

**DETERMINANTS OF INVESTMENT DECISIONS AMONG GENERATION
Z UNIVERSITY STUDENTS IN NAIROBI, KENYA: THE MODERATING
EFFECT OF FINANCIAL LITERACY**

BELYSE UMUTONIWASE KALISA

169095

**A THESIS SUBMITTED TO STRATHMORE UNIVERSITY BUSINESS
SCHOOL IN PARTIAL FULFILMENT FOR THE AWARD OF A MASTER
OF COMMERCE, FINANCE SPECIALIZATION**

APRIL, 2026

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made in this document itself.

Belyse Umutoniwase Kalisa 169095

DocuSigned by:

E5E3CD50BD614D1...

19-Dec-2024

Signature: Date:

APPROVAL

The proposal of Belyse Umutoniwase Kalisa has been reviewed and approved for examination by:

Dr.Freshia Mugo Waweru

Strathmore University Business School

Signature:



.....Date:18/12/2024

ABSTRACT

Investment choices are central to financial security, wealth creation, and risk management, yet the determinants of such decisions among Generation Z in emerging markets remain underexplored. This study examined the determinants influencing investment decisions among Generation Z university students in Nairobi, Kenya, focusing on personal characteristics, environmental influences, and technological platforms, while evaluating the moderating effect of financial literacy. Anchored in the Theory of Planned Behavior, Modern Portfolio Theory, and Decision Theory, the study adopted a positivist research philosophy within a quantitative descriptive cross-sectional design. The target population comprised Generation Z students aged 20–27, enrolled in their 3rd and 4th years across the 13 selected universities in Nairobi. Data were collected between February 2026 and March 2026 from 496 out of a minimum expected of 384 respondents targeted, through structured questionnaires administered online via official student associations and academic networks, of which 321 valid responses were retained after data cleaning. The study operationalized the main constructs using Likert-scale items and objective financial literacy questions, and reliability was assessed using Cronbach's alpha. The collected data were coded and analyzed using STATA version 19 through descriptive statistics, correlation analysis, and regression-based moderation models. The findings revealed that personal determinants exerted the strongest positive and statistically significant influence on investment decisions, followed by technological determinants, while environmental determinants were significant only in isolation and became non-significant in the combined model. Financial literacy had a positive direct effect on investment decisions and significantly moderated only the relationship between personal determinants and investment decisions, with a negative attenuation effect. The study recommends strengthening practical financial literacy programs in universities, improving student-oriented digital investment tools, and promoting low-entry investment products tailored to Gen z in universities. The study was limited by its cross-sectional design, reliance on self-reported data, and focus on university students in Nairobi, which may limit broader generalizability.

TABLE OF CONTENTS

DECLARATION	ii
ABSTRACT.....	3
TABLE OF CONTENTS	4
LIST OF TABLES	9
LIST OF FIGURES.....	x
ABBREVIATIONS AND ACRONYMS.....	xi
DEFINITION OF TERMS	xii
CHAPTER ONE	2
INTRODUCTION	2
1.1 Background of the Study	2
1.2 Problem Statement.....	6
1.3 Objectives of the Study.....	9
1.3.1 General Objective	9
1.3.2 Specific Objectives	9
1.4 Research Questions.....	10
1.5 Scope of the Study	10
1.6 Significance of the Study.....	11
1.6.1 Theoretical Contribution.....	11
1.6.2 Policy and Educational Relevance.....	11
1.6.3 Practical Implications	11
1.7 Chapter Summary	11
CHAPTER TWO	12
LITERATURE REVIEW	12
2.1 Introduction.....	12
2.2 Theoretical Review	12

2.2.1 Theory of Planned Behavior (TPB).....	12
2.2.2 Modern Portfolio Theory (MPT).....	13
2.2.3 Decision Theory.....	14
2.2.4 Technology Acceptance Model (TAM).....	15
2.3 Empirical Review	16
2.3.1 Personal Determinants of Investment Decisions	16
2.3.2 Environmental Determinants of Investment Decisions	18
2.3.2 Technological Determinants in Investment Decisions	19
2.3.4 The Moderating Role of Financial Literacy	20
2.4 Research Gap	21
2.5 Conceptual Framework.....	23
2.6 Operationalization of Variables	24
2.7 Chapter Summary	25
CHAPTER THREE.....	26
RESEARCH METHODOLOGY	26
3.1 Introduction.....	26
3.2 Research Philosophy.....	26
3.3 Research Design	26
3.4 Target Population.....	27
3.4.1 Theoretical Target population.....	27
3.4.2 Accessible Population.....	28
3.4.3 Unit of Analysis.....	30
3.5 Sampling Technique	31
3.6 Sample Size Determination	32
3.6.1 Initial Sample Size.....	32
3.6.2 Adjusting for non-response	33

3.7 Data Collection and Procedure	33
3.8 Data Analysis Techniques	35
3.8.1 Composite Score and Descriptive Analysis.....	35
3.8.2 Inferential Analysis: Multiple Linear Regression.....	35
3.9 Research Quality.....	38
3.9.1 Validity	38
3.9.2 Reliability and Diagnostic Tests.....	39
3.10 Ethical Considerations	40
3.11 Chapter Summary	40
CHAPTER FOUR	41
PRESENTATION OF RESULTS	41
4.1 Introduction.....	41
4.2 Response Rate.....	41
4.3 Demographic Characteristics of Respondents	44
4.3.1 Gender Distribution	44
4.3.2 Age Distribution	45
4.3.3 Income Distribution.....	46
4.3.4 University Type	47
4.3.5 Year of study.....	47
4.4 Reliability Analysis	48
4.5 Descriptive Statistics	49
4.6 Correlation Analysis	50
4.7 Diagnostic Tests.....	51
4.7.1 Multicollinearity Test (VIF)	51
4.7.2 Heteroskedasticity Test.....	52
4.7.3 Normality of Residuals	52

4.7.4 Model Specification (Ramsey RESET Test)	53
4.7.5 Outlier and Influence Diagnostics	54
4.8 Inferential Statistics	54
4.8.1 Simple Linear Regression Analysis.....	54
4.8.2 Combined Regression Model	60
4.8.3 Moderations Role of Financial Literacy	62
4.9 Chapter Summary	64
CHAPTER FIVE	65
DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS.....	65
5.1 Introduction.....	65
5.2 Summary of the Study Findings	65
5.3 Discussions of Findings	65
5.3.1 Relationship between Personal Determinants and Investment Decisions	66
5.3.2 Relationship between Environmental Determinants and Investment Decisions	68
5.3.3 Relationship between Technological Determinants and Investment Decisions	71
5.3.4 The Moderating Role of Financial Literacy	73
5.4 Conclusions.....	76
5.5 Policy and Practical Recommendations.....	77
5.5.1 Strengthen Financial Literacy Programmes in Universities	77
5.5.2 Utilize Digital Platforms for Investment Education	77
5.5.3 Promote Affordable Investment Opportunities for Students	78
5.5.4 Support Structured Peer-Based Financial Learning	78
5.5.5 Enhance Investor Protection and Youth Investment Policies.....	78
5.6 Limitations of the Study	79
5.7 Areas for Future Research	80
REFERENCES	83

APPENDIX.....	99
Appendix 1: Ethical Clearance	99
Appendix 2: NACOSTI – Research License	100
Appendix 3: Plagiarism Report	101
Appendix 4: Questionnaire	102

LIST OF TABLES

Table 2.1: Identified Research Gaps	22
Table 2.2: Operationalization of Variables	24
Table 3.1: Estimated Accessible Population by Institution – 3rd and 4th Year Undergraduate Students, Nairobi County (2025/2026)	28
Table 3.2: Stratification Criteria.....	32
Table 3.3: Proportionate Sample Allocation by University Category.....	33
Table 3.4: Reliability Statistics (Cronbach's Alpha)	39
Table 4.1: Data Cleaning and Final Sample Determination.....	42
Table 4.2: Distribution of Target and Actual Respondents by University	43
Table 4.3: Reliability Statistics (Cronbach’s Alpha).....	48
Table 4.4: Descriptive Statistics of All Study Constructs	49
Table 4.5: Pairwise Correlations Matrix	50
Table 4.6: Multicollinearity Results	52
Table 4.7: Influence Analysis (Standardized Residuals > 3).....	54
Table 4.8: Individual Regression Between PERS_D & ID	55
Table 4.9: Individual Regression Between ENV_D & ID	57
Table 4.10: Individual Regression Between TECH_D & ID	58
Table 4.11: Combined Regression Between PERS_D, ENV_D, TECH_D & ID	60
Table 4.12: Moderating Role of Financial Literacy and Interaction Factors	62

LIST OF FIGURES

Figure 2.1: Conceptual Framework	23
Figure 4.1: Gender Distribution.....	45
Figure 4.2: Age Group Distribution	45
Figure 4.3: Income Group Distribution	46
Figure 4.4: Type of University	47
Figure 4.5: Year Distribution.....	47
Figure 4.6: Normality of Residuals: Histogram and Normal Q-Q Plot.....	53

ABBREVIATIONS AND ACRONYMS

CUE	Commission for University Education
FOMO	Fear of Missing Out
GFLEC	Global Financial Literacy Excellence Centre
KUCCPS	Kenya Universities and Colleges Central Placement Service
NACOSTI	National Commission for Science, Technology, and Innovation
NFT	Non-fungible token
SU-ISERC	Strathmore University Institutional Scientific Ethics Review Committee
TPB	Theory of Planned Behaviour
UK	United Kingdom
US	United States

DEFINITION OF TERMS

Investment decisions refer to the process by which individuals allocate financial resources across different assets based on risk–return trade-offs, information evaluation, and financial objectives (Lusardi & Mitchell, 2014; Alp & Seven, 2019).

