

**FINANCIAL TECHNOLOGY ADOPTION AND PERFORMANCE OF
INVESTMENT MANAGEMENT FIRMS IN KENYA**

BY

HILLARY O OMODHI

**MASTER OF SCIENCE IN COMMERCE
(FINANCE AND ACCOUNTING)**

KCA UNIVERSITY

OCTOBER, 2024

**FINANCIAL TECHNOLOGY ADOPTION AND PERFORMANCE OF
INVESTMENT MANAGEMENT FIRMS IN KENYA**

HILLARY O OMODHI

**A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN
COMMERCE (FINANCE AND ACCOUNTING) DEGREE IN THE SCHOOL OF
BUSINESS, AT KCA UNIVERSITY.**

OCTOBER 2024

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

Student Name : **HILLARY O OMODHI**

Reg No

Sign.....

Date.....

I do hereby confirm that I have examined the master's dissertation of

HILLARY O OMODHI

And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed

Signature.....

Date.....

Dr. Peter Kariuki

Dissertation Supervisor

ABSTRACT

This research examines the influence of financial technology (FinTech) on firm performance. Though financial technology adoption has been postulated to have an impact on firm performance, this assertion has not been sufficiently proven in the literature. The study's context is Kenya's investment management firms. The primary objective of the study was to assess the effect of FinTech on firm performance. The study's specific objectives were to evaluate the impact of blockchain technology, artificial intelligence, big data analytics, and mobile technology integration on the performance of investment management firms in Kenya. Each objective had a corresponding hypothesis tested at a 95 per cent confidence level. The study adopted the innovation diffusion, and task technology fit theories. The study also applied the technology acceptance model. It used a descriptive cross-sectional survey, targeting all 107 investment firms in Kenya. Primary data was gathered through a five-point Likert scale questionnaire. Diagnostic testing was done and descriptive, correlation and multiple regression analyses were conducted. Multivariate analysis showed that blockchain technology had a significant positive impact on the performance of investment management firms in Kenya. Likewise, integrating mobile technology also showed a significant positive impact on firm performance. In contrast, big data analytics and artificial intelligence showed a positive, statistically insignificant impact on firm performance. The study offers recommendations for theory, policy and managerial practice. It encourages management to prioritize specific technologies for firm performance improvement. However, the study's limitations include a cross-sectional design that restricts long-term observations, suggesting that future research should adopt a longitudinal approach and expand to include various industries and regions for broader applicability.

DEDICATION

I would like to express my gratitude to my family for the unwavering love and support that they have consistently shown me throughout my academic pursuits. This dissertation is a special commitment to these individuals.

ACKNOWLEDGEMENT

I thank the Almighty God for His grace that has enabled me reach this far. I give Him all the Glory. The progress of this study is as a result of both direct and indirect support and encouragement far and wide. I am indebted not only to people who gave me the inspiration to take up the master program but also those who gave me the guidance and assistance. My employer The Lutheran Church Missouri Synod, family friend Dr. & Mrs Balint. I am also indebted to my supervisor, **Dr. Peter Kariuki** for his relentless efforts, patience, encouragement and professional guidance in the academic work.

TABLE OF CONTENT

| | |
|---|------|
| DECLARATION | iii |
| DEDICATION | iv |
| ACKNOWLEDGEMENT | vi |
| TABLE OF CONTENT | vii |
| LIST OF TABLES | xi |
| LIST OF FIGURES | xii |
| LIST OF ABBREVIATIONS AND ACRONYMS | xiii |
| OPERATIONAL DEFINITION OF TERMS | xiv |
| ABSTRACT..... | |
| CHAPTER ONE | 1 |
| INTRODUCTION | 1 |
| 1.1 Background of the Study..... | 1 |
| 1.1.1 Financial Technology Adoption | 3 |
| 1.1.2 Firm Performance | 5 |
| 1.1.3 Financial Technology and Firm Performance..... | 6 |
| 1.1.4 Investment Management Firms in Kenya | 8 |
| 1.2 Statement of the Problem | 9 |
| 1.3 The Study Objectives | 11 |
| 1.3.1 The General Objective | 11 |
| 1.3.2 The Specific Objectives | 12 |
| 1.4 Hypotheses of the Study..... | 12 |
| 1.5 Significance of the Research | 13 |
| 1.5.1 Significance to Academic Research and Theory | 13 |
| 1.5.2 Significance to Regulatory Authority and Policy Makers | 13 |
| 1.5.3 Significance to the Management of Investment Firms | 14 |
| CHAPTER TWO | 15 |
| LITERATURE REVIEW | 15 |
| 2.1 Introduction | 15 |
| 2.2 Theoretical Review | 15 |
| 2.2.1 The Innovation Diffusion Theory..... | 16 |
| 2.2.2 Task-Technology-Fit Theory | 17 |

| | | |
|--|--|----|
| 2.2.3 | Technology Acceptance Model | 19 |
| 2.3 | Empirical Review of Literature | 20 |
| 2.3.1 | Blockchain Technology and Firm Performance | 20 |
| 2.3.2 | Artificial Intelligence and Firm Performance | 24 |
| 2.3.3 | Big Data Analytics and Firm Performance | 27 |
| 2.3.4 | Mobile Technology Integration and Firm Performance | 30 |
| 2.4 | Summary of Research Gaps | 33 |
| 2.5 | Conceptual Framework | 34 |
| 2.6 | Operationalisation of Variables | 36 |
| CHAPTER THREE | | 38 |
| RESEARCH METHODOLOGY | | 38 |
| 3.1 | Introduction | 38 |
| 3.2 | Research Design | 38 |
| 3.3 | Target Population | 39 |
| 3.4 | Data Collection Tools | 39 |
| 3.5 | Data Collection Procedure | 40 |
| 3.6 | Pilot Testing | 40 |
| 3.6.1 | Validity Tests | 41 |
| 3.6.2 | Reliability Tests | 42 |
| 3.7 | Diagnostic Tests | 42 |
| 3.7.1 | Normality Test | 42 |
| 3.7.2 | Multicollinearity Tests | 43 |
| 3.7.3 | Autocorrelation Tests | 43 |
| 3.7.4 | Homoscedasticity | 43 |
| 3.8 | Data Processing and Analysis | 44 |
| CHAPTER FOUR | | 46 |
| DATA ANALYSIS, RESULTS AND DISCUSSIONS | | 46 |
| 4.1 | Introduction | 46 |
| 4.2 | Response Rate | 46 |
| 4.3 | Respondents' Demographic Profile | 47 |
| 4.4 | Reliability Tests | 48 |
| 4.5 | Validity Tests | 49 |
| 4.6 | Descriptive Statistics | 49 |

| | | |
|---|--|----|
| 4.6.1 | Blockchain Technology | 49 |
| 4.6.2 | Artificial Intelligence | 51 |
| 4.6.3 | Big Data Analytics | 52 |
| 4.6.4 | Mobile Technology Integration | 54 |
| 4.6.5 | Firm Performance | 55 |
| 4.7 | Diagnostic Tests | 56 |
| 4.7.1 | Normality Tests..... | 57 |
| 4.7.2 | Multicollinearity Test..... | 57 |
| 4.7.3 | Autocorrelation Test | 58 |
| 4.7.4 | Homoscedasticity Test | 58 |
| 4.8 | Hypotheses Testing | 59 |
| 4.8.1 | Blockchain Technology and Firm Performance. | 60 |
| 4.8.2 | Artificial Intelligence and Firm Performance | 61 |
| 4.8.3 | Big Data Analytics and Firm Performance | 62 |
| 4.8.4 | Mobile Technology Integration and Firm Performance | 63 |
| CHAPTER FIVE | | 65 |
| SUMMARY, CONCLUSIONS AND RECOMMENDATIONS..... | | 65 |
| 5.1 | Introduction | 65 |
| 5.2 | Summary of Findings | 65 |
| 5.2.1 | Blockchain Technology and Firm Performance | 65 |
| 5.2.2 | Artificial Intelligence and Firm Performance | 65 |
| 5.2.3 | Big Data Analytics and Firm Performance | 66 |
| 5.2.4 | Mobile Technology Integration and Firm Performance | 66 |
| 5.3 | Conclusion..... | 67 |
| 5.4 | Recommendations | 67 |
| 5.4.1 | Recommendations for Theory..... | 68 |
| 5.4.2 | Recommendations for Policy | 68 |
| 5.4.3 | Recommendations for Managerial Practice. | 68 |
| 5.5 | Limitations of the Study | 69 |
| REFRERENCES..... | | 70 |
| APPENDICES | | 78 |
| Appendix I : Introduction Letter | | 78 |
| Appendix II : Research Permit..... | | 80 |

| | |
|---|----|
| Appendix III : Questionnaire | 81 |
| Appendix IV: Investment Management Firms in Kenya | 85 |
| Appendix V: Summary of Previous Studies and Research Gaps | 92 |

LIST OF TABLES

| | | |
|------------|--|----|
| Table 2.1 | Operationalization of Variables..... | 36 |
| Table 4.1 | Study's Response Rate | 47 |
| Table 4.2 | Tenure with the Organization and in Current Role | 47 |
| Table 4.3 | Reliability Test Results..... | 48 |
| Table 4.4 | Descriptive Statements on Blockchain Technology..... | 50 |
| Table 4.5 | Descriptive Statements on Artificial Intelligence..... | 51 |
| Table 4.6 | Descriptive Statistics on Big Data Analytics..... | 53 |
| Table 4.7 | Descriptive Statements on Mobile Technology Integration..... | 54 |
| Table 4.8 | Descriptive Statistics on Firm Performance | 55 |
| Table 4.9 | The Normality Test..... | 57 |
| Table 4.10 | Collinearity Statistics..... | 58 |
| Table 4.11 | Heteroskedasticity test..... | 58 |
| Table 4.12 | Multivariate Relationship Between FinTech Adoption and Performance.. | 60 |

LIST OF FIGURES

| | |
|--|----|
| Figure 2.1: Conceptual Framework | 35 |
|--|----|

LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|-----------------|-----------------------------|
| AUM: | Assets Under Management |
| FINTECH: | Financial technology |
| CMA: | Capital Markets Authority |
| GDP: | Gross Domestic Product |
| OLS: | Ordinary Least Squares |
| TAM: | Technology Acceptance Model |
| ROA: | Return on Assets |
| ROE: | Return on Equity |

OPERATIONAL DEFINITION OF TERMS

- Artificial Intelligence:** Machines that are configured with human intelligence make decisions using real-time data and mimic human behaviour (Taguimdje, Wamba, Kamdjoug, & Wanko, 2020).
- Big Data Analytics:** Process of analysing trends, patterns and relationships from large and complex data volumes and applying them to more extensive data sets (Kibe, Kwanya, & Owano, 2020).
- Blockchain Technology:** A digital ledger that records data in a manner that allows sharing, duplication and distribution across an organisation's computer network without allowing for unauthorised change, hacking or cheating the system (Afifa, Nguyen, Nguyen, Tran, & Dao, 2024)
- Mobile Technology Integration:** The use of mobile devices to carry out daily and routine asset management activities (Al-Busaidi & Al-Muharrami, 2021)
- Financial Technology Adoption:** The process by which investment management firms utilizes financial technology solutions to enhance, streamline, or transform their financial activities (Irimia-Diéguez, Velicia-Martín, & Aguayo-Camacho, 2023).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The global and financial digital integration has made the adoption of financial technology by investment management firms necessary not only for expanding their knowledge about their clients but also for the enhancement of their firm performance (Al-Busaidi & Al-Muharrami, 2021). Financial technology (FinTech) adoption has become ubiquitous in the financial sector and other professional activities and its wake has a disruptive effect on all core processes and operations (Taguimdje et al., 2020). When integrated with other business functionalities, FinTech has been hypothesized to have an observable effect more so on an organisation's firm performance. FinTech, the convergence of finance and technologies in the conception and offering of financial services is growing at an exponential rate in financial markets due to secure internet connection, smartphone penetration and a highly skilled workforce (Mazambani & Mutambara, 2020).

FinTech has made major inroads into financial services due to the rapid advent of e-commerce (Nilasari, Retnosari, Panggiarti, & Astutik, 2022). This has made FinTech adoption and growth across the globe impressive. In Indonesia, for instance, (Phan, Narayan, Rahman, & Hutabarat, 2020) posit that over the past decade, FinTech growth has been strong because the financial sector has slowly begun to participate in new technology innovations. In Malaysia, the Islamic fund management industry has embraced Fintech innovations by combining artificial intelligence and big data analytics in a bid to improve process efficiencies and cost-effectiveness (Miskam, Yaacob, & Rosman, 2019). In Europe, the integration of financial technology in business processes has allowed management to

generate digital data and the ability to take advantage of digital data (Garg, Gupta, Kapil, Sivarajah, & Gupta, 2023). Kim and Shin (2019) posit that technology-based value exchange initiatives are starting to drive changes in the business strategies of Korean firms. They argue the realisation that firms cannot attain competitive advantage without successful integration of financial technology.

In South Africa, the financial markets have continued to develop and adopt FinTech in tandem with happenings across the rest of the world (Mazambani & Mutambara, 2020). As the most advanced financial hub in Africa, Mazambani and Mutambara (2020) hold that South Africa can be the leader in FinTech development and adoption perhaps fueled by rising public interest and demand. In Nigeria, Zik-Rullahi and Nwosu (2024) noted that the adoption of financial technology was accompanied by risks and drawbacks. However, the listed manufacturing firms improved their performance as a measure of returns made after the adoption of fintech in its payment system and wealth management. The fintech innovations led to meeting customer expectations, survival and success of the businesses. Mobile technology integration in Cameroon has improved financial inclusion among small and mid-sized businesses operating in the country and hence business operations (Talom & Tengeh, 2020).

Three Kenyan airlines have adopted disruptive innovations in particular mobile technology and blockchain technology to support business and thus sustain performance (Chepkemboi & Paul, 2020). Additionally, according to Mugane (2018), high competition in the Kenyan banking sector has prompted the embracing of fintech as a core strategy for increasing efficiency and lowering operational costs. FinTech offers several gains including quick turnaround times, efficiency of operations and superior performance (Phan et al., 2020). Access to digital credit and the use of mobile technologies have enabled more locals to

access financial services and resulted in improved firm performance in commercial banks. As technologies continuously evolve, the financial services sector especially the investment management firms have to accelerate their uptake of innovation and digital enhancements. Investment management firms have been leveraging technology to expand access and usage to financial services, improve quality as well as enhance firm performance (Zik-Rullahi & Nwosu, 2024). What is not clear, however, is how fintech impacts firm performance in these asset management firms. Financial technology has been a major solution for asset management firms not only in Kenya but globally as well. For instance, investment firms are taking advantage of big data analytics, by gaining information on clientele and thus, improving investment portfolios for more gains.

1.1.1 Financial Technology Adoption

Financial technology (FinTech) refers to the integration of finance and technology to deliver online financial solutions like payments, financing, and management (Baker, Kaddumi, Nassar, & Muqattash, 2023). FinTech aims to enhance business efficiency by automating routine tasks, improving processes, reducing interaction costs with stakeholders, and ultimately boosting firm productivity and performance (Cirillo, Fanti, Mina, & Ricci, 2023). FinTech leverages emerging technologies like blockchain, artificial intelligence, big data analytics, and mobile technology integration to drive new business models and services (Baker et al., 2023). This transformation reduces costs, improves service quality, and increases customer satisfaction, disrupting traditional financial services by offering more agile, flexible, transparent and economic solutions (Irimia-Diéguez et al., 2023).

Firms adopt FinTech to thrive in dynamic business environments. One rapidly emerging FinTech is blockchain technology (BCT), which has gained significant momentum

among industry professionals (Aketch, Mwambia, & Baimwera, 2021).. BCT, a type of distributed ledger, enables decentralized information management, allowing stakeholders to collaborate without a central intermediary (Sharma, Shukla, & Raj, 2023). BCT offers a tamper-proof ledger with a traceable record, ensuring data security and has applications across sectors providing benefits like cost reduction, improved transparency, and operational efficiency (Cirillo et al., 2023), leading to better decision-making and enhanced value and performance (Afifa et al., 2024). Although BCT has the potential to revolutionize firms by providing innovative ways to organize and manage information, current research has not sufficiently examined its impact on firm performance of investment management firms in Kenya.

The swift advancement of artificial intelligence (AI) offers businesses enhanced opportunities (Shiyyab, Alzoubi, Obidat, & Alshurafat, 2023). AI are machine programs that simulate human intelligence encompassing image recognition, data mining, machine learning, and natural language processing (Chen, Esperança, & Wang, 2022). AI can offer numerous benefits to adopting firms, including increased efficiency, cost savings, enhanced product quality, and improved customer service (Mukherjee, Baral, Nagariya, Chittipaka, & Pal, 2024). Additionally, it is viewed as the next frontier, capable of transforming nearly all aspects of intra- and inter-organizational operations across various industries (Wamba, 2022). However, there is a notable gap in empirical studies exploring how AI assimilation can improve firm performance in investment management firms in Kenya.

