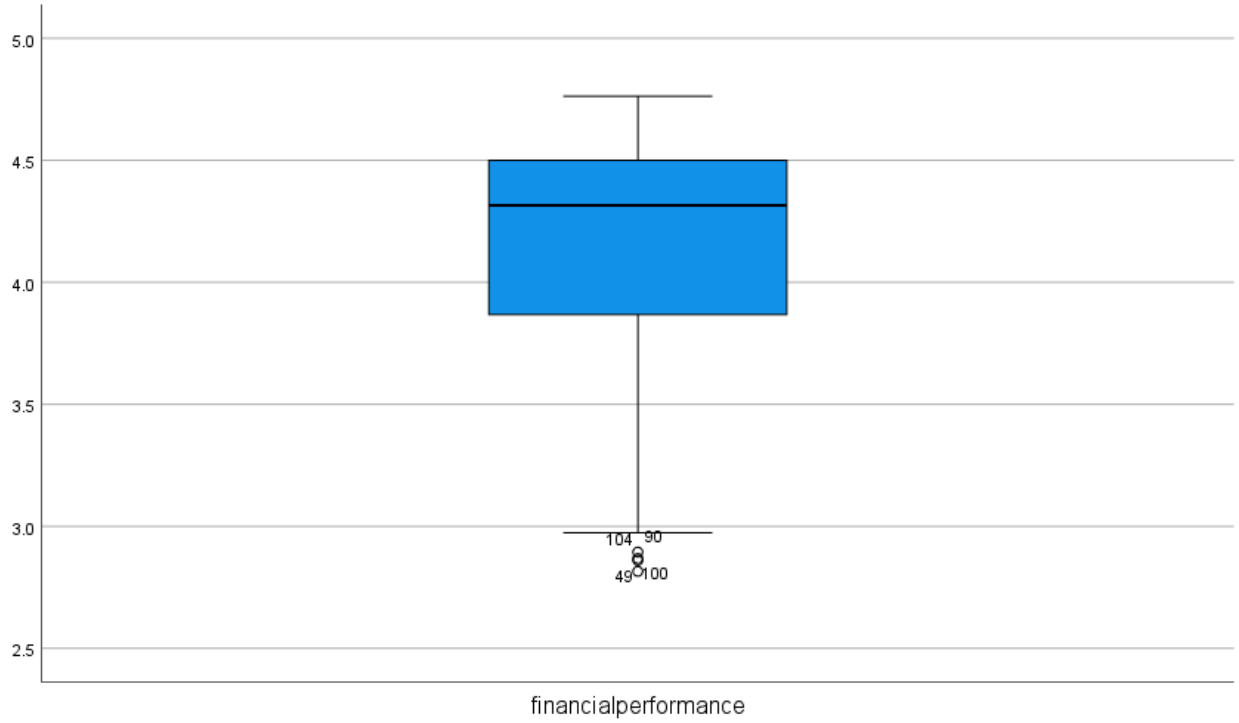
APPENDIX V : Q-Q plots

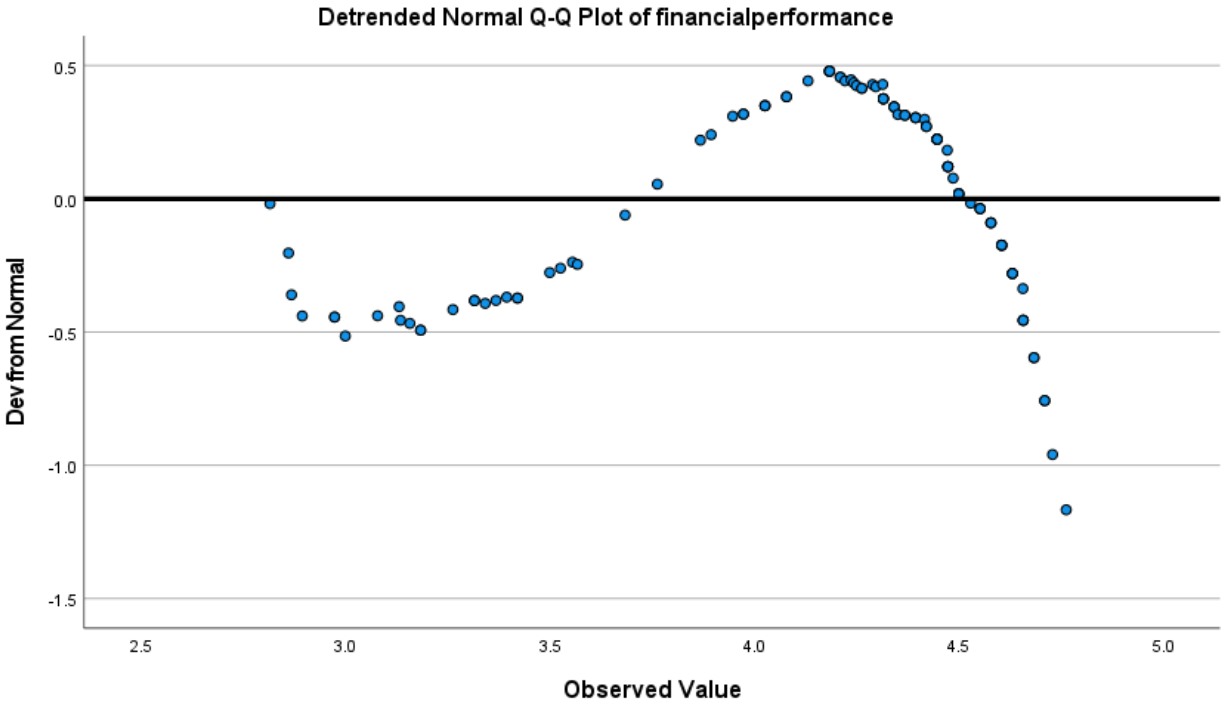





Histogram
Mean = 4.11
Std. Dev. = .549
N = 110
Frequency
25
20
15
10
5
0
3.00
3.50
4.00
4.50
5.00
financialperformance

Boxplot


5.0
4.5
4.0
3.5
3.0
2.5
104
90
49
100
financialperformance


Detrended Normal Q-Q Plot of financialperformance
Dev from Normal
0.5
0.0
-0.5
-1.0
-1.5
2.5
3.0
3.5
4.0
4.5
5.0
Observed Value