Generation Z (or **Gen Z**) refers to individuals born approximately between 1997 and 2012, characterized by digital nativity, high exposure to technology, and distinct financial behaviors shaped by online environments (Dimock, 2019)

Financial literacy is the ability to understand, analyze, and apply financial concepts such as interest rates, inflation, and diversification to make informed financial decisions (Lusardi & Mitchell, 2014)

Personal determinants are individual-level characteristics, including risk tolerance, self-efficacy, and future orientation, that influence financial decision-making behavior (Ajzen, 1991).

Environmental determinants refer to external social and contextual influences, such as peer pressure, family background, and social norms, that shape individuals' financial behaviors (Bandura, 1977).

Technological Determinants are factors related to digital platforms and financial technologies, including accessibility, usability, and trust in online systems, that influence investment participation and decision-making (Venkatesh et al., 2012).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Investment decision-making represents a fundamental component of individual and household financial behavior, significantly influencing long-term wealth accumulation, financial stability, and overall economic inclusion (Lusardi & Mitchell, 2014; Alp & Seven, 2019). Classical finance theories, such as the Modern Portfolio Theory (Markowitz, 1952), posit that investors are rational agents who prioritize decisions based on expected risk-return trade-offs. However, behavioral finance research has increasingly challenged the notion of investor rationality, demonstrating that financial decisions are influenced not solely by objective calculations but also by cognitive biases, social contexts, and environmental cues (Kahneman & Tversky, 1979; Shukla & Shukla, 2025). Consequently, investment behavior is best understood as the outcome of interacting determinants encompassing personal, environmental, technological, and cognitive dimensions (Pašiušienė et al., 2024; Vangala, 2024). Investment, in this study, refers to the allocation of financial resources into financial or real assets with the expectation of generating future returns, whereas investment decisions refer to the cognitive, behavioral, and evaluative processes through which individuals assess, select, and manage investment opportunities.

The increasing complexity of investment decision-making has become particularly evident among younger generations whose financial behaviors are being shaped by rapid technological advancement and changing socio-economic environments. Among these groups, Generation Z has attracted significant scholarly and practitioner interest due to its distinctive exposure to digital technologies, social media, and innovative financial services. Globally, Generation Z (born between 1997 and 2012, as defined by Dimock, 2019) has emerged as a unique cohort whose financial behavior differs considerably from that of previous generations. Having grown up in a highly digitalized environment, Generation Z demonstrates increased engagement with financial technologies and digital investment platforms (Fahlin & Gustafsson, 2024). Reports indicate that nearly one in three Gen Z individuals begin investing before the age of 25, reflecting early exposure to financial markets (CFA Institute, 2025). Their investment behavior is influenced by personal

capacity, environmental interactions, technological accessibility, and cognitive competencies such as financial literacy (Lusardi, 2019; Hidayat & Hartono, 2022).

According to the Global Retail Investor Outlook (2025), 30% of Gen Z began investing during university, compared to only 15% of Millennials. Moreover, 86% report higher interest in digital assets such as cryptocurrencies and NFTs, reflecting a shift toward riskier, innovation-driven portfolios (Adel, 2024; Hajj & Farran, 2024). However, these patterns are also marked by impulsive decision-making, limited diversification, and vulnerability to market volatility, outcomes often linked to gaps in financial literacy and socio-economic constraints (Tikhomirova, 2020; Amokeoja, 2024).

While global evidence demonstrates increasing participation of Generation Z in digital financial markets, the dynamics in emerging economies differ considerably due to institutional, economic, and educational constraints. In many African economies, financial inclusion has expanded rapidly through fintech innovation, yet disparities in financial literacy, investment awareness, and trust in formal financial systems continue to influence investment participation and decision quality (Kolade et al., 2022; Singla & Singh, 2025). In Kenya, platforms such as M-Pesa, DhowCSD, and other fintech-based investment applications have democratized access to financial markets previously accessible only to institutional investors or high-net-worth individuals (CBK, 2023; Nganga, 2025). These digital platforms have reduced transaction costs, increased transparency, and enabled real-time investment management. However, despite increased accessibility, disparities persist due to variations in financial literacy, risk perception, and trust in technological systems (Mwenda, 2024; Wambugu, 2024).

Investment decisions, therefore, result from the complex interaction of personal, environmental, and technological conditions rather than influences. Prior research demonstrates that individual-level factors such as risk tolerance, self-control, income stability, and financial goals shape baseline investment intentions (Lusardi & Mitchell, 2014; Bajo et al., 2023). Environmental determinants, including peer influence, family norms, cultural expectations, and social media, can amplify herd behavior or impulsive trading among Gen Z (Ajzen, 1991; Bandura, 1977; Legenzova & Lecké, 2025). In emerging digital markets, technological determinants such as mobile applications, user

interface simplicity, and digital trust act as enablers of market participation (Davis, 1989; Vangala, 2024). These determinants are selected because they represent the core behavioral, social, and technological conditions empirically associated with youth investment behavior. Together, they provide a comprehensive theoretical lens for understanding Gen Z's investment decisions in a rapidly digitizing financial ecosystem.

Building on this conceptual overview, it is essential to examine each determinant in detail to understand how it specifically shapes Generation Z investment behavior.

Personal determinants encompass individual-level attributes, including demographic characteristics, psychological predispositions, financial attitudes, and behavioral traits, that underpin investment behavior (Bajo et al., 2023). According to Prospect Theory (Kahneman & Tversky, 1979), investors are influenced by loss aversion and risk perceptions, which affect how financial decisions are formed under uncertainty. Among Generation Z, varying levels of income, financial confidence, self-control, and long-term orientation significantly shape their willingness and ability to invest (Fahlin & Gustafsson, 2024).

Risk tolerance remains a central personal determinant, with higher tolerance levels associated with diversified and growth-oriented investment portfolios (Srivastava et al., 2025). Conversely, individuals with low risk tolerance tend to avoid volatile assets, gravitating toward safer but potentially lower-yield investments (Phung & Quyen, 2025). Income stability and savings behavior similarly influence investment participation, as disposable income determines the capacity to commit funds to financial assets (Waweru & Kamau, 2023). Personal financial studies, reflecting beliefs about money management, future financial goals, and perceived financial self-efficacy, play an equally important role in shaping consistent investment intentions (John et al., 2025). Together, these factors create the psychological and economic foundation upon which investment decisions are constructed.

Environmental determinants reflect the social and institutional contexts within which investment decisions occur. Drawing from Social Learning Theory (Bandura, 1977) and the Theory of Planned Behavior (Ajzen, 1991), investment behavior is influenced by subjective norms, observed behaviors, and external expectations expressed through family, peers, cultural norms, media

content, and broader institutional structures. For Generation Z, who maintain extensive digital social networks, environmental influences operate both within physical communities and through virtual platforms.

Social influences, such as peer pressure, family encouragement, online investment communities, and financial influencers, shape perceptions of investment opportunities and risks (CFA Institute, 2025; Legenzova & Leckè, 2025). Studies show that individuals are more likely to invest when people in their social environment model or endorse financial participation (Lusardi & Mitchell, 2014). Cultural norms regarding saving, risk-taking, and financial responsibility further affect investment intentions (Phung & Quyen, 2025). Additionally, trust in regulatory institutions, market stability, and investor protection frameworks form part of the environmental context that determines perceived safety and legitimacy of investment platforms (OECD, 2024). Environmental determinants thus represent external social and institutional mechanisms that interact with individual traits to influence investment behavior.

Technological determinants refer to the digital infrastructure and technology innovations that enable investment participation (Purnamasari et al., 2025). In contemporary markets, mobile trading applications, digital wallets, online brokerage platforms, and robo-advisors have transformed how individuals access, evaluate, and execute investment decisions (Vangala, 2024; Nganga, 2025). From the perspective of the Technology Acceptance Model (Davis, 1989), adoption of such technologies depends on perceived usefulness and perceived ease of use, both of which strongly influence investment engagement among digitally native cohorts.

For Generation Z, technology serves not merely as a medium of execution but as a determinant that shapes attitudes and behavior. Digital investment platforms reduce transaction costs, enhance information accessibility, and provide intuitive interfaces that simplify complex financial processes (Tollefson, 2023). Yet, they also introduce challenges such as information overload and exposure to unverified online content, which can distort judgment, particularly for inexperienced investors (Chen et al., 2022). In this sense, technological determinants operate as enabling factors whose influence is moderated by financial literacy, ensuring that young investors can critically evaluate tools and make informed decisions.

Financial literacy refers to the knowledge, skills, and confidence required to understand and apply fundamental financial concepts, including interest rates, inflation, risk diversification, and long-term planning (Lusardi & Mitchell, 2014; OECD, 2024). It plays a dual role: functioning both as a direct determinant of investment behavior and as a moderating factor shaping how personal, environmental, and technological influences translate into actual decisions (Lusardi & Messy, 2023).

From a behavioral finance perspective, financial literacy enhances cognitive processing ability, allowing individuals to interpret financial information more accurately, assess risks rationally, and resist emotional or socially driven impulses (Nogueira et al., 2025). Empirical studies show that financially literate individuals are more capable of leveraging fintech tools effectively, evaluating complex investment products, and safeguarding themselves from misinformation and speculative pressures (Hussain et al., 2022; Pašiušienė et al., 2024). Conversely, low financial literacy exacerbates the effects of cognitive biases and social influence, leading to more impulsive, less diversified, or poorly informed financial choices.