Big data analysis (BDA) encompasses the essential resources and capabilities needed to transform big data into valuable insights, improving efficiency and performance (Kibe et al., 2020). The use of BDA has grown significantly in recent years significantly in recent years, offering firms a new source of competitive advantage and enhancing performance

(Ansari & Ghasemaghaei, 2023) Big data provides advantages that allow firms to enhance service delivery (Behl, 2022; Kamau & Aduda, 2024). However, to fully realize these benefits, firms must develop or strengthen their capabilities in key areas. Despite its potential, previous studies suggest that BDA implementation can yield results, with some firms not experiencing the expected positive outcomes.

1.1.2 Firm Performance

Firm performance is a critical measure used to assess a company's financial health, operational efficiency, marketing success, and team collaboration (Chen et al., 2022). It is an organizations ability to outperform competitors, measured through operational and market performance (Chong, Rasid, Khalid, & Ramayah, 2024). It is a measure of the extent to which firms can achieve their policies, strategies and both financial and non-financial objectives (Al-Busaidi & Al-Muharrami, 2021). In addition, firm performance reflects its ability to achieve its goals (Insee & Suttipun, 2023) It also takes the perspective of assisting the management in establishing if the firm is operating profitably or if there are losses and what measures need to be taken to reverse the loss back to profit-making (Kamau & Aduda, 2024).

Traditionally, firm performance has been measured by financial outcomes such as return on assets, returns on equity and returns on investments (Kamau & Aduda, 2024). These indicators evaluate how efficiently a company leverages its assets to create profits and enhance shareholder value (Chong et al., 2024). However, focusing solely on financial performance is inadequate for decision-making in today's dynamic, competitive environment. Financial metrics are often short-term, based on past data, and cannot predict future performance (Insee & Suttipun, 2023). To address this, the balanced scorecard approach is

often used, as it evaluates both financial and nonfinancial dimensions of performance. The balanced scorecard evaluates the firms' performance from the perspectives of financials, customers, internal processes, and learning and growth (Ansari & Ghasemaghaei, 2023).

The financial dimension measures the attainment of the firm's financial goals and the attainment of the bottom line (Mukherjee et al., 2024). The customer perspective evaluates performance from the client's viewpoint, emphasizing the need to meet customers' needs to ensure satisfaction and achieve the organization's goals (Insee & Suttipun, 2023). The internal process perspective assesses how operations drive future competitiveness, leading to operational improvements (Chen et al., 2022). The perspective of learning and growth evaluates the enhancement of internal capabilities, focusing on innovation, improvement, and learning to enhance corporate value and operational efficiency (Insee & Suttipun, 2023). This study adopts a balanced scorecard approach to measure firm performance.

1.1.3 Financial Technology and Firm Performance

The performance of a firm is a significant concern for both academics and practitioners across various markets (Maroufkhani, Iranmanesh, & Ghobakhloo, 2023). The changing dynamics of businesses often driven by advanced technological upgrades have led to firms being more competitive (Behl, 2022). Linking fintech investments to a firm's performance has received considerable empirical investigations (Al-Busaidi & Al-Muharrami, 2021). This debate, however, is inconclusive. Moreover, most studies of fintech adoption have focused on banks while others on companies carrying out insurance business with very few focusing on asset management firms. Miskam et al. (2019) focused on the Islamic fund management industry in Malaysia, noting that adoption and shifting to the FinTech ecosystem was to leverage the benefits of fintech.

While some researchers such as Mukherjee et al. (2024) argue that fintech enhances firm performance, others argue that financial technology is unrelated to performance. For instance, Phan et al. (2020) found that financial technology negatively influenced the performance of the banking sector in the country. According to Nilasari et al. (2022), technological innovation was positively and significantly correlated with long-run value creation. Evidence suggests a connection between digital innovations, digital capabilities, and technology orientation as factors that contribute to enhanced performance (Maroufkhani et al., 2023). Performance is evaluated using the balanced scorecard framework incorporating both financial and non-financial metrics in the information technology firms in Malaysia (Khin, 2019). The study encouraged firms to invest in digital technologies, systems and applications and follow the market trends to become innovative readers as well as boost their performance.

Al-Busaidi and Al-Muharram (2021) quantified the impact of mobile trading on the firm performance of commercial banks in Oman and adopted mobile payment infrastructure as the proxy for the dependent variable. The study however suggested the need for customised innovation which would be more customer-centric. In a comparative study of firms that had adopted FinTech and traditional firms in the United States, Nandi et al. (2020) put forward a case for the supervision and regulation of FinTechs to enhance financial stability and performance. However, these studies did not consider investment management firms in the local context in Kenya, as will be the focus of the present research.

In Uganda, financial innovation was argued to predict the success and survival of financial institutions. The study implied that firms' innovations significantly contributed to the survival chances of the institutions. Further, financial innovation explained more of the variances in financial institution performance (Nkundabanyanga, Mugumya, Nalukenge,

Muhwezi, & Najjemba, 2020). In Kenya, studies on fintech and digital revolution are limited, even in the light of experiencing the fastest financial evolution in history since Mpesa's entry in 2007. Misati, Kamau, Kipyegon and Wandaka (2020) shared that fintech service provision in large banks contributed to the recorded high performance, but for medium-sized banks, the investment was moderate and hence it had an average contribution to financial performance outcomes in the banks. The interest rate caps affected the small banks negatively due to a lack of sufficient capital to invest in digital technologies to improve service delivery for better performance. Financial institutions have embraced advanced data analytics as a fundamental approach to stand out from competitors, improve efficiency and lower operational costs (Cirillo et al., 2023).

Financial technology has evolved and replaced the staid service provision processes and its innovative features have expanded reach to customers and lowered costs (Irimia-Diéguez et al., 2023). Fintech includes innovations such as blockchain technology, artificial intelligence, big data and data science leading to improvement in asset management services (Zik-Rullahi & Nwosu, 2024). In asset management, the firms offering this service have not fully and easily adopted the new technologies in carrying out their operations. However, to deliver efficiency, and to improve client experience, asset managers must adopt distribution technology. The distribution technologies will allow asset managers to link clients (both retail, individual and corporate) with service areas, processes and sales options for better client experiences (Kamau & Aduda, 2024).

1.1.4 Investment Management Firms in Kenya

Investment management firms are pools of funds collected by a large number of investors so that they can access a range of investments. Investment management firms offer fund

management services to the pool of investors intending to achieve specified financial objectives (The Capital Markets Authority, 2024). Investment management firms offer professional asset management in the form of securities and other classes of assets and aim at meeting specified investment objectives with the key consideration being the attainment of the client's goals and objectives (Cyttonn, 2023). According to Cyttonn, (2023), funds managed are invested in one of the main types of unit trust funds which includes; Money market funds, equity funds or a balanced fund amongst others. An important criterion for measuring the performance of investment management firms is Assets Under Management (AUM). AUM describes the total value of assets managed by the investment companies on behalf of their clients. Fluctuations in AUM value can indicate a significant inflow or outflow of the client's funds.

In Kenya, the activities of Investment management firms are approved and licenced by the Capital Markets Authority (CMA) and consist of investment banks and collective investment schemes. As of July 31, 2024, a total of 107 companies had been approved and licenced to offer to carry out the activities of investment management including 17 investment banks, 44 fund managers and 46 collective investment schemes. The industry facilitates the movement of significant sums of money into the financial systems (Leite, 2024). In 2023, the global asset management industry's assets grew by nearly \$ 129 trillion, recovering from the previous year's decline (Boston Consulting Group, 2024). However, asset managers now face several challenges to sustaining their growth and firm performance.

1.2 Statement of the Problem

Financial technology adoption in developed regions has been the driving force in financial markets, spurring growth and development. Sharma et al. (2023) mention that financial

technology helps financial institutions respond to challenges and changing market and customer needs. Fintech has been able to innovatively develop financial products for modern business entities and customers. It also includes and connects the excluded population to economic development, through their savings and investments there is economic growth. Financial technology worked by expanding the banking formats including mobile money services, payment options for the unbanked people and tiny banks (Shiyyab et al., 2023). However, the uptake of financial technology is more so in developing countries seeking to serve the unbanked population. At the same time, most African states are way behind in the adoption of financial technology compared to other global regions (Mazambani & Mutambara, 2020).

The CMA acknowledges that the performance of Kenyan Investment Management Firms remains crucial for the micro and macro-economic development of the country (The Capital Markets Authority, 2024). Statistics show that the total assets under management in Kenya grew by 15.14 per cent to Kenya Shillings 88.1 billion in the second quarter of 2020 increasing from Kenya 76.5 billion in the first quarter of the year. Despite the impressive growth, the assets under management to Gross Domestic Product (GDP) ratio was still low at 5.4 per cent compared to the global average of 61.8 per cent (Cytonn, 2023). The downward trend demands further research in seeking to understand if Fintech adoption will improve firm performance in investment firms.

There is evidence that financial technology adoption influences firm performance (Al-Busaidi & Al-Muharrami, 2021; Bag, Rahman, Gupta, & Wood, 2023; Kibe et al., 2020). However, there exist knowledge gaps that this study seeks to address. These gaps are along conceptual, contextual and methodological spheres. Financial technology adoption influence on performance debate is inconclusive. Conceptually, fintech adoption and firm performance

have been reviewed in past studies, but there remain unresolved issues. First, some researchers reported that financial technology adoption by a firm generally enhances firm performance (Kibe et al., 2020; Misati et al., 2020; Phan et al., 2020). Others found that financial technology adoption is unrelated to firm performance (Behl, 2022; Kim & Shin, 2019; Nilasari et al., 2022) There is therefore need to establish if financial technology adoption influences a firm's performance or otherwise.

Existing literature that explores the link between financial technology adoption and the performance of investment management firms is limited. There is a significant need for more empirical evidence to substantiate this relationship. From a methodological perspective, most research exploring the connection between fintech and performance has adopted biased samples likely to result in biased results. Contextually, despite the growing importance of financial technology in different sectors, empirical study of the role of FinTech in firm performance of investment management firms is scanty, creating a knowledge gap. Objectives of the Study. To address the identified gaps, this study investigated the impact of financial technology adoption on the performance of investment management firms in Kenya.

1.3 The Study Objectives

This section outlines the study's primary and specific objectives.

1.3.1 The General Objective

The primary objective of this study was to evaluate the influence of financial technology adoption on the performance of investment management firms in Kenya.

1.3.2 The Specific Objectives

The specific aims of the study were to:

- i. Establish the influence of blockchain technology on the performance of investment management firms in Kenya.
- ii. Determine the effect of artificial intelligence on the performance of investment management firms in Kenya.
- iii. Examine the influence of big data analytics on the performance of investment management firms in Kenya.
- iv. Assess the effect of mobile technology integration on the performance of investment management firms in Kenya.

1.4 Hypotheses of the Study

To achieve the objectives of the study, the following null hypotheses were tested.

H₀₁: Blockchain technology has no statistically significant influence on the performance of investment management firms in Kenya.

H₀₂: Artificial intelligence has no statistically significant effect on the performance of investment management firms in Kenya.

H₀₃: Big data analytics has no statistically significant influence on the performance of investment management firms in Kenya.

H₀₄: Mobile technology integration has no statistically significant effect on the performance of investment management firms in Kenya.

1.5 Significance of the Research

The primary goal of this study was to determine the effect of financial technology adoption on the performance of investment management firms in Kenya. The study set to assess why some investment management firms perform better yet others are recording reduced performance. The study is expected to make several significant contributions to theory, practice and policy.

1.5.1 Significance to Academic Research and Theory

The results of this study are expected to strengthen the theories anchoring the study by providing empirical grounding to theory. The theoretical foundation is based on innovation diffusion, the task technology fit and the technology acceptance model. Academically, information from this research will enrich the area of driving force and the variances for firm performance. This will be by providing a conceptual linkage between financial technology adoption and firm performance. Empirically, the study will provide an avenue for other scholars who shall utilise gaps arising from this study as a launching pad for further future studies.

1.5.2 Significance to Regulatory Authority and Policy Makers

This study will add value to the existing policy tools and guide the stellar performance of investment management firms in Kenya. The study shall provide valuable insights to the government of Kenya and regulatory authorities such as the Capital Markets Authority, regarding the impact of financial technology adoption on the performance of investment management firms in Kenya. Ultimately, this shall guide the regulatory bodies on which policies relating to financial technology to adopt.

1.5.3 Significance to the Management of Investment Firms

The results of this study are anticipated to offer valuable insights to the leadership of approved and licenced investment management firms on how financial technology adoption would impact portfolio returns and subsequently leverage this knowledge to impact firm performance for their firms. The findings are expected to assist other finance professionals such as portfolio managers, investment bankers and fund managers to focus on critical success factors related to financial technology adoption within their institutions and hence improve performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter is devoted to a review of literature, both theoretical review and empirical review to bring forth an understanding of what exists. Initially, this part offers a comprehensive review of the theories that underpin the study. In the section that follows, a pairwise review of extant literature in line with the hypothesised relationship is carried out. This brings fore knowledge gaps along the methodological, contextual and conceptual realms. The knowledge gaps identified are then tabulated and summarised. A conceptual model, schematized along arguments in literature is presented to demonstrate the relationship among the study variables in line with arguments in literature. At the end, the operationalization of study variables is presented and discussed.

2.2 Theoretical Review

The two variables of this study, financial technology adoption and firm performance are anchored on three theories. The theories are the innovation diffusion theory (Rogers, 2003), the task technology fit theory (Goodhue & Thompson, 1995) and the technology acceptance model (Davis, 1989) This study links the three theories to provide an exclusive explanation of the effect of FinTech adoption on firm performance.

2.2.1 The Innovation Diffusion Theory.

The foundations of the innovation diffusion theory originated from the workings of Rogers (1962). The early scholar sought to explain the subtle factors that led to the spread of innovations across firms. According to Rogers (1962) an innovation related to a new way of doing things, novel ideas or objects within the social realms. Innovation diffusion, on the other hand, is the practice of adopting novel objects and ideas in society over time. According to Rogers (1962), new technology adoption is a lengthy process, relatively, and undergoes a process before it is fully adopted by society. Rogers (1962) broke down the innovation adoption into five steps; cognizance, interest, assessment, pilot and eventually adoption. However, the new technology inputs and output must be in a form that is measurable if the novelty is to get acceptance, fully take shape in a firm and satisfy the users (Rogers, 2003).

Rogers (2003) extended the innovation diffusion theory further by elucidating that innovation adoption had more distinct features than the five steps and described the technology adoption process as an uncertainty reduction process. The attributes that were touted as critical in reducing uncertainty included first, the relative advantage, the extent to which new technology was viewed as being better than the old one. The second characteristic was named compatibility, which is consistent with the present need, while the third factor was complexity. However, complexity was negatively related to adoption. Trialability and observability were the last two factors (Rodgers, 2003). It is however imperative, Rodgers (2003) argued that users of new technology are advised of the advantages, consequences and disadvantages of either adoption or non-adoption.

Amongst the critics of the innovation diffusion theory was Lundblad, (2003) whose view of the theory was that it took a different outlook from other theories of change.

Lundbland (2003) argues that innovation diffusion theory does not focus on changing people but views change as being progressive in a way that would fit better to individual needs. In innovation diffusion theory, the argument is that technology changes in response to the needs of the people. Innovation diffusion theory focuses on new item characteristics and holds that for the acceptability of new technology to take root, trialability, complexity, comparability, observability and relative advantage (Rogers, 2003). Rogers (2003) further argues that an organization's perception of these attributes influences the extent of innovation adoption. Accordingly, this implies that the innovative technology must fulfil the stated features before being adopted.

Innovations in technology seek to expand the market base and based on this theory, fintech can increase markets for financial institutions. This theory informs the adoption of technologies such as blockchain, artificial intelligence, big data analytics, and mobile technology. By applying the innovation diffusion theory to the adoption of financial technology, this study hopes to bring to the fore discussions in the contextual evidence to the main literature. This theory is pertinent to the study because financial technology adoption and its usage are fundamental to a firm's firm performance, hence explaining the four independent study objectives.

2.2.2 Task-Technology-Fit Theory

Goodhue and Thompson (1995) developed the task-technology-fit to analyze the relationship between current technological capabilities, individual performance, and the demands for a given task. The task fit technology fit theory posits that individuals and firms only accept technology if it is useful and aids in improving task performance. The model as proposed by Goodhue and Thompson (1995) includes constructs such as task characteristics, technology

characteristics, task-technology-fit and use. According to Goodhue and Thompson, (1995), task characteristics are the actions that firms and individuals must carry out to acquire output from inputs. The characteristics of technology are the various models of technology adopted by individuals and firms in the performance of varied tasks.