To ensure construct validity, this study operationalizes financial literacy using established measurement instruments, including Lusardi and Mitchell's (2011) "Big Three" questions, assessing interest compounding, inflation, and risk diversification, and the OECD-INFE (2018) multidimensional framework capturing functional, interactive, and critical financial literacy.

While personal, environmental, technological, and financial literacy factors provide a framework for understanding Generation Z investment behavior, their interaction and practical impact in emerging digital markets like Kenya remain underexplored. This gap underscores the need to examine how these determinants collectively shape investment decisions.

1.2 Problem Statement

Investment decision-making represents a fundamental component of individual and household financial behavior, significantly influencing long-term wealth accumulation, financial stability, and broader economic inclusion (Lusardi & Mitchell, 2014; Alp & Seven, 2019). Classical finance theories, particularly Modern Portfolio Theory (Markowitz, 1952), assume that investors act

rationally by making decisions based on optimal risk-return evaluations. However, behavioral finance research challenges this assumption by demonstrating that investment decisions are also shaped by cognitive biases, social influences, technological environments, and individual psychological factors (Kahneman & Tversky, 1979; Shukla & Shukla, 2025). Consequently, investment decision-making is better understood as a multidimensional behavioral process influenced by interacting personal, environmental, technological, and cognitive determinants.

Globally, Generation Z (born between 1997 and 2012) represents a distinct cohort whose financial behavior is increasingly shaped by digitalization and exposure to technology-driven financial ecosystems (Dimock, 2019; Fahlin & Gustafsson, 2024). Having grown up in an environment characterized by constant digital connectivity, this generation frequently interacts with financial technologies such as mobile investment applications, fintech platforms, and social media-based financial information systems. Their investment decisions are therefore influenced by a combination of personal financial attributes, environmental interactions, technological accessibility, and cognitive competencies such as financial literacy (Lusardi, 2019; Hidayat & Hartono, 2022).

In Kenya, rapid expansion of fintech services and mobile money platforms has transformed financial service delivery and increased access to digital financial tools. However, access to digital financial services does not automatically translate into informed or effective investment decision-making. Digital payment systems primarily facilitate transactions, savings, and transfers, whereas investment decision-making requires additional behavioral processes such as risk evaluation, financial analysis, information interpretation, and portfolio selection. This distinction highlights the need to examine the determinants that influence how individuals translate financial access and information into actual investment decision choices.

Despite improvements in financial technology and increasing financial awareness initiatives, there remains limited empirical evidence explaining how Generation Z university students in Kenya make investment decisions within a digitally enabled financial environment.

First, a theoretical gap exists because most existing studies are grounded in single-theory approaches such as Behavioral Finance Theory, Technology Acceptance Model, or financial literacy frameworks, without integrating these perspectives into a unified model that simultaneously

explains how personal, environmental, and technological determinants interact in shaping investment decision-making. This limits comprehensive understanding of investment behavior as a multidimensional process.

Second, an empirical gap exists as prior studies have largely concentrated on financial inclusion, fintech adoption, and savings behavior, with insufficient attention to investment decision-making as an outcome variable. Moreover, existing research rarely examines the combined influence of personal determinants (such as risk tolerance and financial attitudes), environmental determinants (such as peer influence and social media exposure), and technological determinants (such as perceived ease of use and usefulness of digital investment platforms) within a single analytical framework among Generation Z university students in Kenya.

Third, a methodological gap exists because most studies employ descriptive or adoption-focused models that examine financial access or usage rather than behavioral decision-making processes. Few studies utilize integrated multivariate models that allow simultaneous estimation of multiple determinant categories and test moderating effects such as financial literacy. Additionally, limited research focuses specifically on Generation Z university students as a distinct analytical unit despite their unique digital and financial characteristics.

Fourth, a contextual and policy gap exists because existing financial inclusion and digital finance policies in Kenya primarily emphasize access to financial services rather than the behavioral conditions that determine whether access translates into informed investment decisions. As a result, there is limited evidence to guide policymakers, financial institutions, and fintech developers on how to design interventions that enhance actual investment decision-making among young digital users.

Furthermore, although financial literacy is widely recognized as an important factor in shaping financial behavior, its moderating role in the relationship between personal, environmental, and technological determinants and investment decision-making remains underexplored in the Kenyan context. Most existing studies treat financial literacy as a direct predictor rather than examining its interaction effect in strengthening or weakening the influence of other determinants on investment decisions.

This creates a clear and persistent gap in understanding how personal, environmental, and technological determinants interact to shape investment decision-making among Generation Z university students, and how financial literacy conditions these relationships. Generation Z university students in Nairobi City County provide a particularly relevant context due to their high exposure to digital financial systems, increasing financial autonomy, and proximity to Kenya's financial and fintech ecosystem. Therefore, this study sought to examine the determinants of investment decision-making among Generation Z university students in Nairobi, Kenya, and to assess the moderating role of financial literacy in these relationships.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study is to re-examine the determinants of investment decisions among Generation Z university students in universities in Nairobi, Kenya, and assess the moderating role of financial literacy.

1.3.2 Specific Objectives

The following specific objectives guided the study:

- i. To assess the influence of personal determinants on investment decisions among Generation Z university students in Nairobi, Kenya.
- ii. To examine the effects of environmental determinants on investment decisions among Generation Z university students in Nairobi, Kenya.
- iii. To evaluate the effects of technological determinants on investment decisions among Generation Z university students in Nairobi, Kenya.
- iv. To determine the moderating role of financial literacy on the relationships between personal, environmental, and technological determinants and investment decisions among Generation Z university students in Nairobi, Kenya.

1.4 Research Questions

The study was guided by the following research questions:

- i. What personal determinants influence investment decisions among Generation Z university students in Nairobi?
- ii. How do environmental (social) determinants affect investment decisions among Generation Z university students in Nairobi?
- iii. How do technological determinants influence investment decisions among Generation Z university students in Nairobi?
- iv. To what extent does financial literacy moderate the relationship between personal, environmental, and technological determinants and investment decisions?

1.5 Scope of the Study

This study focuses on Generation Z university students aged 20-27, enrolled in their third (3rd) and fourth (4th) years of undergraduate study at selected universities in Nairobi County, registered and recognized by the Commission for University Education. The study specifically covers students enrolled during the 2025/2026 academic year, which corresponds to the period of data collection.

The age bracket (20–27) is selected to capture the transitional stage into financial independence, when long-term investment behavior begins to form. Third- and fourth-year students were selected as they are more likely to exhibit financial independence, exposure to economic decision-making, and readiness to engage with formal financial and investment products compared to earlier-year students. Nairobi is chosen due to its concentration of financial institutions, fintech innovations, and diverse university populations, providing an optimal environment for examining the interaction between determinants and investment decisions.

1.6 Significance of the Study

1.6.1 Theoretical Contribution

This study contributes to behavioral finance by integrating personal, environmental, and technological determinants into a unified analytical model and empirically testing the moderating effect of financial literacy in an African emerging market context. This extends existing frameworks that often consider determinants in isolation rather than through their interactions (Singla & Singh, 2025).

1.6.2 Policy and Educational Relevance

Findings will support Kenya's Vision 2030 financial inclusion objectives, the National Financial Education Strategy (2021–2025), and the Capital Markets Authority's youth investment initiatives. Insights may inform curriculum development and targeted interventions to improve financial literacy and rational investment behavior among Gen Z.

1.6.3 Practical Implications

Financial institutions and fintech providers can leverage the study's findings to design investment products, digital platforms, and advisory services tailored to the behavioral and informational needs of Generation Z investors, enhancing engagement and participation in Kenya's investment ecosystem.

1.7 Chapter Summary

This chapter introduced the study by outlining the background, problem statement, objectives, scope, and significance. Investment decisions among Generation Z university students in Nairobi are influenced by personal, environmental, and technological determinants, with financial literacy moderating these relationships. The next chapter provides a detailed review of the relevant theoretical and empirical literature, forming the basis for the study's conceptual framework.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive review of the literature underpinning the study on determinants of investment decisions among Generation Z university students in Nairobi, Kenya. The review critically synthesizes relevant theoretical frameworks, empirical studies, and contextual insights, situating the research problem within established academic debates. The discussion is structured around key theoretical foundations, empirical evidence aligned with study objectives, and the conceptual framework. The chapter concludes with a synthesis of gaps in the literature, the conceptual framework, and the operationalization of variables.

2.2 Theoretical Review

Investment decision-making is influenced by cognitive, behavioral, social, and technological determinants. To capture these complexities, this study draws on three complementary theoretical perspectives: the Theory of Planned Behaviors (TPB), the Markowitz Portfolio Theory (MPT), and the Decision Theory, extended with behavioral finance concepts. Integrating these theories provides a multidimensional understanding of how Generation Z students make investment decisions in Nairobi's rapidly evolving digital financial ecosystem.

2.2.1 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (Ajzen, 1991), posits that individual behavior is determined by behavioral intentions, which in turn are shaped by attitudes, subjective norms, perceived behavioral control. In the context of investment, attitudes are reflections of personal beliefs about asset risk, returns, and diversification. Subjective information includes peer influence, social media, and family expectations, while perceived behavioral control relates to investment platforms, confidence, and financial literacy (Bosnjak et al., 2020; Patel & Nayak, 2024).

For digitally native Generation Z investors, TPB can be extended by incorporating concepts from the Technology Acceptance Model (Davis, 1989) and Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2012). These frameworks emphasize the role of effort expectancy,

social influence, and facilitating conditions, which map directly onto attitudes and perceived behavioral control in TPB (Shachak et al., 2019). For example, the ease of use of mobile investment apps or fintech platforms directly affects students' confidence and intention to invest, while peer-driven social media trends influence subjective norms. Financial literacy moderates these relationships by enhancing critical evaluation and reducing susceptibility to social pressure (Raut et al., 2018; Hussain et al., 2022).

Although TPB provides a robust framework for understanding psychological determinants, it assumes rationality and stable intentions, which may be disrupted by emotional impulses, cognitive biases, and volatile digital information flows (Sniehotta et al., 2014). Therefore, TPB is complemented with rational and probabilistic decision-making theories.

2.2.2 Modern Portfolio Theory (MPT)

Modern Portfolio Theory (MPT), developed by Markowitz (1952), posits that investors optimize portfolios by balancing expected returns and risk, identifying the efficient frontier of optimal portfolios. For young investors like Generation Z, MPT offers a rational benchmark for asset allocation and diversification strategies (Berk & Tutarlı, 2021; Verma & Srivastava, 2024). It assumes investors are risk-aware, utility-maximizing, and operate in efficient markets (Guo, 2022).

However, research shows that Generation Z often exhibits risk-seeking behavior, prefers high-return digital assets (cryptocurrencies, speculative stocks), and may under-diversify due to limited income or experience (Barnea et al., 2010; Mwenda, 2024). Integrating behavioral corrections, such as loss aversion, mental accounting, and overconfidence, enhances MPT's explanatory power in real-world contexts where rationality is bounded (Kahneman & Tversky, 1979; Armansyah et al., 2023).

In Nairobi, MPT provides a lens for understanding students' investment patterns across traditional and digital assets, highlighting the tension between rational diversification principles and behavioral tendencies in the digital trading environment (Akkaya, 2021; Chen, 2025). It also informs the study's objective of examining personal determinants like risk tolerance and return expectations.

2.2.3 Decision Theory

Decision Theory, developed by Ronald A. Fisher, who in the 1920s made significant contributions to statistical decision theory, was advanced by John von Neumann and Oskar Morgenstern (1944), and later formalized in rational choice and game theory, addresses how individuals evaluate alternatives under conditions of uncertainty, a scenario frequently encountered in investment (Greene et al., 2024). It posits that individuals make decisions by assigning utilities to potential outcomes and selecting the option that maximizes expected utility (Pathak & Thapa, 2024). For Gen Z investors, Decision Theory explains how expected returns, perceived probabilities, and utility evaluations influence investment selection (Senyo & Osabutey, 2020; Pašiušienė, et al., 2024).

Behavioral finance extends Decision Theory by incorporating cognitive biases and heuristics. Prospect Theory (Kahneman & Tversky, 1979) demonstrates loss aversion, overweighing potential losses, and risk misperception. Herding behavior, overconfidence, and mental accounting influence Generation Z's tendency to follow social media trends, invest in popular digital assets, or overestimate returns from speculative ventures (Changwasha & Mutezo, 2023; Mohta & Shunmugasundaram, 2023).

Integrating Decision Theory with behavioral finance complements TPB and MPT by addressing probabilistic reasoning, risk assessment, and cognitive distortions, providing a holistic theoretical foundation to examine personal, environmental, and technological determinants of investment decisions. Financial literacy is positioned as a moderator that mitigates behavioral biases and enhances rational decision-making under uncertainty (Lusardi & Mitchell, 2014; Zhu & Xiao, 2022).

Collectively, these theories provide an integrated framework for understanding investment decision-making among Generation Z students. The Theory of Planned Behavior explains how attitudes, social influence, and perceived behavioral control shape investment intentions; Modern Portfolio Theory provides a rational framework for risk-return optimization and diversification; while Decision Theory, extended through behavioral finance, explains how heuristics, emotions, and cognitive biases influence actual decision behavior under uncertainty. These theories explain how

personal, environmental, and technological determinants interact within Nairobi's digital financial ecosystem, while financial literacy moderates the quality and rationality of investment decisions.

2.2.4 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how individuals come to accept and use technology. The model posits that two key beliefs, perceived usefulness and perceived ease of use, determine an individual's attitude toward technology adoption, which in turn influences actual usage behavior. Davis (1989) defines perceived usefulness as the extent to which an individual believes that using a particular technology will enhance their performance, while perceived ease of use refers to the degree to which a person believes that using the system will be free of effort. TAM has been widely applied in information systems and financial technology research to explain user adoption behavior in digital environments.

In the context of this study, TAM is particularly relevant in explaining the technological determinants of investment decisions among Generation Z university students. Perceived usefulness reflects the extent to which students believe that digital investment platforms, mobile trading applications, and fintech tools improve their ability to make informed investment decisions. Perceived ease of use reflects how simple and accessible these platforms are in facilitating investment-related activities. According to Venkatesh and Davis (2000), enhancements to usefulness and ease of use significantly increase technology adoption intentions. In this study, these constructs help explain why Generation Z students who perceive investment platforms as easy to use and beneficial are more likely to engage in investment decision-making.

Furthermore, the integration of TAM into this study supports the technological determinants dimension of the conceptual framework by providing a theoretical explanation for how digital tools influence financial behavior. Consistent with Davis (1989) and later extensions by Venkatesh et al. (2003) in the Unified Theory of Acceptance and Use of Technology (UTAUT), technology adoption is not automatic but depends on user perceptions of value and usability. In relation to this study, this implies that the adoption of fintech platforms among Generation Z students in Nairobi is driven not only by access but also by perceived usefulness and ease of use, which subsequently influence investment decision-making behavior. Therefore, TAM provides a clear theoretical foundation for

understanding how technological determinants translate into investment decisions within the study context.

2.3 Empirical Review

The empirical review is structured around the study's objectives, providing a critical synthesis of global, African, and Kenyan evidence on Gen Z investment behavior.

2.3.1 Personal Determinants of Investment Decisions

Empirical evidence from Lusardi and Mitchell (2014), Alp and Seven (2019), and Armansyah et al. (2023) indicates that personal determinants, including risk tolerance, self-efficacy, future orientation, and behavioral biases, significantly shape investment choices among Gen Z.

Risk tolerance has constantly been identified as a key predictor of investment behavior. Studies from Grable and Joo (2004) and Alp and Seven (2019) show that individuals with higher risk tolerance are more likely to participate in financial markets and allocate funds to higher assets. Among younger investors, particularly Generation Z, this tendency is often reflected in the growing interest in high-volatility assets such as cryptocurrencies and speculative equities (Rosdiana, 2020; Ovami et al., 2024). However, this behavior is not uniform across contexts. Mwenda (2024), in an African context, demonstrates that Gen Z investors exhibit interest in high-return assets; actual investment decisions remain constrained by income limitations and economic uncertainty, suggesting that risk tolerance operates within structural conditions.

Financial Self-efficacy, defined as an individual's confidence in their ability to make sound financial decisions, has also been shown to significantly influence investment behavior (Hernandez-Perez & Rambaud, 2025; Korankye et al., 2026). Farrell et al. (2016) and Lusardi and Mitchell (2014) found individuals with higher financial confidence are more likely to engage in investment activities and adopt structured decision-making processes. In the context of Generation Z, this effect is reinforced by access to digital financial tools, which enhance perceived behavioral control and ease of participation (Venkatesh et al., 2012; Kolade et al., 2022).

Future orientation further explains investment behavior among young individuals. Strömbäck et al. (2017) show that individuals with a long-term financial outlook are more likely to save and invest, prioritizing future benefits over immediate consumption. In emerging market contexts, Ndou (2023) finds that youth with stronger future orientation tend to favor more stable investment instruments, reflecting a cautious approach shaped by economic realities.

Behavioral biases also play a significant role in shaping personal investment decisions. Overconfidence, herd behavior, and fear of missing out (FOMO) have been widely documented among young investors (Armansyah et al., 2023). These biases are particularly pronounced in digital environments, where rapid information flows and social influence amplify speculative behavior (Changweshu & Mutezo, 2023). As a result, investment decisions among Gen Z are often influenced not only by rational evaluation but also by cognitive shortcuts and emotional responses.

Although prior studies consistently identify risk tolerance, financial self-efficacy, and behavioral biases as important predictors of investment behavior, important limitations remain. First, much of the literature originates from developed economies such as the United States, Europe, and parts of Asia (Lusardi & Mitchell, 2014), limiting generalizability to emerging African markets characterized by lower income levels, different financial infrastructures, and varying investment accessibility. Second, several studies examine personal determinants independently without accounting for interactions with technological access and environmental influences (Alp & Seven, 2019; Armansyah et al., 2023). Third, empirical evidence focusing specifically on Generation Z university students in Sub-Saharan Africa remains limited. Existing African studies, such as Mwenda (2024) and Ndou (2023), largely emphasize descriptive investment trends without quantitatively testing the relative explanatory power of personal determinants within integrated behavioral models. Consequently, the extent to which personal determinants independently shape investment decisions among university students in Nairobi remains insufficiently established.

While global evidence suggests that Generation Z favors innovative and high-growth assets, African studies indicate that these preferences are moderated by contextual factors such as income levels, financial access, and macroeconomic conditions (Ndou, 2023; Mwenda, 2024). This highlights the need for context-specific analysis of personal determinants among university students in Nairobi.

Based on the foregoing empirical evidence, the proposed hypothesis is that personal determinants have a positive and significant effect on investment decisions among Generation Z university students in Nairobi.