The degree to which technology supports individuals and firms in the portfolio of tasks at hand is task-technology-fit. The importance of the model is due to the fact it is embedded in the success of technology adoption which leads to the acceptance of technology and performance outcomes (Amron, Ibrahim, Abu Bakar, & Chuprat, 2019). Since its postulation, several scholars have applied the task-technology-fit model to explain end-user behaviour in relation to technology adoption. For instance, Odum, Odum, and Chukwu (2017) adopted the task technology fit theory to investigate the impact of technology adoption on user performance and satisfaction. In addition, Kim and Shin (2019) extended the use of the task technology fit model in investigating user behaviour towards the use of blockchain technology and revealed that the theory had a direct influence on the users' intention to accept and use technology. More recently, Amron et al. (2019) established a positive influence on user's intention to adopt mobile technology integration in enhancing organisational performance.

Further, some scholars have used the task technology fit model in explaining benefits accruing to clients when a good fit between technology and tasks exists. The theory has been used by researchers while investigating the influence of technology adoption on performance. For instance, Joseph and Falana (2021) adopted the various postulates of task technology fit model together with those proposed in the technology acceptance model to investigate the behaviour of varied clients in employing technology in their tasks. They argued that the task technology fit model had a direct influence on customers' uptake of technology. Moreover,

they provided empirical support to the theory by finding that any financial technology would be useful if it provided a means of completing tasks (Joseph & Falana, 2021). Task technology helps in matching jobs and demand for such jobs with the appropriate technology to support such jobs.

Though task technology fit is hypothesised as applying to financial technology, there exist unanswered questions as to the employability of the task fit technology to specific technological innovations (Amron et al., 2019). The assertion by Amron et al., (2019) notwithstanding, the task technology theory offers important linkages between various jobs and tasks with the fitting technology. The theory is also helpful in explaining and forecasting the benefits of financial technology adoption. Based on the above review, we deduce that the task technology fit theorem is a useful predictor of performance in investment management firms that adopt financial technology innovations. The theory thus informs the independent study variables on fintech adoption.

2.2.3 Technology Acceptance Model

Davis (1989) postulated the Technology-Adoption-Model (TAM) which has since gained acceptance as the theory that helps in understanding the adoption and acceptance of technology utilisation. Davis (1989) integrated the theory of reasoned behaviour in coming up with the TAM theory. TAM is modelled based on end-user behavioural intentions moreso in agreeing to utilise novel financial technologies. According to Davis (1989), employment and usage of innovative financial technology are greatly influenced by user acceptance of financial technology. In addition, TAM helps elucidate the reasons for differences in end-users' conduct and intents of adopting technology as well as predicting the factors driving the use and acceptance of technology (Davis, 1989).

Davis (1989) postulates that a positive adoption and usage of technology are positively influenced by the users' needs, how the users view the ease with which they can use the technology and their mental reservations concerning how helpful the technology is. Furthermore, Davis (1989) argues two main factors influence the user intention to employ technology; how the user perceives that technology to be useful and its useableness. It is only after the two factors are present, that the stated technology is accepted and used.

TAM has generated criticism, despite its wide usage, due to its uncertain empirical value and its limits in explaining and explaining powers as well as practicality (Venkatesh, Morris, Davis, & Davis, 2003). The theory has been criticized for its overly focused on individual user perception without question of technology is better off (Venkatesh et al., 2003)Despite the criticism, TAM continues to serve as the guide and has been consistently used in investigations that relate to technology adoption (Zik-Rullahi & Nwosu, 2024)In this study, the theory will inform the general objective of technology adoption.

2.3 Empirical Review of Literature

In this segment, existing literature related to financial technology adaptation and firm performance is empirically reviewed. The study constructs are reviewed empirically along the hypothesised relationships. This brings to the fore the state of knowledge and gaps existing in literature. This will help in understanding how the constructs influence firm performance.

2.3.1 Blockchain Technology and Firm Performance

Yousefi and Tosarkani (2023) investigated the role of blockchain technology on supply chain performance. This was a system-analysis-based approach to assessing how blockchain technology improves the supply chain performance. The adoption of blockchain technology

was to resolve the financial constraints experienced in organizational challenges. The study was based on the FCM model in assessing the enabling components such as social responsibility and environmental sustainability on blockchain technology adoption. Results indicate that blockchain technology adoption supported the improvement of sustainable supply chain performance. The role of blockchain technology was found to enhance environmental sustainability, trace and track processes and create smart contracts that improve sustainable supply chain performance outcomes. However, the study focused on supply chain performance while the present study focusses in on firm performance.

Kim and Shin (2019) investigated the extent to which blockchain technology applications influenced supply chain performance outcomes of various industries in Korea. The study proxied blockchain technology applications as transparency and immutability of information and smart contracts. Supply chain performance was measured as growth in financial and operational outcomes. The cross-sectional study target population was 1693 professionals out of which a purposive sample of 306 respondents was obtained. Primary data was obtained from the respondents using a 5-point Likert scale questionnaire. A structural equation model was used to examine the relationship between blockchain technology and supply chain performance. The findings of the study showed that blockchain technology applications had significant positive effects on both the operational performance and financial performance of Korean firms. However, the study focused on supply chain performance of Korean firms, whereas the present study examines firm performance within investment management firms in Kenya.

The study by Hasan, Shiming, Islam, and Hossain (2020) evaluated the effect of blockchain technology on operational efficiency in 30 firms registered in China's stock exchange (2014-2018). The study which was anchored on transaction cost theory employed

panel data which was evaluated using OLS. The efficiency of operations was based on technical and allocative efficiencies in the firms. The analysis reported a significant and positive relationship between blockchain technology and the operational efficiency of the firms. The study however used operational efficiency as the dependent variable while the present study proposes firm performance. Further, the study was contextualised in China and was not sector-specific making it difficult to port the findings and generalise them to Kenya's asset management firms.

Nandi et al. (2020), investigated the impact of blockchain adoption on supply chain capabilities and subsequently supply chain performance. The study which was carried out in the United States targeted 126 firms across different economic sectors over the period 2016 to 2018. The study was based on the resource-based view and operationalised the dependent variable blockchain technology as the interoperability of enterprise resource programs and the Internet of Things and information sharing. The independent variable, supply chain performance was proxied by quality compliance and improvement, process improvement and flexibility and process time reduction and cost. The study used an abductive research approach adopted secondary data and thereafter used qualitative content analysis. Based on the findings of the study, firms were found to be more oriented towards improving operational level capabilities such as information sharing and coordination as opposed to strategic level capabilities that included integration and collaborative capabilities. Further, the study findings indicated that blockchain technologies were positively and significantly related to supply chain performance. The study was, however, multi-industry and hence argued that outcomes would vary across the industry. Moreover, the study focused on a specific aspect of performance while the present study focusses on firm performance.

Bag et al. (2023) examined the influence of blockchain technology adoption on the performance of small and medium enterprises in South Africa. The aim was to identify and understand the key antecedents that influence SME's adoption of blockchain technology and their effect on performance outcomes. The survey covered 311 SMEs in South Africa and SEM was employed in analyzing the data revealing that the adoption of blockchain technology improved the financial performance of the SMEs. The results also show that relative advantages, support from top managers, compatibility, organizational readiness, regulation, legislature, competitive pressure and external support were significant factors influencing the blockchain technology adoption in SMEs. However, the complexity of the technology had a negative impact on blockchain technology adoption in the SMEs. Application of blockchain technology enhanced financial performance outcomes in the SMEs. Focusing on the SMEs in South Africa might provide varied responses and results compared to covering investment firms in Kenya.

Aketch et al. (2021) study focused on blockchain technology and its effect on performance outcomes in financial markets in Kenya. The research was done through the use of an explanatory research design and targeted 42 commercial banks operating in Nairobi. The study respondents were 84 inclusive of bank managers, and IT and finance departmental heads who filled the structured questionnaire as the research tool. From the conducted descriptive and inferential statistics, it was established that blockchain technology adoption significantly and positively was linked to government policy, internet infrastructure, risk analysis and transaction costs. The improvement of the performance of the financial markets in Kenya was through the contribution of the adoption of blockchain technology. It was recommended that the government have better policies that encourage access and availability of advanced blockchain technologies and the presence of stable and fast internet connections.

The conceptualization of blockchain technology and performance used varying dimensions hence the need for further research.

2.3.2 Artificial Intelligence and Firm Performance

Alzaidi (2018) explored the impact of artificial intelligence on the performance of the banking industry in six Middle East countries; Bahrain, Kuwait, Oman, Qatar, United Arab Emirates and Saudi Arabia. To explain the relationship among the variables, the study adopted a mixed approach and used descriptive and explanatory research designs. The survey method was used to select 200 respondents from the banks across the Middle East region. Primary data utilized in the study was collected using structured and close-ended questionnaires. The study investigated if: error reduction; increased work efficiency; reduced cost of operations and efficient decision-making, were the driving factors of artificial intelligence adoption. The study findings were that artificial intelligence had a statistically significant and positive impact on the performance of the banking sector in the Middle East. The study adopted an explanatory research design while the current study will adopt a cross-sectional research design, Further, the study focused on the banking sector in the Middle East nations and the findings may not be applicable in the Kenyan asset management sector.

Taguimdje et al. (2020) analysed the influence of artificial intelligence capabilities on firm performance. The study defined artificial intelligence capabilities as the firm's ability to create a bundle of organizational, personnel and artificial intelligence resources for business value creation. Artificial intelligence capabilities were proxied by artificial intelligence management capability which is the ability of an organization to model intelligent behaviour to create added value for the organization's sustainability; artificial intelligence personal expertise, that is the professional skills and knowledge required by the organization's staff for

modelling intelligent behaviour accomplish the tasks and artificial intelligence improved the technological assets in the organization. Firm performance improved as evidenced by its production levels, efficiencies, effectiveness, profit margins and firm value. The study called on the theory of IT capabilities as integral from the review of over five hundred case studies in different sectors across the globe. The results from the study highlighted that artificial intelligence improved performance levels. The researchers argued that by building on artificial intelligence attributes, firms can enhance their project outcomes.

Abrokwah-Larbi and Awuku-Larbi (2023) the influence of artificial intelligence on marketing performance in SMEs within the emerging economy of Ghana. The study focus was assessing the link between the use of artificial intelligence in marketing and business performance based on a resource-based view perspective. The study was done among 225 SMEs and there was structural equation modelling of the data revealing significant influence of artificial intelligence in marketing and performance of the SMEs. Adopting the perspective of a balanced scorecard model where customer, financial, and internal business processes performance and learning growth were impacted by artificial intelligence in marketing. Adoption of artificial intelligence in marketing included Internet of Things (IoT), visual and augmented reality, collaborative decision-making systems and personalization. The study recommends that SME owners and managers embrace and encourage the adoption of artificial intelligence in marketing when pursuing improved performance outcomes.

Mukherjee et al. (2024) investigated the influence of artificial intelligence on performance of micro, small, and medium enterprises in India. They measured artificial intelligence by evaluating the firm's infrastructure and skilled personnel for AI data processing, the use of AI for forecasting, and the collaborative use of AI outcomes for decision-making. The study adopted a cross-sectional research design. They included a

sample of 307 firms and utilized a seven-point Likert scale questionnaire to collect data for the firms' employees. The findings indicated that artificial intelligence has a significant positive impact on firm performance. However, the study focused on small enterprises in India, but the results can be validated by conducting studies in other industries, such as investment management firms in other countries.

Joseph and Falana (2021) examined the effect of artificial intelligence on firm performance in Nigeria. This research was based on the viewpoint of robotic taxation and its main objective was linking artificial intelligence to firm performance. Through a survey design and triangulation format for data from the analyzed companies. The study found that the adoption of AI solutions including robotic taxation noticed an improved bottom-line performance. The study also shared that the involvement of robotics enhanced the employment of skilled workers in the country. The study concludes that in seeking to improve earnings and income for the Nigerian government from taxation, the adoption of AI was imperative through robotic taxation perspectives. The study assessed firm performance in general and hence the need to narrow down the perspective to balanced scorecard approach of firm performance.

Githui (2019) investigated the extent to which artificial intelligence influenced marketing strategy among mobile telephony operators in Kenya during the period 2019. The study was premised on the TAM and the disruptive innovations theories. The descriptive research design study had a population of five licensed mobile telephone service providers from which 28 respondents were purposively selected. The study proxied artificial intelligence as response solutions; machine learning, chatbots and predictive consumer behaviour. The study used primary data that was collected through self-administered questionnaires. The data collected was analyzed to establish the relationship among the

variables. The findings of the study indicated that a positive and significant relationship existed between artificial intelligence and marketing strategies. However, even though the study was done in Kenya, the conceptual relationship was between artificial intelligence and marketing strategies of mobile firms while the current study looks at firm performance as the independent variable and is from the context of asset management firms.

Kiplagat and Mutuku (2023) sought to establish the effects of artificial intelligence on the performance of selected service firms in Nairobi, Kenya. The proxies adopted by the study for artificial intelligence were machine learning, targeted advertisement and natural language processing. The study used the descriptive research design and purposively targeted 30 firms that were using artificial intelligence. Findings of the study indicated that artificial intelligence techniques were deployed in Kenya only to a small extent pointing to already installed technologies whose full potential was not being exploited. The findings further indicated that block chain technology had a positive and a statistically significant influence on operational performance.

2.3.3 Big Data Analytics and Firm Performance

Zhu and Yang (2021) examined the impact of big data analytics on the improvement of financial performance and sustainability of operations in banks in Asian Countries. The concepts of sustainable commitment, green supply chain management, integration of big data and green HR practices were linked to the environmental and financial performance of banks. The researchers collected data using survey approaches from 317 employees working in the 37 banks spread across 6 Asian countries. Questionnaires were used as the data collection tools. The findings of the study showed that big data analytics strategies influence internal processes that improve the financial performance of the banks. Big data analytics helped in

monitoring, tracking and evaluating customers as a means of meeting their needs and enhancing operational efficiencies. The results also indicate that the use of green supply chains and green human resource practices can improve the environmental performance of the banks. The study was done in the banking sector, located in Asia and there is a need for localization of studies to consider background setting and its impact on study concepts.

Behl, (2022) investigated the effect of big data analytics capabilities on competitive advantage and firm performance of tech start-ups in India and China. The study used the dynamic capabilities view as the underpinning theory and examined the role of big data analytics in explaining better firm performance across the two countries. Primary data was obtained from a single respondent in each of the 502 firms spread across the two countries with 269 from India and 233 from China. The study used partial least square structured equation modelling using Warp PLS 6.0 to test the theoretical model. The study found that big data analytics capabilities had a positive and significant impact on the firm performance of tech start-ups.

Maroufkhani et al. (2023) investigated the impact of big data analytics adoption on the firm performance of small- and medium-sized enterprises in Iran's manufacturing sector. The firm performance consisted of financial and market performance based on the growth of revenues and profit margins, commanding a large market share and gaining a competitive edge. The study used the technology–organisation–environment model and resource-based view as the guiding theories of the research. Primary data that was obtained using questionnaires was analysed using SEM to test the model for the study. The result of the study confirmed that big data analytics adoption enhanced the financial and market performance of small- and medium-sized enterprises.

Stonehouse and Konina (2020) investigated the effect of big data analytics on supply chain input in the agricultural sector in Ethiopia. The study is anchored on the fact that 85% of employment opportunities in Ethiopia are from the agriculture sector and the exports are largely agricultural products. The growing population demands improved output from the agricultural sector and hence the need for big data analytics adoption to cure the inefficient agricultural supply chain. Therefore, this study's main objective is to assess how big data analytics can help achieve a better agriculture input supply chain. The researchers collected data by interviewing supply chain management professionals and findings showed that big data analytics usage enhanced operational and strategic advantages in the agricultural sector. The findings revealed that the application of big data analytics had positive impacts on agricultural productivity, quality and quantity of exports and food security. The study was done in a different context -the agricultural sector and its supply chain and its background setting was Ethiopia.

Wakhungu and Mutuku (2023) examined the relationship between big data analytics and the performance of private hospitals in Nairobi Kenya. The study was guided by the diffusion of innovation theory and adopted the descriptive research design. The target population was 120 private hospitals in Nairobi. A census survey was conducted with 120 senior staff members in the hospitals. Data was collected using closed-ended questionnaires via a pick-and-drop approach. The findings revealed that big data analytics had a positive and statistically significant impact on the performance of private hospitals in Nairobi, Kenya. However, the study focused exclusively on private hospitals in Nairobi, limiting its applicability to other sectors such as investment management firms, which have different operational structures and challenges. This study aims to address this limitation by focusing

on the influence of FinTech adoption on firm performance, thereby exploring its applicability in sectors beyond private hospitals.

2.3.4 Mobile Technology Integration and Firm Performance

Omar and Ismail (2020) researched mobile technology integration and its impact on leadership in the context of Malaysia. As mobile technology is growing around the world, the education sector is set to enjoy some of its benefits and hence the principals should encourage its use by teachers as a teaching aid in the classroom. Thus, the study sought to mobile technology integration, identify level of technology leadership, and the role of principals as visionary leaders, enacting a digital age learning culture and improving systems for digital citizenship as the predicting factors of mobile technology integration. 376 secondary school teachers took part in the research by filling out the research tool and producing quantitative data. The data was analyzed using inferential statistics and found the association was both positive and significant for the linkage between technology leadership and mobile technology integration. It is concluded that visionary leadership, improved systems, learning culture and digital citizenship, significantly predicted the influence of mobile technology integration in secondary schools. However, the link between mobile technology integration and its influence on firm performance was not captured.

Al-Busaidi and Al-Muharrami (2021) assessed the business value of fintech investments on the performance of banks in Oman over the period between 2008 and 2017. The panel study employed a mixed research approach in assessing the longitudinal quantitative data. The study targeted the top managers in seeking their views on the impact of fintech investment firms' performance outcomes. The study used both primary data, obtained using semi-structured questionnaires and secondary data that was obtained from the

institution's published financial statements. Fintech was proxied by blockchain, digital currency, mobile trading, big data and global transactions. Performance on the other hand was proxied by value and is linked also to customer indicators, internal process indicators and learning and growth indicators. The results of the longitudinal study demonstrated a significantly positive impact of fintech on finance performance indicators.

Talom and Tengeh (2020) investigated the influence mobile money usage had on firm performance firms in Cameroon. The paper adopted a mixed research methodology on a sample of 285 firms that were selected using a snowballing technique. Primary data used in the study was obtained by using a questionnaire and face-to-face interviews with the study respondents. The results from the study showed that usage of mobile technology to make and receive payments accounted for more than seventy per cent of the variance in turnover and financial performance amongst small and medium-sized firms in Cameroon after the adoption of mobile payments technology. In this respect then, the study concluded that mobile money usage positively influenced the performance of business enterprises in Cameroon. The study however was conducted in Cameroon and targeted the micro firms hence the findings may not be portable to a Kenyan context.

Asongu (2021) did research on mobile phone technology as a knowledge creator and its diffusion for inclusive human development within the sub-Saharan African region. The study scope was 49 sub-Saharan countries and used empirical evidence based on Tobit Q regressions for 12 years from 2000 -2012. The findings showed that mobile phone technology interactions and knowledge creation had a combined positive effect in improving inclusive human development within the sub-Saharan African region. Further results showed that penetration of mobile phones and interlinked innovations resulted in the improvement in inclusive human development, despite variations in economic status, and legal., religious and

political stability. This study was done a decade or more in the past, and therefore there is a need to use recent data in making inferences since there are changes in the markets, policies and structures.

Mugo, Muathe, and Waithaka (2022) investigated on integration of mobile banking services and its effect on efficiency in deposit-taking Saccos in Kenya. These Saccos have embraced integrated mobile banking as a convenient way for customers to access financial services. Through the use of descriptive research design, the researcher analyzed 175 DT-Saccos. The study used secondary data for the period of five years. Descriptive, correlation and regression analyses were conducted on the collected quantitative data. The findings showed that the integration of mobile banking services positively but moderately influenced the efficiency of services delivered by DT-Saccos. The drawn conclusion is that efficiency in the DT-Saccos was enhanced through the adoption of the integration of mobile banking. The study however did not assess how the integration of mobile banking services affects financial performance outcomes.

Onyango, Otuya and Nanyama (2023) examined the effect of mobile phone-based digital technologies on the performance of micro, small and medium enterprises that are owned by women in Kakuma Refugee Camp. The MSMEs face a lot of challenges and yet they are the backbone of Africa's economy, employ millions of people and contribute to the economic growth of the region. To solve these challenges, the focus has been on investing and utilization of digital technology for the growth and survival of enterprises. The study used the resource-based view and technology acceptance model. It was a cross-sectional survey design that surveyed 111 enterprises and women owners of MSMEs filled out the structured questionnaires. From the descriptive and inferential statistics consisting of correlation and regression analysis; findings showed that mobile phone-based technology

significantly affected the performance of the enterprises. The study concluded that mobile phone-based technologies including mobile money payments, money transfers, mobile banking and mobile phone contacts led to improved customer satisfaction, high growth and profitability rates. The study respondents were only women, creating a gender bias and its context was in MSMEs in Kakuma refugee camp.

Chepkemboi and Paul (2020) sought to identify the effect of mobile technology on the firm performance of selected airlines in Kenya; Kenya Airways, Jambo Jet and Fly540. Mobile technology adoption was proxied as using hand-held devices like smartphones, making mobile payments and using phones to book and channel retailing. Firm performance was measured as financial performance; effectiveness of internal processes; customer satisfaction and employee turnover. This study applied a descriptive research design and focused on 120 staff working within the Nairobi offices. It adopted a census method for determining the sample size. The study used primary data that was collected using self-administered questionnaires developed on a five-point Likert scale. The findings of the study indicated that mobile technology adoption had a strong and positive correlation with the performance of airlines in Kenya. The study however focused on the performance of airlines in Kenya thus creating a gap in the literature and a need to investigate the influence of mobile technology on firm performance of investment management firms in Kenya.

2.4 Summary of Research Gaps

The studies reviewed in sections 2.3.1 to 2.3.4 have exposed various conceptual gaps in the relationship between financial technology adoption and firm performance. The gaps relate to the contextual, conceptual and methodological spheres. The conceptual gaps include how the variables in the study are hypothesized to influence each other and their definition. Most

studies have considered the variables in isolation and thus the linkage of all the variables as well as their joint influence on financial performance is not considered. A few other studies have linked Fintech adoption to efficiency leaving the linkage between FinTech adoption and firm performance unexplored. Contextually, little has been written about fintech adoption and its influence on firm performance from the perspective of investment management firms in Kenya. The majority of the studies are from different geographical setups and the findings may not be generalized in the Kenyan context. On the other hand, methodological gaps relate to research design, data used and population of the study as well as data analysis. Some studies have used samples and their findings may not be inferred to the entire population.

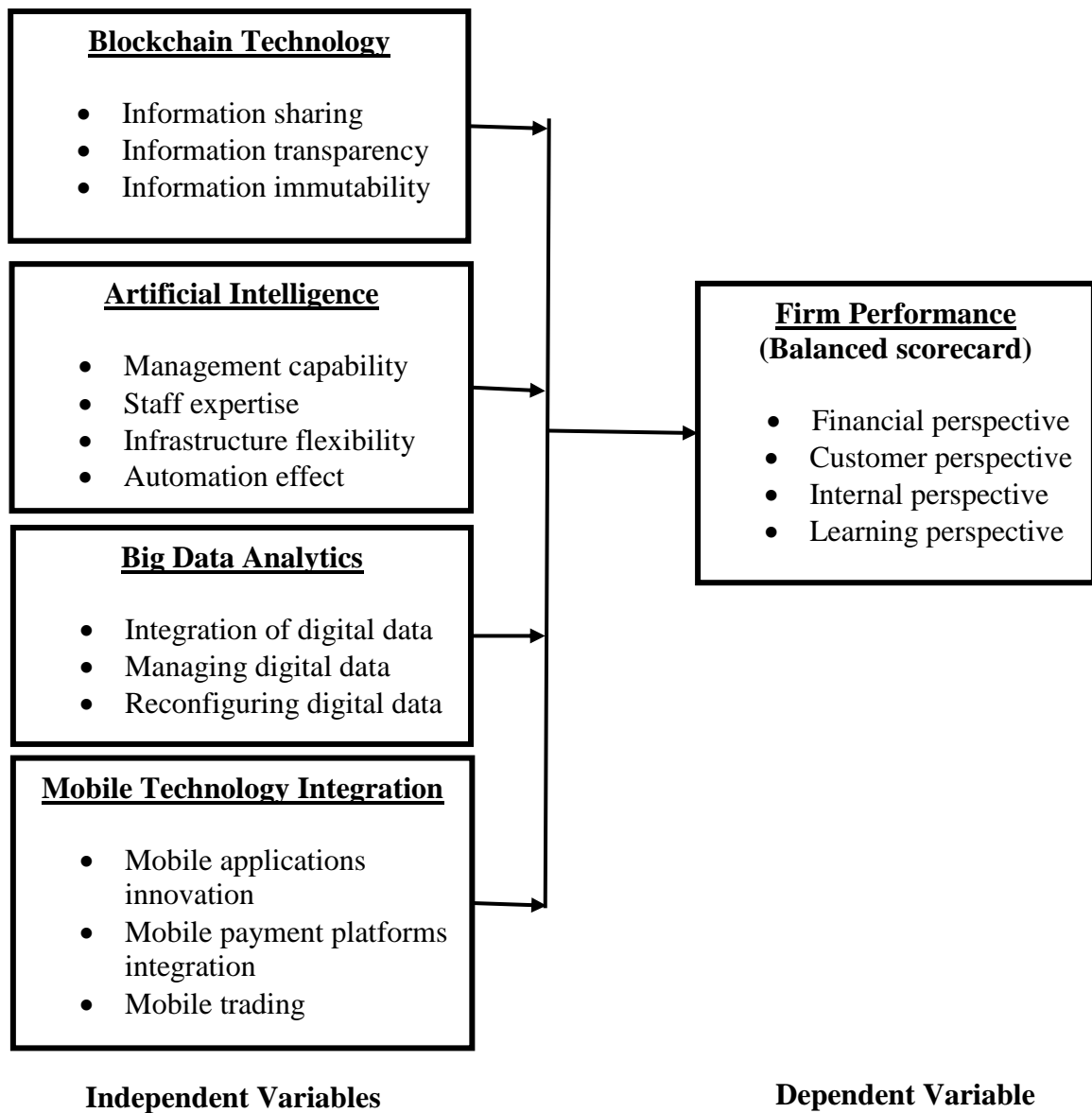
Conceptually, most studies have examined the relationship between fintech adoption and firm performance using two variables at a time. Thus, the linkage of all variables and their joint influence was not considered. In the present study, the proxies for financial technology adoption are defined by four independent variables namely blockchain technology, artificial intelligence, big data analytics and mobile technology adoption. No other study has used all four variables at a go. The context of investment management firms in Kenya has not been explored by literature. Most studies have been contextualised in developed and emerging markets where financial technology adoption is normal. It is not clear if findings can be ported and generalised to Kenyan investment management companies. A summary of the identified gaps in the literature is presented in Appendix V.

2.5 Conceptual Framework

To guide empirical literature, the study developed and adopted the framework presented in Figure 2.1. From the model, financial technologies were adopted as the independent variable while firm performance was the dependent variable.

FIGURE 2.1

Conceptual Framework



2.6 Operationalisation of Variables

Operationalisation is the process of strictly defining variables of the study into measurable factors (Bougie & Sekaran, 2019). The process of operationalization is important as it allows the researcher to measure the study variable empirically and quantitatively thus allowing for the testing of formulated hypotheses (Cooper & Schindler, 2014). In the current study, variables are operationalized based on research objectives and backed by the literature reviewed. Table 2.1 provides a summary of the operationalisation of variables.

TABLE 2.1

Operationalization of Variables

| Variable | Operationalization | Supporting Literature | Ratio Scale |
|-------------------------------|---|---|--------------------|
| Blockchain technology | Data sharing Data transparency Data immutability | (Aketch et al., 2021; Nandi et al., 2020; Yousefi & Tosarkani, 2023) | Ordinal |
| Artificial intelligence | Automation impact Infrastructure adaptability Employee expertise | (Joseph & Falana, 2021; Taguimdje et al., 2020) | Ordinal |
| Big data analytics | Data integration Data management Data reconfiguration | (Behl, 2022; Maroufkhani et al., 2023; Wakhungu & Mutuku, 2023) | Ordinal |
| Mobile technology integration | Mobile applications Mobile trading Payment platforms | (Asongu, 2021; Mugo et al., 2022; Talom & Tengeh, 2020) | Ordinal |
| Firm performance | Balanced scorecard Financial perspective Customer perspective Internal perspective | (Insee & Suttipun, 2023) (Chen et al., 2022) (Ansari & Ghasemaghaei, 2023) | Ordinal |

Learning perspective

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is the presentation of the procedure and method that guided the carrying out of this study. In the chapters, the research plan and the targeted population in addition to the research instruments are discussed. Further, validity and reliability tests as well as diagnostic tests are discussed. Finally, the chapter presents the procedures for processing and analysing data.

3.2 Research Design

Research design refers to the blueprint and methods for collecting, measuring and analysing data (Cooper & Schindler, 2014). The blueprint assists the study obtain answers to the questions with minimal resources. The present study espouses a descriptive cross-sectional research design. Cross-sectional research designs study a particular phenomenon or phenomenon at a particular time and thus assist in establishing if a significant association among the study variables exists at that moment (Saunders & Tossey, 2015). The choice of cross-sectional research design is because it allows the collection of data across a large number of firms at one point in time and tries to establish the relationship between the variables. The study was done among investment management firms in Kenya and assessed the existence of any relationship between financial technology adoption and firm performance. Cross-sectional studies are suitable in cases where the purpose of the study is to evaluate if a significant relationship exists among the variables of the study at a point (Saunders & Tossey, 2015).

3.3 Target Population

This study targeted 107 investment management firms. They included (17) investment management banks, 44 fund managers and 46 collective investment firms and fund managers licenced and approved by the Capital Markets Authority to operate in Kenya as of June 30, 2024. Individual firms are the unit of analysis with the highest-ranking investment manager in each of the firms forming the unit of observation. Appendix IV provides a list of licenced and approved investment management firms in Kenya. This research is a census study due to the relatively small population size of 107. Further, Cooper and Schindler (2014) favour census in circumstances where the size of the targeted population is small and with heterogeneous elements. The census also allows for the variability of responses to be captured by the researcher. Additional benefits include the census study's ability to facilitate comparison, adequacy of representation, reliability and accuracy (Saunders & Tossey, 2015).

The role played by senior investment managers in asset management is a major consideration in determining the unit of observation. Therefore, the study respondents will be one of the senior investment managers in each investment firm, which makes the sample size 107 respondents. This respondent group is chosen because the senior managers are knowledgeable and they define and direct the course the firm takes and hence can provide credible responses. In their absence, officials acting on their behalf were requested to respond.

3.4 Data Collection Tools

Research instruments refer to the tools used for data collection and the measuring of research variables (Saunders & Tossey, 2015). This study utilized primary data collected through structured questionnaires, designed based on hypothesized concepts, relevant theory, and

existing literature. The questionnaires collected data on the independent variables - blockchain technology, artificial intelligence, big data analytics and mobile technology integration, in addition to firm performance as the dependent variable.

The questionnaire was structured into three sections. Section A gathered the demographic information of both the firms and respondents. Section B focussed on the independent variables, and the final section addressed firm performance. On the scale, 1 represented strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The questionnaire, detailed in Appendix 1, was distributed both in person and using google forms to maximize response rate. To prevent data duplication from multiple responses, only one respondent per firm was targeted.

3.5 Data Collection Procedure

Due to the small population size, all 107 investment management firms were contacted to participate in this research. This eliminates the accuracy concerns that would arise if sampling is adopted. The study relied on primary data collected through a questionnaire administered to a single respondent from each firm. To ensure higher response rates, the researcher distributed the questionnaire using Google Forms.

3.6 Pilot Testing

The purpose of pilot testing is to allow for the assessment of the effectiveness of the research instrument. Further, a pilot test allows for the refinement of the questionnaire so that the targeted respondents have no problems answering the questions and recording the data (Saunders & Tossey, 2015). A preliminary analysis using the pilot test data detects weaknesses in design and instrumentation, argues Cooper and Schindler (2014). A pilot study

allows a researcher to obtain an assessment of the items' validity and likely reliability of data collected as well as ensuring that the data collected allows the formulated questions to be answered (Cooper & Schindler, 2014).

A pilot test was conducted on 4 individual pensions registered by the regulator to operate in Kenya. Individual pension funds offer almost similar services to investment management firms and are not part of the study population thus eliminating the risk of inaccurate results arising from their familiarity with the data collection instrument. In carrying out a pilot test, the researcher was able to establish if the respondents could answer the questions without difficulty. Any such items were revised.