2.3.2 Environmental Determinants of Investment Decisions

Environmental determinants encompass peer influence, family financial socialization, social norms, and institutional trust (Martiny et al., 2024). Empirical findings consistently indicate that young adults are highly sensitive to social cues, with peer groups shaping attitudes toward risk-taking and financial experimentation (Bursztyn et al., 2014).

In university environments, peer pressure and observational learning strongly predict financial behavior (Aleño et al., 2025). Family financial socialization also plays a critical role: exposure to family financial discussions and parental investment habits increases the likelihood of early investment participation (Shim et al., 2010). Sabri & Macdonald (2010) emphasized peer and family pressures as significant predictors of investment engagement among young adults, while Ndou (2023) noted that macroeconomic context (e.g., inflation, taxation) indirectly moderates asset preferences by influencing perceived stability and security.

Social media and online communities further these effects. Changweshwa and Mutezo (2023) demonstrated that viral financial content fosters herd behavior, often leading Gen Z investors to follow trends rather than making independent, rational decisions. Kamunzyu and Kariuki (2019) argued that in Kenya, limited financial education and institutional trust exacerbate reliance on environmental cues, constraining diversification and risk-taking among youth investors.

Environmental factors further extend to trust in financial institutions, which has been shown to influence risk attitudes and the willingness to invest in formal markets (Abdelsalam et al., 2024). Generation Z has mixed levels of institutional trust: while they value transparency and digital accessibility, they often distrust traditional financial institutions due to perceived complexity and hidden charges (Putra, et al., 2025).

Despite extensive evidence supporting the importance of social influence in financial behavior, important conceptual and methodological gaps persist. Studies such as Shim et al. (2010) and

Bursztyn et al. (2014) primarily examine peer and parental influence independently, without integrating digital technological exposure and financial literacy into the same analytical framework. In addition, most African studies emphasize broad youth populations rather than university students specifically, despite evidence suggesting that educational exposure and institutional environments significantly influence financial behavior (Lusardi et al., 2010). Furthermore, few studies quantitatively compare the relative influence of environmental determinants against personal and technological factors in emerging digital finance ecosystems such as Nairobi. This limits understanding of whether environmental influences remain independently significant once individual and technological characteristics are controlled for.

Although these studies (e.g., Shim et al., 2010; Bursztyn et al., 2014; Changweshu & Mutezo, 2023) demonstrate that environmental determinants significantly influence financial behavior, most existing research examines these factors in isolation. Few studies integrate environmental influences with personal and technological determinants within a unified analytical framework, particularly in the context of Generation Z students in Nairobi. This creates a gap that the current study seeks to address. Based on the empirical literature, the formulated hypothesis is that environmental determinants have a significant effect on investment decisions among Generation Z university students in Nairobi.

2.3.2 Technological Determinants in Investment Decisions

Technological innovations, particularly digital investment platforms, fintech apps, and mobile solutions, play a dual role: they enable broader participation while introducing new risks (Mou, 2024). Evidence suggests that access to technology alone does not guarantee optimal decision-making. Assefa et al. (2018) found that young investors in emerging markets often default to low-risk instruments due to limited financial literacy, while Bayar et al. (2020) linked weak knowledge to constrained access to high-growth assets.

The digital environment can also amplify misinformation and impulsive behavior. Changweshu and Mutezo (2023) highlighted the spread of oversimplified financial advice via social media, which frequently encourages speculative trading. Mohta and Shunmugasundaram (2023) added that prior losses and limited resources create psychological barriers to adopting new platforms,

often leading to avoidance behavior. Mentoring and support programs, however, can mitigate these effects, enhancing confidence and resilience in digital investing (Ashwitha & Suresh, 2025).

For Gen Z in Nairobi universities, technological determinants intersect with financial literacy and environmental influences. While fintech platforms democratize access, their effectiveness depends on user knowledge, digital infrastructure, and quality of information environments, a gap that remains underexplored in the Kenyan context.

Although technological innovation has significantly expanded access to financial markets, empirical findings regarding its influence on investment quality remain mixed. Studies such as Venkatesh et al. (2012) and Mou (2024) emphasize that digital platforms enhance participation by reducing transaction costs and improving accessibility. Conversely, Chen et al. (2022) and Changwasha and Mutezo (2023) argue that digital platforms may amplify speculative behavior, misinformation, and herd trading, particularly among financially inexperienced users. In Kenya, the rapid expansion of mobile money and fintech ecosystems has increased digital financial inclusion (CBK, 2023), yet limited empirical evidence exists regarding how university students utilize investment-specific technologies beyond transactional mobile payment systems. Additionally, few studies integrate technological determinants with behavioral and literacy dimensions within a unified quantitative framework, creating an important contextual and methodological gap addressed by the present study.

2.3.4 The Moderating Role of Financial Literacy

Financial literacy emerges as a critical moderator, shaping the translation of personal, environmental, and technological determinants into actionable investment decisions. Madinga et al. (2022) emphasized that budgeting and money management skills enhance risk assessment, while Wang et al. (2024) noted that financial literacy strengthens portfolio diversification and confidence, even for risk-averse investors

Zhu and Xiao (2022) demonstrated that financial literacy allows investors to understand complex products such as derivatives and cryptocurrencies, making them less susceptible to hype. Their findings echo Lusardi and Mitchell's (2011) "Big Three Questions" framework, which established

a strong link between basic financial knowledge (interest, inflation, diversification) and sound investment choices. These insights suggest that financial literacy not only equips individuals with knowledge but also enhances their ability to apply investor profiles effectively in practice.

Additional studies expand this argument. Bayar et al. (2020) found that individuals with a deeper understanding of financial instruments were more likely to embrace moderate- to high-risk options, leveraging knowledge to mitigate potential losses. Hussain et al. (2022) reinforced this, showing that financially literate individuals align their investment behavior with their risk tolerance, whereas less-literate individuals often misjudge risk, leading to suboptimal choices.

Empirical evidence suggests that financial literacy is not merely an additional skill but a crucial moderator of whether Gen Z investors remain confined to conservative strategies or venture into innovative, high-yield opportunities. In the academic area, especially among university students, this dynamic is particularly relevant, as their educational exposure may influence both the depth of financial knowledge and their willingness to translate risk tolerance into effective investment strategies.

While financial literacy is widely recognized as a determinant of financial behavior, most empirical studies treat it as a direct explanatory variable rather than as a moderating construct (Lusardi & Mitchell, 2014; Wang et al., 2024). Existing studies largely focus on how financial literacy independently affects savings, portfolio diversification, and investment participation, with limited attention to how it conditions the effects of behavioral, environmental, and technological determinants. Furthermore, evidence from developing economies remains inconsistent regarding whether financial literacy strengthens rational investment behavior or merely increases participation in financial markets (Hii et al., 2022; Merter & Balçioğlu, 2025). In the Kenyan context, empirical evidence examining financial literacy as a moderator among Generation Z university students remains extremely limited, justifying the need for the present study.

2.4 Research Gap

The reviewed literature demonstrates that investment decision-making among Gen Z is influenced by interconnected personal, environmental, technological, and financial literacy factors. However,

significant theoretical, empirical, contextual, and methodological gaps remain. Existing studies frequently examine determinants independently rather than within integrated behavioral frameworks (Alp & Seven, 2019; Changweshu & Mutezo, 2023). Moreover, most empirical evidence originates from developed economies, limiting applicability to emerging African digital finance environments characterized by different institutional structures, income constraints, and technological adoption patterns (Ndou, 2023; Mwenda, 2024). Methodologically, few studies apply structured moderation analysis to examine whether financial literacy conditions the relationships between investment determinants and decision-making outcomes.

Synthesizing theory and empirical evidence, the study identifies critical gaps, which can be summarized thematically in the following Table 2.1:

Table 2.1: Identified Research Gaps

Thematic Area	Existing Evidence	Identified Gap	Implication for Current Study
Personal Determinants	Risk tolerance, income, savings habits, behavioural biases influence investment globally (Barber & Odean, 2001; Alp & Seven, 2019)	Limited evidence for Gen Z alumni in Nairobi universities; few quantitative studies linking personal factors to actual investment decisions	Study empirically tests personal determinants in Nairobi context
Environmental Determinants	Peer/family influence and social networks shape youth investment (Sabri & MacDonald, 2010; Changweshu & Mutezo, 2023)	Scarce localized evidence on environmental determinants; interaction with technological factors unexplored	Quantitative assessment of environmental determinants on Gen Z investment decisions
Technological Determinants	Fintech platforms, mobile apps, and digital assets increase participation (Rodiana, 2020; Venkatesh et al., 2003)	Limited research on digital adoption among Nairobi university students; risks of misinformation and impulsivity under-studied	Context-specific analysis of technological determinants and their impact
Financial Literacy (Moderator)	Enhances risk assessment, diversification, and reduces bias (Lusardi & Mitchell, 2014; Wang et al., 2024)	Moderating effect under-researched among Kenyan Gen Z	Study tests moderation of financial literacy across all determinants

Methodology	Cross-sectional and descriptive designs dominate (Owusu et al., 2021)	Few studies use rigorous moderation analysis or quantitative models	This study applies structured moderation analysis with a quantitative design
-------------	---	---	--