Various types of validity tests include construct, content, face, and criterion-related validity. In this study, both content and construct validity were evaluated. Content validity assesses how well the questions align with the study's objectives.

3.6.1 Validity Tests

The validity of a measurement tool refers to its ability to accurately assess what it is intended to measure (Cooper & Schindler, 2014). In this study, content and construct validity were measured. Content validity tests cover the extent of the questions in guiding the study. Also referred to as logical validity, content validity refers to the extent to which a measure represents all sides of a given construct. To measure content validity, the researcher tapped on the expert judgement of the KCA University-appointed supervisor. Pilot testing the questionnaire also helped in establishing if the respondents could answer the questions with ease. This allowed for ambiguous, double-edged questions, and sensitive questions to be revised or dropped.

3.6.2 Reliability Tests

Assessing the extent to which the methods used in collecting data will yield consistent results is reliability (Saunders & Tossey, 2015). Further, reliability checks on the internal consistency of the research instrument. The research instrument reliability and internal consistency were measured using Cronbach's Alpha coefficient. The coefficient values range from zero to one. The higher the values of Cronbach Alpha the higher the reliability of the items while lower values reflect low or no internal consistency (Bougie & Sekaran, 2019). There are different arguments as to what would form the acceptable level of a reliable coefficient. For instance, Cooper and Schindler (2014) root for an alpha value of 0.7 and above as being acceptable, and Bougie and Sekaran (2016) argue that a Cronbach alpha value of between 0.50 and 0.80 is acceptable. For this study, the Cronbach Alpha value was set at 0.7.

3.7 Diagnostic Tests

Diagnostic tests allow for the non-violation of the assumptions of the classical linear regression assumptions and hence biased estimates. Violation of assumptions results in inefficient, biased, inconsistent and biased results (Greene, 2012). To allow for the non-violation, normality, multicollinearity, autocorrelation and heteroscedastic tests, as outlined in the subsections that follow, were carried out.

3.7.1 Normality Test

The normality assumption requires that the model's residual follow a normal distribution. This is crucial for obtaining accurate standard error estimates of the model parameters (Gujarati & Sangeetha, 2013). To assess this, the study used the Shapiro-wilk test, where the null hypothesis assumes normality. A low p-value indicates that the residuals are unlikely to be

normality distributed. The test was considered appropriate for this analysis due to the relatively small sample size.

3.7.2 Multicollinearity Tests

Multicollinearity arises when two or more explanatory variables in a multi-linear regression are highly linearly related thus making the parameters indeterminate (Greene, 2012). In the present study, the Variance Inflation Factor was adopted as the test for multicollinearity. The absence of multicollinearity was assumed if the computed Variance Inflation Factor was less than ten. However, if the value of the Variance Inflation Factor was greater than 10, then this would indicate the presence of harmful collinearity.

3.7.3 Autocorrelation Tests

In cross-sectional data, autocorrelation refers to the degree of correlation between values of the same variable across different observations or elements in the data. The presence of autocorrelation between successive values of the same variable results in biased coefficient values resulting in a non-valid hypothesis. The Durbin-Watson test was used to check for autocorrelation between the variables. According to Gujarati and Sangeetha, (2013), the Durbin-Watson statistic ranges from zero to four. Values between 1.5 and 2.5 suggests no autocorrelation. Values close to zero indicate positive autocorrelation, while those near four suggests negative autocorrelation.

3.7.4 Homoscedasticity

According to Gujarati and Sangeetha (2013), homoscedasticity is the classical linear assumption is constant or equal variance across all observations of the residuals. If absent, the data is said to be heteroscedastic, meaning the variance of the residuals change across

observations. The presence of heteroscedasticity can invalidate statistical tests of significance. Breusch-Pagan / Cook-Weisberg test is favoured to test for the absence of heteroscedasticity. A small p-value indicates that the residuals variance is non-constant, signifying heteroscedasticity.

3.8 Data Processing and Analysis

Data processing refers to the conversion of raw data to meaningful information. In this study, the responses from the respondents will be edited, classified, coded and tabulated. The data was analysed using both SPSS and STATA software Data collected was analysed using descriptive and inferential statistics. Descriptive statistics was used to present and describe quantitative features through frequency, mean and standard deviation. Statistical inference was used to assess the parameters and test the statistical significance of the hypotheses. Multivariate regression analysis was conducted to determine the relationships between the study variables. The multiple regression model is expressed in Equation 1.

$$\text{FirPer} = \beta_0 + \beta_1 \text{BCT}_1 + \beta_2 \text{AI}_2 + \beta_3 \text{BDA}_3 + \beta_4 \text{MTL}_4 + \epsilon \text{ ----- (1)}$$

Where: -

FirPer represents firm performance

β_0 is the regression constant, while β_1 , β_2 , β_3 , and β_4 denote regression parameters

BCT_1 : - Blockchain technology adoption

AI_2 : - Artificial intelligence adoption

BDA₃: - Big data analytics

MTI₄: -Mobile technology integration

ϵ :- represents the residual term

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

The primary aim of this study was to investigate the influence of financial technology adoption and performance of investment management firms in Kenya. To achieve this, specific objectives were established, and corresponding hypotheses were tested using multiple regression analysis. The analyses were conducted at a 95 per cent level of significance level ($p < 0.05$), with coefficients of determination (R^2) and t-values being key outputs.

4.2 Response Rate

The study had a target population of 107 investment banks, collective investment schemes, and fund managers licenced by the Capital Markets Authority as of June 30, 2024, in Kenya. Each of the 107 firms was approached and provided with a research instrument. Seventy-seven respondents completed and returned the questionnaire, resulting in a response rate of 71.92 per cent. Of the 77 responses, 7 were from investment banks, 31 from fund managers and 39 from collective investment schemes. This rate is relatively higher and consistent with similar studies. The strong response rate was supported by the authorization of the research by from the National Commission for Science, Technology, and Innovation. The letter introducing the researcher obtained from KCA University, and the online format of the questionnaire aided in obtaining the higher response. The results are presented in Table 4.1.

TABLE 4.1
Study's Response Rate

| Questionnaires | Frequency | Per cent |
|----------------|------------|-------------|
| Returned | 77 | 71.9% |
| Not returned | 30 | 28.1% |
| Total | 107 | 100% |

4.3 Respondents' Demographic Profile

The respondents' characteristics were analysed based on their tenure in their current positions and overall length of service with the company. The results are presented in Table 4.2.

TABLE 4.2
Tenure with the Organization and in Current Role

| Duration | Years in the Current Position | | Duration in Current Role | |
|--------------------|-------------------------------|---------------|--------------------------|---------------|
| | Frequency | Percentage | Frequency | Percentage |
| Less than 5 years | 16 | 20.8% | 41 | 53.2% |
| 6 to 10 years | 61 | 79.2% | 26 | 33.7% |
| 11 to 15 years | 0 | 0% | 5 | 6.5% |
| 16 to 20 years | 0 | 0% | 3 | 3.9% |
| More than 20 years | 0 | 0% | 2 | 2.6% |
| Total | 77 | 100.0% | 77 | 100.0% |

The findings presented in Table 4.2 show that 79.2 percent of the respondents had held their current position for at least 5 years, suggesting that they had significant experience. This experience made them credible sources of relevant and up-to-date information. Additionally, 53.2 per cent of the respondents had worked for their firms for five years or less, indicating

that the majority had relatively short tenures. The fact that senior managers had only been with their firms for up to five years may suggest high staff turnover in investment management firms. This could be attributed to the similarity of products offered by the companies, making it easier to recruit trained employees from other firms.

4.4 Reliability Tests

Reliability ensures consistent and dependable results from data collection or analysis methods. It checks if repeated measures produce similar outcomes and if different observations reach comparable conclusions. In this study, Cronbach’s alpha assessed the internal consistency of the measuring instrument. Alpha values range from 0 (no consistency) to 1 (perfect consistency), with a threshold of 0.7 set for reliability. The results are shown in Table 4.3.

TABLE 4.3
Reliability Test Results

| Variable | Item Count | Coefficient | Reliability |
|-------------------------------|------------|-------------|-------------|
| Blockchain technology | 7 | 0.832 | Strong |
| Artificial intelligence | 7 | 0.877 | High |
| Big data analytics | 7 | 0.812 | Strong |
| Mobile technology integration | 7 | 0.866 | Strong |
| Firm performance | 8 | 0,841 | Strong |

The results in Table 4.3 show that all variables have Cronbach’s alpha values above the acceptable threshold of 0.7, indicating internal consistency. This confirms that the instrument reliably measures blockchain technology, artificial intelligence, big data analytics, mobile technology integration and firm performance.

4.5 Validity Tests

Validity measures how well the research instrument evaluates the attributes it is designed to assess. This study focussed on content validity, ensuring the instrument thoroughly covered the research questions. Feedback from lecturers and supervisors at KCA University, along with a pilot test involving five investment management firms, not included in the final sample, helped identify and fix unclear questions. This process improved the content validity of the questionnaire before the final data collection.

4.6 Descriptive Statistics

To examine the effect of financial technology adoption on performance of investment management firms, the independent variable was disaggregated into blockchain technology, artificial intelligence, big data analytics and mobile technology integration. Firm performance was operationalized by a balanced scorecard. Data was gathered using a five-point, where respondents assessed how relevant each statement was to their organization. The subsequent sections present the findings.

4.6.1 Blockchain Technology

Blockchain technology was operationalized through five dimensions, information sharing, transparency, immutability, auditability and integration. All are aligned with the investment management industry. Seven descriptive statements regarding blockchain technology were presented to the respondents. Respondents indicated on a 5-point Likert scale the extent to which blockchain technology was implemented in their firms. The objectives were to determine the level of blockchain adoption, with results displayed in Table 4.4.

TABLE 4.4**Descriptive Statements on Blockchain Technology**

| Statements | Mean | SD. |
|---|-------------|-------------|
| Blockchain technology has improved the integrity and visibility of our systems. | 3.81 | 1.05 |
| It has reduced risks and increased efficiency in business operations. | 3.38 | 1.15 |
| Blockchain has introduced new ways to automate processes with partners. | 2.87 | 1.174 |
| It offers better data protection and enhanced transaction speeds. | 3.12 | 1.32 |
| The adoption of blockchain has lowered transaction costs. | 3.71 | 1.07 |
| Blockchain has strengthened relationships with stakeholders. | 3.56 | 1.08 |
| It has facilitated more transparent and reliable record-keeping. | 4.12 | 0.73 |
| Average | 3.51 | 1.08 |

The statements and descriptive statistics outlined in Table 4.4 there was a general agreement amongst the respondents that blockchain technology has improved the integrity and visibility of their systems (Mean: 3.81, SD: 1.05), with moderate variability in responses. There is moderate agreement that it has reduced risks and increased efficiency in business operations (Mean:3.38, SD: 1.15), though responses show some variability. However, participants show less agreement regarding the introduction of new ways to automate processes with partners (Mean: 2.87, SD: 1.17), with opinions varying widely. Slight agreements exist on whether blockchain offers better data protection and enhanced transaction speeds (Mean: 3.12, SD 1.32), with high variability among responses. Similarly, respondents generally agree that blockchain has lowered transaction costs (Mean: 3.71, SD: 1.07), albeit with moderate variability. There is moderate agreement on the strengthening of relationships with stakeholders (Mean: 3.56, SD: 1.08), though responses vary somewhat. Conversely, participants strongly agree that blockchain has facilitated more transparent and reliable record-keeping (Mean: 4.12, SD: 0.73), with relatively low variability. The overall

mean is 3.51, indicating moderate agreement on blockchain adoption, while the average standard deviation of 1.08 suggests moderate variability in responses.

4.6.2 Artificial Intelligence

The second objective of the study aimed to investigate the influence of artificial intelligence (AI) on the firm performance of the investment management industry in Kenya. AI was operationalized through five dimensions, information effects, staff expertise, infrastructure flexibility and transformational effects. Respondents were presented with seven descriptive statements related to AI and requested to show the extent to which AI implementation impacted their firms. A total of 77 responses were received and the descriptive summary of the responses is presented in Table 4.5.

TABLE 4.5
Descriptive Statements on Artificial Intelligence

| Statements | Mean | SD |
|--|-------------|-------------|
| AI has enabled our firm to create valuable resource bundles. | 3.96 | 0.08 |
| We use AI to model intelligent behaviour. | 3.94 | 0.78 |
| AI has increased the number of transactions processed monthly. | 3.91 | 0.80 |
| AI applications have reduced customer service costs. | 3.81 | 0.86 |
| Operational improvements from AI have enhanced revenue. | 3.79 | 0.83 |
| Our staff's AI expertise ensures effective resource utilization. | 4.00 | 0.63 |
| The AI infrastructure supports rapid deployment across operations. | 3.94 | 0.95 |
| Average | 3.91 | 0.82 |

The descriptive statistics presented in Table 4.5 reveal a strong overall consensus on the benefits of AI across various domains, with an average mean of 3.91 and an average standard

deviation of 0.82. This indicates a general agreement among participants regarding the positive effects of AI. To elaborate, participants strongly agree that AI has facilitated the creation of valuable resource bundles, evidenced by a high mean of 3.96 and a low standard deviation of 0.08, indicating minimal variability in responses. Similarly, there is robust agreement that AI effectively models intelligence behaviour as reflected by a mean of 3.94 and a standard deviation of 0.78. Furthermore, AI's contribution to increasing the number of transactions processed monthly is also acknowledged, with a mean of 3.91 and a standard deviation of 0.80. In contrast, while AI's role in reducing customer service costs is positively regarded (Mean: 3.81), the responses exhibit moderate variability (SD: 0.86). Operational improvements driven by AI have been recognized to enhance revenue, demonstrated by a mean of 3.79 with consistent agreement as reflected by a standard deviation of 0.83. In terms of staff expertise in AI, there is a strong consensus on its importance for effective resource utilization, with a mean score of 4.00 and a standard deviation of 0.63. However, opinions on the AI infrastructure's support for rapid deployment across operations show slightly more variations as indicated by a mean of 3.94 and a higher standard deviation of 0.95.

4.6.3 Big Data Analytics

The third objective of the study was to assess the effect of big data analytics on the performance of investment management firms in Kenya. Big data analytics was operationalized by factors such as the integration, management and reconfiguration of digital data. Respondents answered questions related to these aspects, with a total of seventy-seven responses collected. The results are summarized in Table 4.6

TABLE 4.6**Descriptive Statistics on Big Data Analytics**

| Statements | Mean | SD |
|---|-------------|-------------|
| Our organization generates large unstructured data for analysis. | 3.75 | 1.00 |
| We integrate internal and external data to analyze our environment. | 3.92 | 0.85 |
| Our big data analytics managers understand the needs of other stakeholders. | 3.66 | 0.98 |
| Staff employ effective methods for digital data generation. | 3.61 | 0.83 |
| Big data is seamlessly integrated into our business processes. | 3.56 | 0.94 |
| Our staff select appropriate methods for big data generation. | 3.66 | 0.80 |
| Big data is effectively utilized within the organization. | 3.86 | 0.96 |
| Average | 3.74 | 0.91 |

The descriptive statistics for big data analytics presented in Table 4.6 show a generally positive outlook with an average mean of 3.74 and a standard deviation of 0.91. This suggests that the respondents largely agree on the effectiveness of big data analytics within the organization. Specifically, the organization is viewed as effective in integrating internal and external data (mean: 3.92 and SD: 0.85) and utilizing big data (mean 3.86, SD: 0.96). However, the generation of large unstructured data is seen positively (Mean: 3.75), but with some variability in responses (SD: 1.00). Similarly, while staff methods for data generation and selection are regarded as effective (Means: 3.61 and 3.66), integrating big data into business processes show room for improvement (Mean: 3.56, SD: 0.94). Overall, the average score reflects a favourable view of big data analytics, though opinions vary on certain aspects, particularly process integration.

4.6.4 Mobile Technology Integration

The fourth objective of this study was to assess the influence of mobile technology integration on the performance of investment management firms in Kenya. Mobile technology integration was defined by factors including mobile application innovation, integration of mobile payment platforms, and mobile trading. Seventy-seven respondents provided answers on these aspects. The results are summarized in Table 4.7

TABLE 4.7
Descriptive Statements on Mobile Technology Integration

| Statements | Mean | SD |
|--|------|------|
| Our company uses mobile wallets for electronic transactions. | 3.30 | 1.15 |
| Integration with mobile technology provides a competitive advantage | 3.29 | 1.15 |
| We offer a mobile platform for clients to trade. | 3.75 | 0.92 |
| Our mobile platform trains prospective clients about our products. | 3.64 | 1.01 |
| Mobile technology adoption has improved our firm's performance. | 3.91 | 0.94 |
| Integrating mobile technology has streamlined our business processes. | 3.83 | 0.98 |
| We choose mobile technologies that align with our business objectives. | 3.17 | 1.13 |
| Average | 3.55 | 1.05 |

The results presented in Table 4.7 show generally positive views on mobile technology integration. Respondents moderately agree that mobile technology improves performance, with a mean of 3.91 and a standard deviation of 0.94, indicating consistent opinions. Similarly, they agree that it streamlines processes, reflected by a mean of 3.83 and a standard deviation of 0.98, suggesting moderate variability, but overall consistent views. Furthermore, there is a strong agreement that the company offers a mobile trading platform with a mean of 3.75 and a standard deviation of 0.92, showing less variability and strong consensus.

Additionally, respondents agree that the platforms educate clients, as evidenced by a mean of 3.64 and a standard deviation of 1.01, indicating some variability in opinions. In contrast, opinions are more varied regarding the use of mobile wallets, with a mean of 3.30 and a standard deviation of 1.15, reflecting significant variability in views. Similarly, perceptions of mobile technology providing competitive advantage are mixed, with a mean of 3.29 and a standard deviation of 1.15, suggesting diverse opinions. In addition, opinions on whether mobile technologies align with business objectives are also mixed, with a mean of 3.17 and a standard deviation of 1.13, indicating substantial variability in responses.

4.6.5 Firm Performance

The study aimed to determine the extent to which investment management firms had achieved performance measures. Performance was assessed using the balanced scorecard indicators. Respondents were asked to rate their firms on the various BSC perspectives. The results are presented in Table 4.8.

TABLE 4.8
Descriptive Statistics on Firm Performance

| Statements | Mean | SD |
|---|------|------|
| We have achieved significant revenue growth. | 3.68 | 0.94 |
| The company consistently meets its financial goals. | 3.22 | 1.23 |
| The adoption of fintech has significantly improved return on assets | 4.17 | 0.66 |
| Customer satisfaction has improved. | 3.75 | 1.08 |
| We have seen an increase in customer retention. | 3.57 | 1.08 |
| Our processes are efficient and cost-effective. | 4.18 | 0.62 |
| We meet client demands more effectively now. | 3.22 | 1.26 |
| Employees are improving their skills through training. | 3.40 | 1.04 |

| | | |
|----------------|-------------|-------------|
| Average | 3.65 | 0.99 |
|----------------|-------------|-------------|

Table 4.8 presents the descriptive statistics on performance, highlighting various statements related to business outcomes. The mean score for significant revenue growth stands at 3.68 with a standard deviation of 0.94, indicating positive perception among the respondents. Consistently meeting financial goals received a lower mean of 3.22 and a higher standard deviation of 1.23, suggesting variability in responses. The adoption of fintech is notably impactful, with a mean of 4.17 and a low standard deviation of 0.66, reflecting strong agreement on its positive effect on return in assets. Customer satisfaction has also seen improvement, with a mean score of 3.75 and a standard deviation of 1.08, while customer retention increased, averaging 3.75 with a similar standard deviation. The efficiency and cost-effectiveness of processes were rated highly at 4.18 (SD = 0.62). However, the effectiveness in meeting customers' demands is perceived as lower, with a mean of 3.22, and a high standard deviation of 1.26, indicating varied opinions. Employee skill improvement through training has a mean of 3.40 and a standard deviation of 1.04. Overall, the average mean across these statements is 3.65, with a standard deviation of 0.99, suggesting a generally positive view of firm performance but with notable variability in certain areas.

4.7 Diagnostic Tests

In classical linear regression, key assumptions are crucial for avoiding incorrect conclusions. Diagnostic tests were conducted before data analysis to ensure that the cross-sectional data met these assumptions. The following sections outline the results of diagnostic tests.

4.7.1 Normality Tests

To ensure the dataset conforms to a normal distribution, this study used the Shapiro Wilk test, to check if the residuals were normally distributed. A p-value greater than 0.05 indicates that the data does not significantly deviate from normality, while a p-value lower than 0.05 suggests a departure from normality (de Souza, Toebe, Mello, & Bittencourt, 2023). Results are presented in Table 4.9.

TABLE 4.9

The Normality Test

| Shapiro-Wilk W test for normal data | | | | | |
|--|-------------|----------|----------|----------|------------------|
| Variable | Obs. | w | v | v | Prob>z |
| Residual | 77 | 0.957 | 2.881 | 2.314 | 0.01 |

The Shapiro-Wilk test presented in Table 4.9 shows a W-statistic value of 0.967, slightly below 0.95, indicating possible deviation from normality. With a p-value of 0.01, less than 0.05, the study rejected the null hypothesis and concluded that the residuals were not normally distributed. To address this, robust regression method was used.

4.7.2 Multicollinearity Test

Multicollinearity occurs when independent variables are highly correlated. This can result in inflated variances and unreliable statistical tests (Gujarati & Sangeetha, 2013). The variance inflation factor (VIF) was used to test for multicollinearity and the results are presented in Table 4.10.

TABLE 4.10
Collinearity Statistics

| Variable | Tolerance | VIF |
|------------------------------|-----------|-------|
| Blockchain technology | .408 | 2.450 |
| Artificial intelligence | .891 | 1.123 |
| Big data analytics | .760 | 1.317 |
| Mobile telephony integration | .430 | 2.326 |

The results in Table 4.5 indicate that all VIF values are below 5, suggesting that there is no significant multicollinearity among the variables in the model.

4.7.3 Autocorrelation Test

The autocorrelation test checks if residuals from a regression model are correlated over time, potentially indicating model misspecification or omitted variables. This study used the Durbin-Watson (DW) test to assess autocorrelation. The DW statistic of 1.899 was obtained. The value is close to 2 suggesting no significant autocorrelation. This value is included in the main model coefficient table.

4.7.4 Homoscedasticity Test

The homoscedastic test examines whether the variance of residuals depends on the values of the independent variable. This study adopted the Breusch-Pagan/Cook-Weisberg test to detect heteroscedasticity in the regression model. The null hypothesis for the test is that the residuals have constant variance, indicating homoscedasticity. The findings are presented in Table 4.11.

TABLE 4.11
Heteroskedasticity test

| Breusch-Pagan/Cook-Weisberg test for heteroskedasticity | |
|---|--------|
| Variable: fitted values of firm performance | |
| Chi ² (1) | 7.47 |
| Prob > chi ² | 0.0063 |

The results in Table 4.11 indicate that the p-value is less than 0.05, leading to the rejection of the null hypothesis. This suggests significant evidence of heteroscedasticity in the model, implying that the variance of the residuals is not constant. To address the situation, robust standard error estimates will be used without needing to transform the data.

4.8 Hypotheses Testing

This section details the results of hypothesis testing and their interpretations. The analysis was conducted on two levels, bivariate regression evaluated independent effects, while multiple regression examined the combined effects. Interpretations included an analysis of the coefficients of determination (R^2), F-statistic values, beta (β) coefficients, and their related p-values. R^2 indicated how much variation in the independent variable explained changes in the dependent variable, with higher R^2 reflecting stronger explanatory power. A significant F-value signified a more robust model, indicating that the model provided a good fit for the data. The direction of the relationship between the independent and dependent variables was determined by the sign of the beta coefficient. Hypothesis decisions were based on p-values. The study failed to reject the hypothesis if p was significant but rejected if the p-value was not significant. The findings are organized into sections that follow and align with the study's objectives and hypotheses and are discussed in the relevant empirical literature. The results of multivariate regression are presented in Table 4.12.

Table 4.12 presents a multivariate regression analysis exploring the influence of financial technology adoption – measured through blockchain technology, artificial intelligence, big

data analytics, and mobile technology adoption – on the performance of investment management firms in Kenya. The model explains 69.4 per cent of the variance in firm performance, as indicated by an R-squared value of 0.694. The F-statistic of 40.99, with a p-value of 0.000, demonstrates that the overall model is highly significant. This implies that the combined effect of these FinTech innovations has a meaningful influence on firm performance.

TABLE 4.12

Multivariate Relationship Between FinTech Adoption and Performance

| Source | SS | Df | ms | Observations | 77 |
|----------|--------|----|-------|-------------------------|-------|
| Model | 25.732 | 4 | 6.433 | F (1,75) | 40.99 |
| Residual | 11.301 | 72 | .157 | Prob > F | 0.000 |
| Total | 37.033 | 76 | .487 | R-Squared | 0.694 |
| | | | | Adjusted R ² | 0.678 |
| | | | | Root MSE | 0.396 |

| Firm performance | Coeff. | Std. Err. | t | P> t | (95% Conf. Interval) | |
|-------------------------|--------|-----------|------|------|----------------------|-------|
| Blockchain technology | .378 | .092 | 4.11 | .000 | .195 | .561 |
| Artificial intelligence | .123 | .078 | 1.58 | .119 | -.032 | .277 |
| Big data analytics | .058 | .083 | 0.70 | .486 | -.108 | .225 |
| Mobile technology | .376 | .089 | 4.20 | .000 | .197 | .553 |
| Constant | .294 | .389 | 0.76 | .453 | -.481 | 1.064 |

4.8.1 Blockchain Technology and Firm Performance.

The study’s first objective was to evaluate the influence of blockchain technology on the performance of investment management firms in Kenya. A null hypothesis, stating that blockchain technology has no statistically significant effect on the performance of investment

management firms in Kenya was formulated and tested. The results presented in Table 4.12 beta coefficient ($\beta = 0.378$) for blockchain had a statistically significant p-value ($p < 0.000$), indicating that the effect of blockchain technology was positive and statistically significant. This is supported by a t-value of 4.11 and a confidence interval ranging from 0.195 to 0.561. This provided strong evidence against the null hypothesis. Therefore, the null hypothesis was rejected, and the study concluded that blockchain technology had a positive and statistically significant influence on the performance of investment management firms in Kenya.

These findings align with existing literature as Yousefi and Tosarkani (2023), Kim and Shin (2019), Hasan et al. (2020), Nandi et al. (2020), and Aketch et al. (2021) all reported significant positive relationships between blockchain technology and performance outcomes. However, the findings were at variance with Bag et al. (2023), who noted the negative impact of blockchain technology.

4.8.2 Artificial Intelligence and Firm Performance

In line with the second specific objective, the second null hypothesis posited that artificial intelligence has no statistically significant effect on the performance of investment management firms in Kenya. This hypothesis was tested and the results are presented in Table 4.11. The results indicate that the impact of artificial intelligence on firm performance is positive but not statistically significant. The coefficient of 0.123 suggests a small effect, but the t-value of 1.58 and the p-value of 0.119 indicate that this result is not significant at the 5 per cent level. The confidence interval for artificial intelligence ranges from -0.032 to 0.277, further reinforcing the lack of statistical significance.

The findings contradict with extant literature, which predominantly shows a positive relationship between artificial intelligence and firm performance. For example, Alzaidi,

(2018) found a significant positive impact of AI on banking performance in the Middle East. Similarly, Taguimdje et al. (2020) reported enhanced performance through AI capabilities. Abrokwah-Larbi and Awuku-Larbi (2023) noted significant improvements in marketing performance for SMEs in Ghana, while Joseph and Falana (2021) highlighted the positive effects of AI on performance in Nigeria. Githui (2019) and (Kiplagat & Mutuku, 2023) also documented significant positive relationships between AI and performance in Kenya.

4.8.3 Big Data Analytics and Firm Performance

Consistent with the third objective, a corresponding null hypothesis, that big data analytics has no statistically significant influence on firm performance of investment management firms in Kenya was formulated. This hypothesis was tested, and the results are presented in Table 4.11.

The findings presented in Table 4.11 illustrate the combined effect of big data analytics on firm performance of investment management firms in Kenya. According to the results, BDA shows no statistically significant impact on performance, with a coefficient of 0.058, a t-value of 0.70, and a p-value of 0.486. The confidence interval spanning from -0.108 to 0.225, suggests that the impact of data analytics is negligible in this model. Consequently, the study concluded that big data analytics has a positive and statistically insignificant impact on the performance of investment management firms in Kenya.

The findings are at variance with existing literature showing a positive relationship between big data analytics and firm performance. For example, Zhu and Yang (2021), Behl, (2022), and Maroufkhani et al (2020) Other studies which found statistically significant relationship were Hassen and Chen (2020), Masila (2023) and Mugane (2018).

4.8.4 Mobile Technology Integration and Firm Performance

The fourth objective of this study was to examine the influence of mobile technology integration (MTI) on firm performance of investment management firms in Kenya. To address this, a corresponding null hypothesis, that mobile technology adoption has no statistically significant influence was formulated and tested. The findings are presented in Table 4.12.

The findings presented in Table 4.12 illustrate the effect of mobile technology integration, jointly with other variables), on the performance of investment management firms in Kenya. The results indicate that mobile technology integration has a positive and statistically significant effect on firm performance. Its coefficient of 0.376 indicates a substantial positive influence, with a t-value of 4.20 and a p-value of 0.000, supported by a confidence interval between 0.197 and 0.553. This evidence contradicts the null hypothesis, leading to its rejection. The study therefore concludes that mobile technology has a positive and statistically significant effect on the performance of investment management firms in Kenya. The findings are consistent with Omar and Ismail (2020), Al-Busaidi and Al-Muharrami (2020) and (Talom & Tengeh, 2020). In Kenya, the findings are consistent with Ngangi (2022), Onyango et al. (2023) and Chepkemboi and Paul (2020).

The output of the regression analysis can be represented by the following multivariate regression:

$$\text{FirPer} = 0.294 + 0.378*\text{BCT} + 0.123*\text{AI} + 0.058*\text{BDA} + 0.376*\text{MTI}$$

Where:

FirPer =Firm performance, the dependent variable

BCT = Blockchain technology

AI = Artificial intelligence

BDA = Big data analytics

MTI = Mobile technology integration

The regression model indicates that firm performance is positively influenced by the adoption of various financial technologies. According to the equation, the constant term of 0.294 represents when none of the technologies have been adopted. Each coefficient reflects the expected change in firm performance for a one-unit increase in the respective technology. Specifically, a one-unit increase in blockchain technology is associated with a 0.378 increase in firm performance, while an increase in artificial intelligence adoption correlates with a 0.123 increase. In contrast, big data analytics contributes a smaller increase of 0.058 and mobile technology integration in a significant 0.376. Overall, the model demonstrates that the adoption of these technologies enhances firms, with blockchain and mobile technology integration showing the most substantial positive effects.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study's findings, presents conclusions, and offers recommendations for future research. It highlights the key relationships between the study variables and draws corresponding conclusions. The chapter also addresses the study's limitations and suggests directions for future research.

5.2 Summary of Findings

This section summarizes the study findings, which were based on four specific objectives and corresponding hypotheses. The results are presented according to these objectives.

5.2.1 Blockchain Technology and Firm Performance

The first objective evaluated the effect of blockchain technology on the performance of investment management firms in Kenya. The study concluded that blockchain technology positively and significantly influenced firm performance, leading to the rejection of the null hypothesis. This finding aligns with existing literature supporting a positive relationship between blockchain technology and performance outcomes, though it contrasts with some studies that noted a negative impact.

5.2.2 Artificial Intelligence and Firm Performance

The second objective assessed the effect of artificial intelligence on firm performance of investment management firms in Kenya. The study found that artificial intelligence positively

but statistically insignificantly influenced firm performance, leading to the study failing to reject the null hypothesis. However, the model indicates that artificial intelligence accounts for only a small portion of the variation in firm performance, suggesting that other factors also play a significant role. The finding contradicts existing studies, which consistently demonstrate that artificial intelligence enhances performance in various contexts.

5.2.3 Big Data Analytics and Firm Performance

The third objective investigated the influence of big data analytics on firm performance of investment management firms in Kenya. The results revealed that big data analytics had a positive but statistically insignificant influence on firm performance. The study therefore failed to reject the null hypothesis. Consequently, the study accepted the null hypothesis, affirming that data analytics did not have a statistically significant impact on performance. These findings contradict with existing literature demonstrating a positive relationship between big data analytics and firm performance.

5.2.4 Mobile Technology Integration and Firm Performance

The fourth objective examined the influence of mobile technology integration on the performance of investment management firms in Kenya. A corresponding null hypothesis was formulated and tested. The findings revealed that mobile technology integration positively and significantly influences firm performance, leading to the rejection of the null hypothesis. Consequently, the study accepted the alternative hypothesis, affirming that mobile technology integration significantly affects performance. These results are consistent

with existing literature on the positive effect of mobile technology integration on performance outcomes.