Source: Author

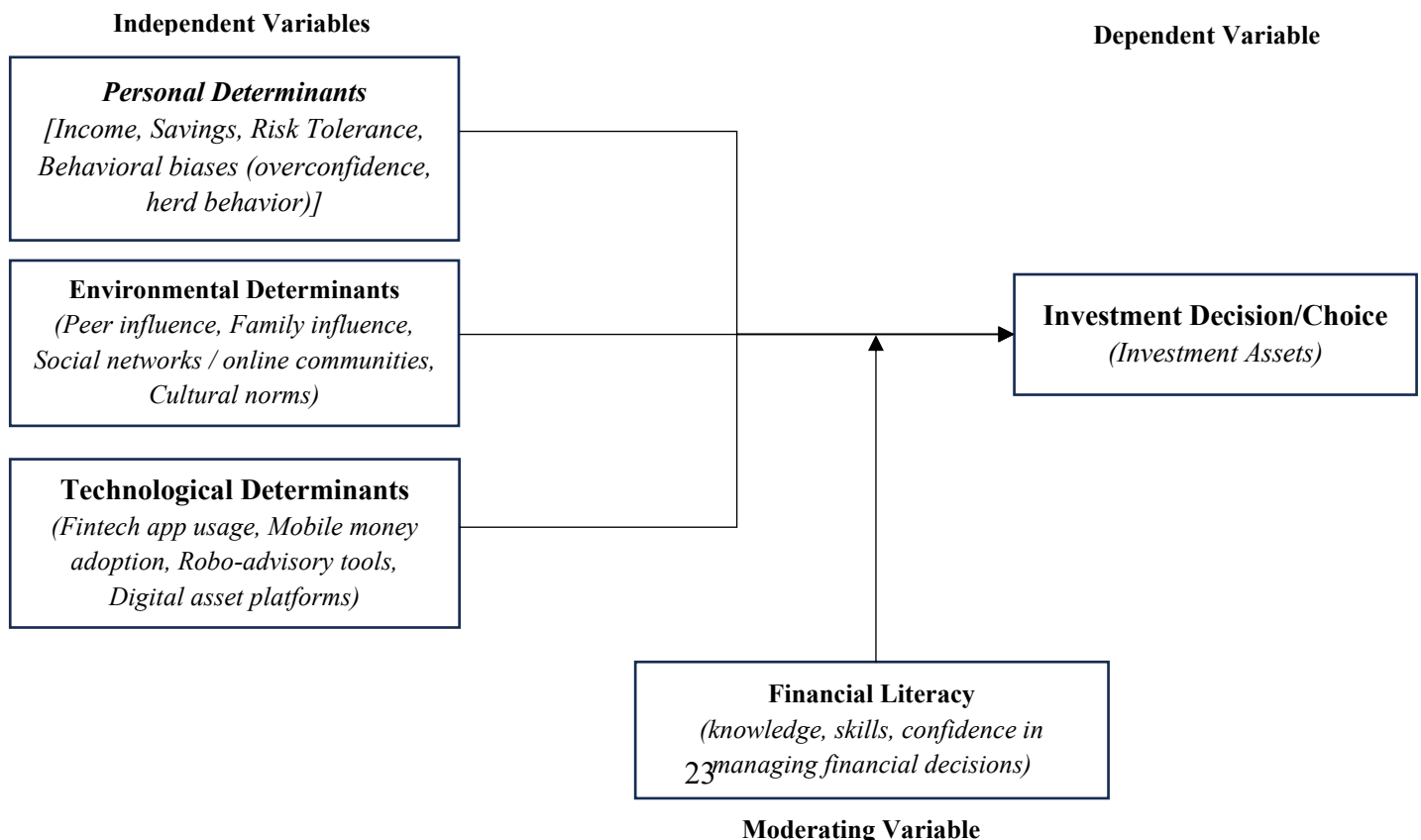
Addressing these gaps, this study will provide quantitative, context-specific evidence on how personal, environmental, and technological determinants influence Gen Z's investment choices in Nairobi and test the moderating role of financial literacy.

2.5 Conceptual Framework

A conceptual framework serves as a foundational structure that guides research by illustrating the hypothesized relationships among key variables (DeCuir-Gunby & McCoy, 2023). The conceptual framework illustrates hypothesized relationships: personal, environmental, and technological determinants influence investment decisions, with financial literacy moderating all relationships.

The relationship between the variables is illustrated in Figure 2.1.

Figure 2.1: Conceptual Framework



Source: Author

2.6 Operationalization of Variables

The important variables for the analysis are identified and operationalized in this subsection.

Table 2.2: Operationalization of Variables

Designation	Acronym	Indicators	Scale
Dependent Variable			
Investment Decisions	ID	Investment planning; Risk evaluation; Investment comparison; Long-term orientation; Structured decision-making	5-point Likert Scale
independent Variable			
Personal Determinants	PERS_D	Income level; Savings habits; Risk tolerance; Behavioral biases (overconfidence, herd behavior)	5-point Likert Scale
Environmental Determinants	ENV_D	Peer influence; Family influence; Social networks / online communities; Cultural norms	5-point Likert Scale
Technological Determinants	TECH_D	Fintech app usage; Mobile money adoption; Robo-advisory tools; Digital asset platforms	5-point Likert Scale
Moderating Variable			
Financial Literacy	FL	• Basic financial knowledge (interest, inflation, diversification) • Ability to interpret investment products - Risk assessment skills	5-point Likert Scale

Source: Author

Although asset participation profiles are collected descriptively, the regression analysis operationalizes investment decisions as a standardized composite index derived from Likert-scale

indicators. This approach is consistent with prior behavioral finance and social science research utilizing composite behavioral constructs in Ordinary Least Squares (OLS) regression models (Hair, et al., 2018; Taber, 2018).

2.7 Chapter Summary

This chapter reviews the theoretical and empirical literature on investment decisions among Generation Z, highlighting their personal, environmental, and technological determinants and the moderating role of financial literacy. While global evidence underscores the relevance of these factors, African and Kenyan-specific contexts remain under-researched. Methodological and contextual gaps justify the present study, which applies a quantitative approach to empirically examine these determinants and their moderating influence of financial literacy among university students in Nairobi.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodological framework that guides the investigation of the determinants of investment decisions among Generation Z university students in Nairobi, Kenya, with a particular focus on the moderating role of financial literacy. The chapter discusses the research philosophy, research design, target population, sampling procedures, data collection instruments, validity and reliability testing, data analysis techniques, and ethical considerations.

3.2 Research Philosophy

The study was guided by a positivist philosophy, which posits that social and economic behavior can be observed objectively and analyzed using empirical, quantifiable measures (Saunders et al., 2019). Positivism assumes that reality is objective and measurable and that knowledge can be generated through systematic observation, empirical testing, and statistical analysis. The study seeks to determine the extent to which personal, environmental, and technological determinants influence investment decisions, and whether financial literacy moderates these relationships (Creswell & Poth, 2018; Alam, 2019).

Consistent with the positivist philosophy, a deductive approach underpinned the study, where hypotheses are derived from established theoretical frameworks and tested empirically using quantitative methods. The Theory of Planned Behavior (Ajzen, 1991), Modern Portfolio Theory (Markowitz, 1952), and Decision Theory (Neumann & Morgenstern, 1944) collectively frame the inquiry. These three theories provide a robust theoretical lens through which to examine the intricate interplay of individual perceptions, rational asset allocation, and decision-making processes in investment contexts (Tanuwijaya & Setyawan, 2021; Pandurugan & Shammakhi, 2024).

3.3 Research Design

This study employed a descriptive cross-sectional research design. A cross-sectional design was essential because data were collected from respondents at a single point in time, specifically during the 2025/2026 academic year, enabling the examination of patterns, associations, and

moderation effects among the study variables without manipulating any independent variable (Hirose & Creswell, 2023). This design also allowed for the comparison of financial behaviors across different demographic profiles within the population (Shaikh & Sharif, 2024). A descriptive component was included to characterize the demographic and behavioral profiles of the respondents, while an explanatory component allowed for the testing of hypothesized relationships through regression and moderation analysis.

A quantitative approach was adopted throughout, as it allowed for the systematic collection of structured data that could be analyzed using inferential statistics. This approach is consistent with the positive philosophy and is well-suited to studies that aim to estimate the magnitude and significance of relationships between constructs measured using Likert-type scales (Creswell & Creswell, 2022)

3.4 Target Population

3.4.1 Theoretical Target population

The target population comprised Generation Z university students aged 20 to 27 year, enrolled in their third (3rd) and fourth (4th) years of undergraduate study at selected universities in Nairobi County, registered and recognized by the Commission for University Education (CUE), during the 2025/2026 academic year. This population segment was deliberately selected because students in their later undergraduate years have higher exposure to financial decision-making, greater personal financial independence, and a higher likelihood of making autonomous investment decisions compared to first and second-year students. The bracket of 20 to 27 captures the transitional stage into financial adulthood, when long-term investment habits and risk attitudes begin to form.

According to the CUE (2025), a total of 263,680 undergraduate students were enrolled in their third or fourth year of study across CUE-recognized universities nationally during the 2024/2025 academic year. Of these, 103,593 were enrolled in their third year and 160,087 in their fourth year, representing 16.8% and 26.0% of total national undergraduate enrollment, respectively, and a combined third- and fourth-year national cohort of 263,680 students (42.9% of total enrollment). This national figure established the broader population landscape from which the

study's accessible population was drawn and confirms that the combined third- and fourth-year cohort constitutes a substantive and well-defined stratum of the Kenyan undergraduate body.

Nairobi County was chosen as the study context because its concentration of public and private universities, diversity of socio-economic backgrounds, and its role as Kenya's principal hub for financial services and fintech innovation (Ager, 2018). This environment provides students with exposure to investment-related information, digital platforms, and social networks that examine personal, environmental, and technological determinants of investment decisions, particularly relevant and practically grounded.