5.3 Conclusion

This study aimed to establish the influence of financial technology adoption on firm performance of investment management firms in Kenya. To achieve this goal, four specific objectives and corresponding hypotheses were formulated and tested. The study adopted a cross-sectional research design. Primary data were analysed using regression analysis aided by the SPSS and STATA software. Descriptive and inferential regression was carried out and varied results were obtained. The findings of the study were compared with existing empirical literature and conclusions were made. The multivariate examination of the variables revealed that blockchain technology had a positive and statistically significant influence on firm performance of investment management firms in Kenya. Similarly, mobile technology integration was found to have a significant positive effect on firm performance. However, big data analytics and artificial intelligence were found to have a positive but statistically insignificant influence on firm performance, further supporting the study's objectives.

5.4 Recommendations

The findings of this study underscore the importance of financial technology adoption in enhancing the performance of investment management. This study aimed to investigate this relationship, the findings can serve as a basis for refining existing policies and improving management practices in investment firms both in Kenya and globally. Therefore, the study

recommends fostering deeper conceptual and theoretical debates on the relationships among the identified variables.

5.4.1 Recommendations for Theory

The study contributes to the existing empirical literature by confirming that financial technology adoptions significantly impact firm performance. It highlights specific technologies that influence performance, using management to prioritize these areas for improvements. Additionally, this research extends theoretical discussions around technology adoption and firm performance by examining the relationship between various financial technologies and their impact on investment management firms.

5.4.2 Recommendations for Policy

The findings have important implications for policymakers within investment management firms. Given the crucial role of these firms in economic growth, regulatory bodies need to promote policies that encourage the adoption of financial technologies. Such policies should mandate firms to disclose how these technologies contribute to their performance, thereby enhancing accountability and encouraging best practices in technology integration.

5.4.3 Recommendations for Managerial Practice.

Management teams in investment management firms should actively work to disclose performance benefits realized from the adoption of financial technologies. They should also aim to understand how these technologies not only enhance performance but also improve overall organizational effectiveness.

5.5 Limitations of the Study

This study aimed to establish the influence of financial technology adoption on firm performance of investment management firms in Kenya. While the objective was met, it was not without limitations. One such limitation was the cross-sectional design employed, which restricted the observations of long-term effects. Future research could consider a longitudinal design to better capture trends over time. Additionally, the study focused solely on investment management firms in Kenya, which may limit the generalizability of findings to other sectors or regions. Further studies could expand the scope to include different industries and geographical regions.

REFERENCES

- Abrokwah-Larbi, K., & Awuku-Larbi, Y. (2023). The impact of artificial intelligence in marketing on the performance of business organizations: evidence from SMEs in an emerging economy. *Journal of Entrepreneurship in Emerging Economies*, 1–28. <https://doi.org/10.1108/JEEE-07-2022-0207>
- Afifa, M. M., Nguyen, T. H., Nguyen, L. T. Le, Tran, T. H. T., & Dao, N. T. (2024). Nexus among blockchain technology adoption and firm performance: perspective from mediating and moderating effects. *International Journal of Organizational Analysis*, 1–20. <https://doi.org/10.1108/IJOA-11-2023-4076>
- Aketch, S., Mwambia, F., & Baimwera, B. (2021). Effects of Blockchain Technology on Performance of Financial Markets in Kenya. *International Journal of Finance and Accounting*, 6(1), 1–15. <https://doi.org/10.47604/ijfa.1237>
- Al-Busaidi, K. A., & Al-Muharrami, S. (2021). Beyond profitability: ICT investments and financial institutions performance measures in developing economies. *Journal of Enterprise Information Management*, 34(3), 900–921. <https://doi.org/10.1108/JEIM-09-2019-0250>
- Alzaidi, A. A. (2018). Impact of Artificial Intelligence on Performance of Banking Industry in Middle East. *International Journal of Computer Science and Network Security*, 18(10), 140–148.
- Amron, M. T., Ibrahim, R., Abu Bakar, N. A., & Chuprat, S. (2019). Determining factors influencing the acceptance of cloud computing implementation. *Procedia Computer Science*, 161, 1055–1063. <https://doi.org/10.1016/j.procs.2019.11.216>
- Ansari, K., & Ghasemaghaei, M. (2023). Big Data Analytics Capability and Firm Performance: Meta-Analysis. *Journal of Computer Information Systems*, 63(6), 1477–1494. <https://doi.org/10.1080/08874417.2023.2170300>
- Asongu, S. (2021). The Effects of Mobile Phone Technology, Knowledge Creation and Diffusion on Inclusive Human Development in Sub-Saharan Africa. *Journal of the Knowledge Economy*, 12. <https://doi.org/10.1007/s13132-020-00668-8>

- Bag, S., Rahman, M. S., Gupta, S., & Wood, L. C. (2023). Understanding and predicting the determinants of blockchain technology adoption and SMEs' performance. *International Journal of Logistics Management*, 34(6), 1781–1807. <https://doi.org/10.1108/IJLM-01-2022-0017>
- Baker, H., Kaddumi, T. A., Nassar, M. D., & Muqattash, R. S. (2023). Impact of Financial Technology on Improvement of Banks' Financial Performance. *Journal of Risk and Financial Management*, 16(4), 1–20. <https://doi.org/10.3390/jrfm16040230>
- Behl, A. (2022). Antecedents to firm performance and competitiveness using the lens of big data analytics: a cross-cultural study. *Management Decision*, 60(2), 368–398. <https://doi.org/10.1108/MD-01-2020-0121>
- Boston Consulting Group. (2024). *AI and the Next Wave of Transformation: Global Asset Management Report 2024*.
- Bougie, R., & Sekaran, U. (2019). *Research Methods For Business: A Skill Building Approach*. Wiley. Retrieved from <https://books.google.co.ke/books?id=ikI6EAAAQBAJ>
- Chen, D., Esperança, J. P., & Wang, S. (2022). The Impact of Artificial Intelligence on Firm Performance: An Application of the Resource-Based View to e-Commerce Firms. *Frontiers in Psychology*, 13, 1–14. <https://doi.org/10.3389/fpsyg.2022.884830>
- Chepkemboi, E. T., & Paul, S. (2020). Disruptive innovation strategies and performance of selected airlines in Kenya. *Journal of Business and Strategic Management*, 4(1), 47–68.
- Chong, C. Le, Rasid, A., Khalid, H., & Ramayah, T. (2024). Big data analytics capability for competitive advantage and firm performance in Malaysian manufacturing firms. *International Journal of Productivity and Performance Management*, 73(7), 2305–2328. <https://doi.org/10.1108/IJPPM-11-2022-0567>
- Cirillo, V., Fanti, L., Mina, A., & Ricci, A. (2023). New digital technologies and firm performance in the Italian economy. *Industry and Innovation*, 30(1), 159–188. <https://doi.org/10.1080/13662716.2022.2055999>
- Cooper, D. R., & Schindler, P. S. (2014). *Business research methods* (Twelfth Ed). New

York: McGraw-Hill/Irwin.

Cytonn. (2023). *Kenya Retirement Benefits Scheme FY'2022 Review*.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>

de Souza, R. R., Toebe, M., Mello, A. C., & Bittencourt, K. C. (2023). Sample size and Shapiro-Wilk test: An analysis for soybean grain yield. *European Journal of Agronomy*, 142, 126666. <https://doi.org/https://doi.org/10.1016/j.eja.2022.126666>

Garg, P., Gupta, B., Kapil, K. N., Sivarajah, U., & Gupta, S. (2023). Examining the relationship between blockchain capabilities and organizational performance in the Indian banking sector. *Annals of Operations Research*. <https://doi.org/10.1007/s10479-023-05254-0>

Githui, I. F. (2019). *Influence Of Artificial Intelligence On Marketing Strategy Among Mobile Telephony Operators In Kenya*. Retrieved from <https://api.semanticscholar.org/CorpusID:230288595>

Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS Quarterly: Management Information Systems*, 19(2), 213–233. <https://doi.org/10.2307/249689>

Greene, W. H. (2012). *Econometric Analysis* (7th Editio). London, United Kingdom: Pearson Education Limited.

Gujarati, D., & Sangeetha, S. (2013). *Basic Econometrics* (4th Editio). Boston: McGraw-Hill.

Hasan, M. R., Shiming, D., Islam, M. A., & Hossain, M. Z. (2020). Operational efficiency effects of blockchain technology implementation in firms: Evidence from China. *Review of International Business and Strategy*, 30(2), 163–181. <https://doi.org/10.1108/RIBS-05-2019-0069>

Insee, K., & Suttipun, M. (2023). R&D spending, competitive advantage, and firm

- performance in Thailand. *Cogent Business and Management*, 10(2), 1–18. <https://doi.org/10.1080/23311975.2023.2225831>
- Irimia-Diéguez, A., Velicia-Martín, F., & Aguayo-Camacho, M. (2023). Predicting Fintech Innovation Adoption: the Mediator Role of Social Norms and Attitudes. *Financial Innovation*, 9(1), 1–23. <https://doi.org/10.1186/s40854-022-00434-6>
- Joseph, O. A., & Falana, A. (2021). *Artificial Intelligence and Firm Performance: A Robotic Taxation Perspective BT - The Fourth Industrial Revolution: Implementation of Artificial Intelligence for Growing Business Success* (A. Hamdan, A. E. Hassanien, A. Razzaque, & B. Alareeni, Eds.). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-62796-6_2
- Kamau, L. wanjiku, & Aduda, J. (2024). The Effect of Financial Technologies on Financial Inclusion in Kenya. *Finance and Business Analytics*, 2(1), 45–57. Retrieved from <https://quantresearchpublishing.com/index.php/jefba/article/view/24>
- Khin, S. (2019). *Digital technology , digital capability and organizational performance*. 11(2), 177–195. <https://doi.org/10.1108/IJIS-08-2018-0083>
- Kibe, L. W., Kwanya, T., & Owano, A. (2020). Relationship between big data analytics and organisational performance of the Technical University of Kenya and Strathmore University in Kenya. *Global Knowledge, Memory and Communication*, 69(6–7), 537–556. <https://doi.org/10.1108/GKMC-04-2019-0052>
- Kim, J. S., & Shin, N. (2019). The impact of blockchain technology application on supply chain partnership and performance. *Sustainability (Switzerland)*, 11(21), 1–17. <https://doi.org/10.3390/su11216181>
- Kiplagat, R. K., & Mutuku, M. (2023). Artificial Intelligence Inclusion and Performance of Sensor Management System in Nairobi-City Water and Sewerage Company, Kenya. *Journal of Business and Management Sciences*, 11(3), 182–188. <https://doi.org/10.12691/jbms-11-3-3>
- Leite, P. (2024). Can mutual fund characteristics predict future performance ? Evidence from

- Portugal a. *Studies in Economics and Finance*, 1–13. <https://doi.org/10.1108/SEF-07-2023-0441>
- Lundblad, J. P. (2003). A Review and Critique of Rogers' Diffusion of Innovation Theory as it Applies to Organizations. *Organization Development Journal*, 21(4), 50–64. Retrieved from <https://www.proquest.com/scholarly-journals/review-critique-rogers-diffusion-innovation/docview/197971687/se-2?accountid=148930>
- Maroufkhani, P., Iranmanesh, M., & Ghobakhloo, M. (2023). Determinants of big data analytics adoption in small and medium-sized enterprises (SMEs). *Industrial Management and Data Systems*, 123(1), 278–301. <https://doi.org/10.1108/IMDS-11-2021-0695>
- Mazambani, L., & Mutambara, E. (2020). Predicting FinTech innovation adoption in South Africa: the case of cryptocurrency. *African Journal of Economic and Management Studies*, 11(1), 30–50. <https://doi.org/10.1108/AJEMS-04-2019-0152>
- Misati, R., Kamau, A., Kipyegon, L. ;, & Wandaka, L. (2020). *Is The Evolution of Fintech/Digital Financial Services Complementary To Bank Performance In Kenya?* (No. 46). Nairobi: Kenya Bankers Association.
- Miskam, S., Yaacob, A. M., & Rosman, R. (2019). Fintech and Its Impact on Islamic Fund Management in Malaysia: A Legal Viewpoint. In *Emerging Issues in Islamic Finance Law and Practice in Malaysia* (pp. 223–246). <https://doi.org/10.1108/978-1-78973-545-120191019>
- Mugane, G. M. (2018). Big Data Analytics and Competitive Advantage of Commercial Banks and Fintech Companies in Kenya. *Fintech and Financial Sector*.
- Mugo, D. M., Muathe, S. M. A., & Waithaka, S. T. (2022). Effect of Mobile Banking Services on Financial Performance of Deposit-Taking Cooperative Societies in Kenya. *Journal of Business and Technology*, 3(1), 20–32. <https://doi.org/10.4038/jbt.v3i1.65>
- Mukherjee, S., Baral, M. M., Nagariya, R., Chittipaka, V., & Pal, S. K. (2024). Artificial intelligence-based supply chain resilience for improving firm performance in emerging

- markets. *Journal of Global Operations and Strategic Sourcing*, 17(3), 516–540. <https://doi.org/10.1108/JGOSS-06-2022-0049>
- Nandi, S., Sarkis, J., Carolina, S., Carolina, S., Helms, M., & College, D. S. (2020). *Do blockchain and circular economy practices improve post COVID-19 supply chains? A resource-based and resource dependence perspective*. 121(2), 333–363. <https://doi.org/10.1108/IMDS-09-2020-0560>
- Nilasari, A. P., Retnosari, R., Panggiarti, E. K., & Astutik, E. P. (2022). Increased E-commerce and Fintech Transactions During the Covid-19 Pandemic. *Jurnal Analisis Bisnis Ekonomi*, 20(2), 93–107. <https://doi.org/10.31603/bisnisekonomi.v20i2.5963>
- Nkundabanyanga, S. K., Mugumya, E., Nalukenge, I., Muhwezi, M., & Najjemba, G. M. (2020). Firm characteristics, innovation, financial resilience and survival of financial institutions. *Journal of Accounting in Emerging Economies*, 10(1), 48–73. <https://doi.org/10.1108/JAEE-08-2018-0094>
- Odum, N., Odum, C., & Chukwu, E. E. (2017). Technological Infrastructure Investments and Financial Performance of Banks in Nigeria. *International Digital Organization for Scientific Research*, 3(1–22).
- Omar, M. N., & Ismail, S. N. (2020). Mobile Technology Integration in the 2020s: The impact of technology leadership in the Malaysian context. *Universal Journal of Educational Research*, 8(5), 1874–1884. <https://doi.org/10.13189/ujer.2020.080524>
- Onyango, O. C., Otuya, W., & Nanyama, R. (2023). Effect of Mobile Phone-Based Digital Technologies on the Performance of Refugee Women-Led Micro, Small and Medium Enterprises in Kakuma Refugee Camp. *African Journal of Empirical Research*, 4(2), 763–771. <https://doi.org/10.51867/ajernet.4.2.77>
- Phan, D. H. B., Narayan, P. K., Rahman, R. E., & Hutabarat, A. R. (2019). Do financial technology firms influence bank performance? *Pacific Basin Finance Journal*, 62(November 2018), 1–13. <https://doi.org/10.1016/j.pacfin.2019.101210>
- Phan, D. H. B., Narayan, P. K., Rahman, R. E., & Hutabarat, A. R. (2020). Do financial

technology firms influence bank performance? *Pacific Basin Finance Journal*, 62(September 2019), 1–13. <https://doi.org/10.1016/j.pacfin.2019.101210>

Rogers, E. M. (2003). *Diffusion of Innovations* (5th editio). New York: Free Press.

Sangwan, V., Harshita, Prakash, P., & Singh, S. (2019). Financial technology: a review of extant literature. *Studies in Economics and Finance*, Vol. 37, pp. 71–88. <https://doi.org/10.1108/SEF-07-2019-0270>

Saunders, M., & Tossey, P. (2015). *Handbook of Research Methods in Management*. Northhamton: Edward Elgal Publishing Limited.

Sharma, P., Shukla, D. M., & Raj, A. (2023). Blockchain adoption and firm performance: The contingent roles of intangible capital and environmental dynamism. *International Journal of Production Economics*, 256, 108727. <https://doi.org/https://doi.org/10.1016/j.ijpe.2022.108727>

Shiyyab, F. S., Alzoubi, A. B., Obidat, Q. M., & Alshurafat, H. (2023). The Impact of Artificial Intelligence Disclosure on Financial Performance. *International Journal of Financial Studies*, 11(3), 1–25. <https://doi.org/10.3390/ijfs11030115>

Stonehouse, G. H., & Konina, N. Y. (2020). Management Challenges in the Age of Digital Disruption. *Advances in Economics, Business and Management Research*, 119, 1–6. <https://doi.org/10.2991/aebmr.k.200201.001>

Taguimdje, W., Wamba, S., Kamdjoug, K., & Wanko, T. (2020). Influence of Artificial Intelligence (AI) on Firm Performance: The Business Value of AI-based Transformation Projects. *Business Process Management Journal*, (March), 1–45.

Talom, F. S. G., & Tengeh, R. K. (2020). The impact of mobile money on the financial performance of the SMEs in douala, Cameroon. *Sustainability (Switzerland)*, 12(183), 1–17. <https://doi.org/10.3390/su12010183>

The Capital Markets Authority. (2024). *Quarterly Statistical Bulletin Quarter ended June 2024*.

- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478.
- Wakhungu, K. J., & Mutuku, M. (2023). Big Data Analytics Capabilities and Performance of Private Hospitals in Nairobi City County, Kenya. *Journal of Business and Management Sciences*, 11(3), 169–175. Retrieved from <http://pubs.sciepub.com/>
- Wamba, S. F. (2022). Impact of artificial intelligence assimilation on firm performance: The mediating effects of organizational agility and customer agility. *International Journal of Information Management*, 67, 102544. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2022.102544>
- Yousefi, S., & Tosarkani, B. (2023). Exploring the Role of Blockchain Technology in Improving Sustainable Supply Chain Performance: A System-Analysis-Based Approach. *IEEE Transactions on Engineering Management*, 1–17. <https://doi.org/10.1109/TEM.2022.3231217>
- Zhu, X., & Yang, Y. (2021). Big data analytics for improving financial performance and sustainability. *Journal of Systems Science and Information*, 9(2), 175–191. <https://doi.org/10.21078/JSSI-2021-175-17>
- Zik-Rullahi, A. A., & Nwosu, C. R. (2024). Impact of Financial Technology on Financial Performance of Manufacturing Firms in Nigeria. *Journal of Accounting and Financial Management*, 6(1), 79–94. <https://doi.org/10.56201/jafm.v8.no8.2022.pg79.94>

APPENDICES

Appendix I : Introduction Letter



Thika Road, Ruaraka
P.O. Box 56808-00200 Nairobi Kenya
Pilot Line: +254 20 8070408/9

Tel: +254 20 3537842
Fax: +254 20 8561077
Mobile: +254 734 888022, 710 888022
Email: kca@kca.ac.ke
Website: www.kca.ac.ke

BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2024

Date: Friday, September 13, 2024

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: HILLARY O OMODHI REG NO: REG.NO. 16/04771

It is my distinct pleasure to introduce to you Hillary O Omodhi, who is a student in our institution pursuing a Master of Science in Commerce- Finance and Accounting, in the School of Business.

Omodhi is conducting a research on a topic titled: *“Financial Technology Adoption and Financial Performance of Investment Management Firms in Kenya.”* which is part of the requirements of the program he is pursuing. The research as well as the data procured thereof shall be used for academic purposes only.

Any assistance accorded to him is highly appreciated.

In case of further inquiry, do not hesitate to contact the undersigned.

Yours faithfully,



DR. JACKSON NDOLO

DIRECTOR, BOARD OF POST GRADUATE STUDIES

BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2024

Date: Friday, September 13, 2024

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: HILLARY O OMODHI REG NO: REG.NO. 16/04771

It is my distinct pleasure to introduce to you Hillary O Omodhi, who is a student in our institution pursuing a Master of Science in Commerce- Finance and Accounting, in the School of Business.

Omodhi is conducting a research on a topic titled: *“Financial Technology Adoption and Financial Performance of Investment Management Firms in Kenya.”* which is part of the requirements of the program he is pursuing. The research as well as the data procured thereof shall be used for academic purposes only.

Any assistance accorded to him is highly appreciated.

In case of further inquiry, do not hesitate to contact the undersigned.


Yours faithfully,




DR. JACKSON NDOLO

DIRECTOR, BOARD OF POST GRADUATE STUDIES


Appendix II: Research Permit


REPUBLIC OF KENYA


NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

RefNo: **418071** Date of Issue: **02/October/2024**

RESEARCH LICENSE




This is to Certify that Mr. Hillary Ochieng Omodhi of KCA University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: FINANCIAL TECHNOLOGY ADOPTION AND FINANCIAL PERFORMANCE OF INVESTMENT MANAGEMENT FIRMS IN KENYA for the period ending : 02/October/2025.

License No: **NACOSTI/P/24/40531**

Applicant Identification Number
418071

Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix III : Questionnaire

Dear Respondent,

The purpose of this questionnaire is to collect data from investment management banks, fund managers and collective investment schemes in Kenya. This will help the researcher establish the influence of financial technology and firm performance of investment management firms in Kenya. The information collected shall be strictly used for academic purposes and shall be treated with strict confidence. Your participation in filling out this questionnaire is highly appreciated.

PART A Demographic Profile

Information on the Firm

1. Name of the firm (Optional)-----
2. Firm broad category
 - i. Investment Management Bank
 - ii. Collective Investment Firm
 - iii. Fund Manager

Respondent's profile

3. Current position of the respondent-----
-
4. How long have you worked in your current position?
Below 5 years []; 6 - 10 years []; 11 – 15 years []
16-20 years []; Over 20 years [].
5. For how many years have you worked in this company

Below 5 years []; 6 – 10 years []; 11 – 15 years []

16-20 years []; Over 20 years []

PART B FINANCIAL TECHNOLOGY ADOPTION

The following statements relate to financial technology adoption. Specify the extent to which the statements are applied in the organisation you work for using a five-point Likert scale.

Where 1 = To no extent at all; 2 = Less Extent; 3 = Moderate Extent; 5 = Very Large Extent

| Blockchain Technology (BCT) | | | | | | |
|-------------------------------------|---|----------|----------|----------|----------|----------|
| # | Statements | 1 | 2 | 3 | 4 | 5 |
| BCT 1 | BCT has improved the integrity and visibility of our systems. | | | | | |
| BCT 2 | It has reduced risks and increased efficiency in business operations. | | | | | |
| BCT 3 | BCT has introduced new ways to automate processes with partners. | | | | | |
| BCT 4 | It offers better data protection and enhanced transaction speeds. | | | | | |
| BCT 5 | The adoption of BCT has lowered transaction costs. | | | | | |
| BCT 6 | BCT has strengthened relationships with stakeholders. | | | | | |
| BCT 7 | It has facilitated more transparent and reliable record-keeping. | | | | | |
| Artificial Intelligence (AI) | | | | | | |
| # | Statements | 1 | 2 | 3 | 4 | 5 |
| AI1 | AI has enabled our firm to create valuable resource bundles. | | | | | |
| AI2 | We use AI to model intelligent behaviour. | | | | | |
| AI3 | AI has increased the number of transactions processed monthly. | | | | | |
| AI4 | AI applications have reduced customer service costs. | | | | | |
| AI5 | Operational improvements from AI have enhanced revenue. | | | | | |
| AI6 | Our staff's AI expertise ensures effective resource utilization. | | | | | |
| AI7 | The AI infrastructure supports rapid deployment across operations. | | | | | |
| Big Data Analytics (BDA) | | | | | | |
| # | Statements | 1 | 2 | 3 | 4 | 5 |
| BDA 1 | Our organization generates large unstructured data for analysis. | | | | | |
| BDA2 | We integrate internal and external data to | | | | | |

| | analyze our environment. | | | | | |
|--|--|---|---|---|---|---|
| BDA3 | Our BDA managers understand the needs of other stakeholders. | | | | | |
| BDA4 | Staff employ effective methods for digital data generation. | | | | | |
| BDA5 | Big data is seamlessly integrated into our business processes. | | | | | |
| BDA6 | Our staff select appropriate methods for big data generation. | | | | | |
| BDA7 | Big data is effectively utilized within the organization. | | | | | |
| Mobile Technology Integration (MTI) | | | | | | |
| # | Statements | 1 | 2 | 3 | 4 | 5 |
| MTI1 | Our company uses mobile wallets for electronic transactions. | | | | | |
| MTI2 | Integration with mobile technology provides a competitive advantage. | | | | | |
| MTI3 | We offer a mobile platform for clients to trade. | | | | | |
| MTI4 | Our mobile platform trains prospective clients about our products. | | | | | |
| MTI5 | Mobile technology adoption has improved our firm's performance. | | | | | |
| MTI6 | Integrating mobile technology has streamlined our business processes. | | | | | |
| MTI7 | We choose mobile technologies that align with our business objectives. | | | | | |

PART C: Firm Performance

The following statements relate to firm performance. Specify the extent to which the statements are applied in the organisation you work for using a five-point Likert scale: **Where 1 = To no extent at all; 2 = Less Extent; 3 = Moderate Extent; 5 = Very Large Extent.**

| Firm Performance (FP) | | | | | | |
|------------------------------|--|---|---|---|---|---|
| # | Statements | 1 | 2 | 3 | 4 | 5 |
| FP1 | We have achieved significant revenue growth. | | | | | |
| FP2 | The company consistently meets its financial goals. | | | | | |
| FP3 | The adoption of fintech has significantly improved return on assets. | | | | | |
| FP4 | Customer satisfaction has improved. | | | | | |

| | | | | | | |
|-----|--|--|--|--|--|--|
| FP5 | We have seen an increase in customer retention. | | | | | |
| FP6 | Our processes are efficient and cost-effective. | | | | | |
| FP7 | We meet client demands more effectively now. | | | | | |
| FP8 | Employees are improving their skills through training. | | | | | |

Appendix IV: Investment Management Firms in Kenya

| Collective Investment Schemes | |
|--------------------------------------|--|
| 1. | African Alliance Kenya Unit Trust Scheme |
| 2. | British-American Unit Trust Scheme |
| 3. | NCBA Unit Trust Funds |
| 4. | Zimele Unit Trust Scheme |
| 5. | ICEA Unit Trust Scheme |
| 6. | CIC Unit Trust Scheme |
| 7. | Madison Unit Trust Fund |
| 8. | Dyer and Blair Unit Trust Scheme |
| 9. | Amana Unit Trust Funds Scheme |
| 10. | Diaspora Unit Trust Scheme |
| 11. | First Ethical Opportunities Fund |
| 12. | Genghis Unit Trust Funds |
| 13. | Mali Money Market Fund |
| 14. | Genghis Specialized Funds |
| 15. | Sanlam Unit Trust Scheme |
| 16. | Nabo Africa Funds |
| 17. | Old Mutual Unit Trust Scheme |

| | |
|-----|---|
| 18. | Equity Investment Bank Collective Investment Scheme |
| 19. | Dry Associates Unit Trust Scheme |
| 20. | Co-op Trust Fund |
| 21. | Apollo Unit Trust Scheme |
| 22. | Cytonn Unit Trust Scheme |
| 23. | Orient Umbrella Collective Investment Scheme |
| 24. | Wanafunzi Investment Unit Trust Fund |
| 25. | Absa Unit Trust Funds |
| 26. | Jaza Unit Trust Fund |
| 27. | Masaru Unit Trust Scheme |
| 28. | ADAM Unit Trust Scheme |
| 29. | KCB Unit Trust Scheme |
| 30. | GenAfrica Unit Trust Scheme |
| 31. | Amaka Unit Trust (Umbrella) Scheme |
| 32. | Jubilee Unit Trust Collective Investment Scheme |
| 33. | Enwealth Capital Unit Trust Scheme |
| 34. | Kuza Asset Management Unit Trust Scheme |
| 35. | Etica Unit Trust Funds |
| 36. | Lofty Corban Unit Trust Scheme |
| 37. | Standard Investment Trust Funds |

| | |
|-----|--|
| 38. | Faida Unit Trust Funds |
| 39. | Taifa Unit Trust Funds |
| 40. | Stanbic Unit Trust Funds |
| 41. | Spearhead Africa Infrastructure (Special) Fund |
| 42. | Rencap Unit Trust Scheme |
| 43. | Mayfair Umbrella Collective Investment Scheme |
| 44. | Investcent Partners Trust Fund |
| 45. | ICEA LION Collective Investment Scheme |
| 46. | GCIB Unit Trust Scheme |
| 47. | CPF Unit Trust Funds |
| 48. | Arvocat Unit Trust Scheme |

| Fund Managers | |
|----------------------|--|
| 1. | Orient Asset Managers Limited |
| 2. | Amana Capital Limited |
| 3. | Apollo Asset Management Company Limited |
| 4. | Britam Asset Managers (Kenya) Limited |
| 5. | Metropolitan Canon Asset Managers Limited |
| 6. | Nabo Capital Limited |
| 7. | CIC Asset Managers Limited |
| 8. | Co-op Trust Investment Services Limited |
| 9. | FCB Capital Limited |
| 10. | Fusion Investment Management Limited |
| 11. | GenAfrica Asset Managers Limited |
| 12. | ICEA Lion Asset Management Limited |
| 13. | Madison Investment Managers Limited |
| 14. | Old Mutual Investment Group |
| 15. | Sanlam Investments East Africa Limited |
| 16. | Standard Chartered Investment Services Limited |
| 17. | Zimele Asset Management Company Limited |
| 18. | KCB Asset Management Limited |

| | |
|-----|---|
| 19. | Cytonn Asset Managers Limited |
| 20. | Altree Capital Kenya Limited |
| 21. | Jubilee Financial Services Limited |
| 22. | ABSA Asset Management Limited |
| 23. | African Diaspora Asset Managers Limited |
| 24. | CFS Asset Management Limited |
| 25. | I&M Capital Limited |
| 26. | Globetec Asset Managers Limited |
| 27. | African Alliance Kenya Asset Management Limited |
| 28. | CPF Financial Services Limited |
| 29. | Kuza Asset Management Limited |
| 30. | Ndovu Wealth Limited |
| 31. | Mayfair Asset Managers Limited |
| 32. | Etica Capital Limited |
| 33. | Star Capital Management Limited |
| 34. | Lofty-Corban Investments Limited |
| 35. | Virtual Capital International Limited |
| 36. | ALA Capital Limited |
| 37. | Spearhead Africa Asset Management Limited |
| 38. | MKM Capital Limited |

| | |
|-----|--------------------------------------|
| 39. | Arvocat Asset Managers Limited |
| 40. | Myxeno Investment Management Limited |
| 41. | GTXN Investments Limited |
| 42. | VCG Asset Management Limited |

| Investment Banks | |
|-------------------------|--|
| 1. | ABSA Securities Limited |
| 2. | Dyer and Blair Investment Bank Limited |
| 3. | Equity Investment Bank Limited |
| 4. | Faida Investment Bank Limited |
| 5. | Genghis Capital Limited |
| 6. | KCB Capital Limited |
| 7. | NCBA Investment Bank Limited |
| 8. | Renaissance Capital (Kenya) Limited |
| 9. | SBG Securities Limited |
| 10. | Standard Investment Bank |
| 11. | Sterling Capital Limited |
| 12. | Dry Associates Limited (Trading as “Dry Associates Investment Bank”) |
| 13. | Salaam Investment Bank Kenya Limited |
| 14. | Gulfcap Investment Bank Limited |
| 15. | Pergamon Investment Bank Limited |
| 16. | Investcent Investment Bank Limited |
| 17. | Capital A Investment Bank Limited (Formerly Securities Africa Kenya Limited) |

Source: CMA (2024)

Appendix V: Summary of Previous Studies and Research Gaps

| Researcher(s) and Study | Gap | The focus of the present study |
|--|--|--|
| Morkunas, Paschen, and Boon (2019) How blockchain technologies impact your business | Focused on the influence of blockchain technology on operational efficiency. Ignored the role of blockchain technology in enhancing the financial performance of the firm. | The current study focuses on the role of financial technology adoption on firm performance. |
| Kim and Shin (2019) The impact of blockchain technology application on supply chain partnership and performance | The study focused on the role of selected financial technology on the supply chain performance of Korean firms. | The study focuses on the role of financial technology application on firm performance of Kenyan investment management firms in Kenya. |
| Githui, (2019) Influence of artificial intelligence on marketing strategy among mobile telephony operators in Kenya | The study adopted a descriptive research design and considered multiple respondents from each of the two operators that were sampled. | The present study is a cross-sectional study and shall use only one respondent to avoid duplicity of respondents. |
| Alzaidi, (2018) Impact of Artificial intelligence on the performance of the banking industry in the Middle East. | The study conducted was in six Middle East countries financial performance was not considered in this study. Investment management firms were not sampled. | The current study seeks to establish the influence of financial technology adoption on financial performance in the Kenyan context. |
| Hasan et al. (2020) Operational efficiency effects of blockchain technology implementation in firms: Evidence from China | The study was not sector-specific and was contextualised in China. The effect of blockchain adoption on financial performance was not examined. | The present study is contextualised on Kenya's Asset management industry. The effect of blockchain on financial performance is examined. |
| Nandi, Nandi, Moya and Kaynak (2020) Blockchain technology-enabled supply chain systems and supply chain performance | Findings are based on multi-industry firms in the United States. | This study is based on Kenyan firms. |

Source: Literature Review (2024)