3.4.2 Accessible Population

The accessible population was operationally defined as third- and fourth-year undergraduate students aged 20 to 27 years enrolled during the 2024/2025 academic year at selected Commission for University Education (CUE)-recognized universities in Nairobi County, representing both public and private higher education institutions (Commission for University Education [CUE], 2025). While the CUE (2025) report provides national enrollment statistics by institution type and broad student distribution, institution-level enrollment records disaggregated by year of study, age bracket, and county were not uniformly available from a single centralized public source at the time of this study (CUE, 2025).

Accordingly, the study employed available institutional undergraduate enrollment summaries for 2025 as a proxy for estimating the relative population distribution across the 13 selected universities in Nairobi County. This approach is consistent with sampling practices in higher education studies where disaggregated administrative data are limited (Kothari, 2019). The national CUE figures were used to anchor the population frame and justify the adequacy of the minimum sample size, while the institutional proxy figures were used to guide proportionate sample allocation across institutions (CUE, 2025; Israel, 1992).

The proxy population was estimated at approximately 26,400 undergraduate students across the 13 institutions in Nairobi County, comprising both public universities (approximately 33%) and private universities (approximately 67%), based on aggregated institutional enrollment patterns reported in higher education statistical summaries (CUE, 2025; World Bank, 2023). Final respondent eligibility was confirmed at the point of data collection through screening questions embedded in the questionnaire, which verified age, year of study, university name, institution

type, and enrollment status for the 2025/2026 academic year, consistent with best practices in survey population validation (Saunders, Lewis & Thornhill, 2019). Table 3.1 presents the institutional distribution.

Table 3.1: Estimated Accessible Population by Institution – 3rd and 4th Year Undergraduate Students, Nairobi County (2025/2026) ¹

Institution	Undergrad (Graduates 2025)	Estimated 3rd Year (× 0.647)	Estimated Combined (3rd + 4th Year)	% of Total
PUBLIC UNIVERSITIES				
Jomo Kenyatta University of Agriculture and Technology (JKUAT)	3,616	2,340	5,956	13.68%
University of Nairobi	3,416	2,211	5,627	12.92%
Kenyatta University	1,716	1,110	2,826	6.49%
Public Sub-total	8,748	5,661	14,409	33.10%
PRIVATE UNIVERSITIES				
Catholic University of Eastern Africa (CUEA)	2,199	1,423	3,622	8.32%
Daystar University	1,177	762	1,939	4.45%
KCA University	3,286	2,126	5,412	12.43%
Mount Kenya University	5,413	3,503	8,916	20.48%
Africa Nazarene University	700	453	1,153	2.65%
Riara University	601	389	990	2.27%
Strathmore University	1,285	832	2,117	4.86%
The Presbyterian University of East Africa (PUEA)	455	294	749	1.72%
United States International University-Africa (USIU-Africa)	929	601	1,530	3.51%
Zetech University	1,640	1,061	2,701	6.20%
Private Sub-total	17,685	11,444	29,129	66.91%
COMBINED TOTAL	26,433	17,105	43,538	100.00%

Source: Author's compilation from institutional undergraduate output data (2025). Figures represent a proxy population frame used for proportionate sample allocation.

¹ Fourth-year figures derived from institutional undergraduate graduation output data (2025). Third-year estimates derived by applying the national CUE (2025) third-to-fourth-year enrollment ratio of 0.647 (103,593 ÷ 160,087). Figures represent estimated population benchmarks used for proportionate sample allocation.

It is critical to note that the institutional figures used in Table 3.1 represent a proxy population frame rather than exact enrollment figures disaggregated by age, year of study, and county. This approach was adopted because institution-level data specifically identifying Generation Z students aged 20–27 in the third and fourth year within Nairobi County were not publicly available in a centralized format. Therefore, the proxy figures were used only to guide proportional distribution of questionnaire invitations and not as exact population counts. This limitation is acknowledged and considered when interpreting the generalizability of the findings.

3.4.3 Unit of Analysis

The unit of analysis in this study was the individual student respondent, specifically Generation Z undergraduate students enrolled in selected CUE-recognized universities in Nairobi County. The study adopted the individual as the unit of analysis because investment decision-making is fundamentally a micro-level behavioral phenomenon that originates from individual cognition, attitudes, and perceptions of risk, environment, and technology (Kahneman & Tversky, 2019; Ajzen, 2021). Behavioral finance theory further supports this position by emphasizing that financial decisions are shaped by individual-level cognitive biases, heuristics, and psychological influences rather than purely institutional or aggregate factors (Barberis & Thaler, 2019; Shiller, 2018). Therefore, analyzing investment decision-making at the group or institutional level would obscure important variations in personal financial behavior.

Methodologically, using the individual as the unit of analysis is consistent with prior empirical studies on financial behavior and investment decision-making, which commonly collect data at the respondent level to capture heterogeneity in financial attitudes, risk tolerance, and technological engagement (Lusardi & Mitchell, 2018; Hidayat & Hartono, 2022). This approach also allows for the proper measurement of key study constructs, including personal determinants, environmental determinants, technological determinants, and financial literacy, all of which are inherently individual-level variables. In addition, financial literacy, as a moderating variable, reflects differences in knowledge and financial capability across individuals, making the individual respondent the most appropriate unit for examining its moderating effects (Lusardi & Messy, 2023).

3.5 Sampling Technique

The study employed a multi-stage sampling approach comprising stratified purposive sampling at the institutional level and convenience sampling at the respondent level. Initially, universities in Nairobi County were stratified into public and private institutions to ensure representation of the two major categories of higher education institutions in Kenya. This approach facilitated adequate coverage of institutional diversity within the study area and enhanced the representativeness of the sample (Saunders et al., 2019).

Following stratification, universities were purposively selected based on three criteria: location within Nairobi County, recognition by the Commission for University Education (CUE), and the presence of sufficient numbers of third- and fourth-year undergraduate students. Purposive selection was considered appropriate because it enabled the inclusion of institutions that could provide respondents possessing the characteristics relevant to the study objectives (Creswell & Creswell, 2022).

At the respondent level, proportionate allocation was used to determine the number of participants to be drawn from each selected university based on its share of the proxy population. Eligible respondents were then recruited using convenience sampling through accessible university networks, student associations, WhatsApp groups, peer referrals, and digital questionnaire links. Eligibility was verified through screening questions embedded in the questionnaire, covering age, year of study, university name, enrollment status, and institution type. Only responses meeting all inclusion criteria were retained for analysis.

The use of this multi-stage sampling approach was appropriate because it enabled the study to capture variations across different categories of universities while ensuring access to respondents who met the study requirements. Furthermore, combining stratification, purposive selection, proportionate allocation, and respondent screening enhanced sample adequacy and strengthened the generalizability of findings to Generation Z university students in Nairobi County (Creswell & Creswell, 2022; Saunders et al., 2019).

Table 3.2: Stratification Criteria

Stratification Criterion	Categories
Type of university	- Public universities (33%) - Private universities (67%)
Academic level	- Third-year undergraduate students (65%) - Fourth- year undergraduate students (35%)

Source: Author's compilation from institutional undergraduate output data (2025). Figures represent a proxy population frame used for proportionate sample allocation.

3.6 Sample Size Determination

3.6.1 Initial Sample Size

Given that Nairobi's university population exceeds 25,000 Cochran's (1977) formula for large or unknown populations was used to determine the initial sample size:

$$n_0 = \frac{Z^2 p^*(1-p)}{e^2} \quad (\text{Eq. 3. 1})$$

Where:

N_0 = initial minimum sample size

Z = x-score for the desired confidence level (1.96 for 95%)

p = estimated proportion possessing the attribute of interest (0.5 used for maximum variance)

e = margin of error (0.05 for $\pm 5\%$).

Substituting yields:

$$n_0 = \frac{1.96^2 * 0.5 * 0.5}{0.05^2} \approx 384$$

The minimum sample size was therefore 384 completed responses, a threshold widely recognized as sufficient for social science surveys requiring 95% confidence and 5% precision (Cochran, 1977; Ahmed, 2024).

3.6.2 Adjusting for non-response

Sample units were allocated proportionately across the two university strata based on each category's share of the proxy population, ensuring the sample mirrors the population structure. Table 3.3 presents the allocation of both the distributed ($n = 512$) and minimum completed ($n = 384$) samples across the two strata.

Table 3.3: Proportionate Sample Allocation by University Category

University Category	Population Share	Distributed (n=512)	Minimum Completed (n=384)
Public Universities	33.00%	169	127
Private Universities	67.00%	343	257
Total	100.0%	512	384

Source: Author (2025)

Since not all invited respondents participated, prior adjustments were made for an expected response rate “ r .” If the anticipated non-response rate from the minimum was 25% ($r = 0.75$). Thus, to achieve $n = 384$ completed responses, approximately five hundred (512) undergrad students enrolled in their third (3rd) and fourth (4th) years of undergraduate study at selected public and private universities in Nairobi County, registered and recognized by the Commission for University Education, were contacted.

3.7 Data Collection and Procedure

According to Creswell & Creswell (2018), data collection is a systematic process of gathering and organizing information that enables the researcher to address research questions and hypotheses. In this study, the primary tool collection was a structured questionnaire design to capture responses on the main constructs: Investment Decision (ID_i), Personal Determinants ($PERS_D_i$), Environmental Determinants (ENV_D_i), Technological Determinants ($TECH_D_i$), and Financial Literacy (FL_i). Each construct was operationalized through a set of items measured on a five-point Likert scale ranging from “*strongly disagree*” (1) to “*strongly agree*” (5).

The questionnaire consisted of six sections: demographic characteristics and five thematic sections corresponding to the study variables. Closed-ended Likert items were adopted because they allow quantification of perceptions and behaviors, facilitating statistical modeling of the

relationships between the constructs (Yamashita, 2022). Data collection was scheduled between February 2026 and March 2026. The Google Forms platform was appropriate due to its efficiency, real-time monitoring of responses, cost-effectiveness, and ease of integration with statistical packages (Santoso & Marzuki, 2020; Hasan & Bakar, 2022).

The data collection process followed a structured multi-step procedure. First, universities in Nairobi County accredited by the Commission for University Education were identified and reviewed to confirm their eligibility. Institutions representing both public and private sectors were targeted to ensure balanced coverage and institutional diversity. Second, an institutional permission process was initiated where necessary, including formal requests to relevant university administration offices. Third, the questionnaire link was distributed to potential respondents through multiple channels commonly accessible to university students in Nairobi, including university student association networks, class WhatsApp groups, peer referral chains, and direct digital sharing via email.

To ensure that only eligible participants responded, the questionnaire opened with a brief explanation of the study purpose, a voluntary participation and confidentiality statement, and a set of eligibility screening questions. These screening items required respondents to confirm their age (20 to 27 years), type of university (public or private), name of their university, year of study (third or fourth year), and enrollment status for the 2025/2026 academic year. Only respondents meeting all five eligibility criteria were retained for data analysis.

A total of 512 invitations were distributed to achieve the minimum target of 384 valid completed responses, factoring in the anticipated 25% non-response and ineligibility rate. Periodic reminders were sent through the same distribution channels at two-week intervals during the collection window to boost response rates. Upon closure of the data collection period, all submitted responses were downloaded from Google Forms into Microsoft Excel for initial review, followed by import into STATA version 19 for data screening and analysis.

3.8 Data Analysis Techniques

3.8.1 Composite Score and Descriptive Analysis

Each construct was represented by a variable with a subscript “*i*,” denoting individual respondents. For example, PERS_D_{*i*} was constructed from *m* items answered by respondent “*i*”. Following Taber (2018), a composite approach was used by computing summated mean scores of all relevant items per construct. The generic formula for a composite score is:

$$Xi_i = \frac{1}{m} \sum_{k=1}^m x_{ik} \quad (\text{Eq. 3.2})$$

Where x_{ik} is the response of individual *i* to item *k*, and *m* is the total number of items for the construct.

Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed for all demographic variables and study constructs. Means and standard deviations were calculated for each Likert scale item and for the composite construct scores to characterize central tendency and variability in respondents' perceptions and behaviors.

3.8.2 Inferential Analysis: Multiple Linear Regression

Once the composite indices were computed, inferential analysis proceeded using Ordinary Least Squares (OLS) regression models. Since the dependent variable, Investment Decision (ID), was operationalized as a continuous composite index derived from Likert-scale items measuring investment decision quality, multiple linear regression was considered appropriate for examining the relationships among the study variables (Norman ,2010) and Sullivan & Artino ,2013) The categorical investment asset profile section was used only for descriptive analysis and was not included in the regression models.

The inferential analysis was conducted in three sequential stages to address the study objectives and provide a comprehensive understanding of the determinants of investment decisions among Generation Z university students in Nairobi.

First, simple linear regression models were estimated separately for each determinant. This stage examined the individual effects of Personal Determinants (PERS_D), Environmental Determinants (ENV_D), and Technological Determinants (TECH_D) on Investment Decisions (ID). The purpose was to establish whether each determinant independently exerted a statistically significant influence on investment decision-making behavior.

Second, a combined multiple regression model was estimated by incorporating Personal Determinants, Environmental Determinants, Technological Determinants, and Financial Literacy (FL) simultaneously. This stage allowed the study to evaluate the independent contribution of each predictor while controlling for the influence of the other variables, thereby providing a more realistic representation of investment decision-making behavior.

Third, a moderation analysis was conducted by introducing interaction terms between Financial Literacy and each determinant variable. Specifically, the interaction terms included Personal Determinants $\times$ Financial Literacy, Environmental Determinants $\times$ Financial Literacy, and Technological Determinants $\times$ Financial Literacy. This stage examined whether financial literacy altered the strength or direction of the relationships between the determinants and investment decisions.

The simple regression models were specified as follows:

$$ID_i = \alpha + \beta_1 PERS_D_i + \epsilon_i \quad (\text{Eq. 3.3})$$

$$ID_i = \alpha + \beta_1 ENV_D_i + \epsilon_i \quad (\text{Eq. 3.4})$$

$$ID_i = \alpha + \beta_1 TECH_D_i + \epsilon_i \quad (\text{Eq. 3.5})$$

The combined regression model was specified as:

$$ID_i = \alpha + \beta_1 PERS_D_i + \beta_2 ENV_D_i + \beta_3 TECH_D_i + \beta_4 FL_i + \epsilon_i \quad (\text{Eq. 3.6})$$

Where:

- ID_i = Investment Decision score for respondent i
- α = Constant (intercept)

- $\beta_1, \beta_2, \beta_3$ = Beta coefficients for the respective independent variables
- $PERS_D_i$ = Personal Determinants score
- ENV_D_i = Environmental Determinants score
- $TECH_D_i$ = Technological Determinants score
- ϵ_i = Error term

The significance of each predictor was assessed at the 5% level ($p < 0.05$). Model fit was evaluated using R^2 , adjusted R^2 , and the F-statistic.

With Moderation:

$$ID_i = \alpha + \beta_1 PERS_D_i + \beta_2 ENV_D_i + \beta_3 TECH_D_i + \beta_3 FL_i + \beta_4 (PERS_D_i * FL_i) + \beta_4 (ENV_D_i * FL_i) + \beta_5 (TECH_D_i * FL_i) + \epsilon_i \text{ (Eq. 3.7)}$$

Where: FL_i is the Financial Literacy score (centered) and $(PERS_D \times FL)_i$, $(ENV_D \times FL)_i$, $(TECH_D \times FL)_i$ = Interaction terms between each determinant and financial literacy. All other terms are as defined in the main effects model.

Moderation was confirmed when interaction terms were statistically significant ($p < 0.05$), indicating that the relationship between the independent variable and investment decisions varied as a function of financial literacy. To reduce multicollinearity between the predictors and interaction terms, the variables involved in the interaction effects were mean centered prior to estimation (Baron & Kenny, 1986; Hayes, 2018).

Model adequacy was evaluated using the coefficient of determination (R^2), adjusted R^2 , F-statistics, and the statistical significance of the estimated coefficients, which are widely used indicators for assessing the explanatory power and overall fitness of regression models (Gujarati & Porter, 2019). Additional diagnostic tests were conducted to verify compliance with the assumptions of Ordinary Least Squares (OLS) regression. Multicollinearity was assessed using the Variance Inflation Factor (VIF), while heteroskedasticity was examined using the Breusch-Pagan/Cook-Weisberg test (Hair et al., 2019). Residual normality was evaluated through both graphical and statistical procedures to determine whether the error terms approximated a normal distribution, an important assumption for valid statistical inference (Field, 2018). Where heteroskedasticity was detected, robust standard errors were employed to obtain consistent standard error estimates

and improve the reliability of hypothesis testing (Wooldridge, 2020). All analyses were conducted using STATA statistical software version 19 (StataCorp, 2025).

3.9 Research Quality

3.9.1 Validity

Validity refers to the extent to which the research instrument accurately measures the constructs it is intended to measure and reflects the relationships among the study variables (Haghani, 2023). To ensure the quality and appropriateness of the measurement instrument, the study assessed content validity and construct validity.

Content validity was assessed by mapping each questionnaire item to its corresponding construct and verifying alignment with the theoretical foundations and operational definitions presented in Table 2.2. The questionnaire items were adapted from established literature and previously validated studies, including Lusardi and Mitchell's (2014) financial literacy framework, the Theory of Planned Behavior constructs (Ajzen, 1991), and technology adoption indicators derived from the Technology Acceptance Model (Davis, 1989) and UTAUT framework (Venkatesh et al., 2012). In addition, the instrument was reviewed for clarity, relevance, and consistency with the study objectives.

Construct validity was assessed through the internal consistency and conceptual coherence of the composite indices used in the analysis. Since the study operationalized the main variables as standardized composite indices derived from multiple Likert-scale items, reliability analysis using Cronbach's alpha was used to confirm that the items consistently measured the intended constructs. All constructs exceeded the recommended threshold of 0.70, indicating acceptable internal consistency and supporting the validity of the measurement (Nunnally, 1975; Taber, 2018). Furthermore, the study employed standardized composite measures and diagnostic testing procedures to strengthen measurement accuracy and model appropriateness before estimating the regression models.

3.9.2 Reliability and Diagnostic Tests

Reliability refers to the consistency with which the questionnaire measures a construct across respondents and contexts (Ranganathan et al., 2024). Internal consistency was assessed using Cronbach's alpha (α), with a minimum acceptable threshold of 0.70 (Nunnally, 1975; Taber, 2018). For each construct (ID_i, PSF_i, TPI_i, FL_i), items with low inter-item correlation were reformulated or excluded to maintain consistency (Lee & Kim, 2019). Table 3.4 presents the reliability statistics obtained as follows:

Table 3.4: Reliability Statistics (Cronbach's Alpha)

Construct	No of Items	Cronbach's Alpha (α)
Investment Decisions (ID)	7	0.8538
Personal Determinants (PERS_D)	6	0.8149
Environmental Determinants (ENV_D)	5	0.7720
Technological Determinants (TECH_D)	5	0.8188
Financial Literacy (FL)	3	0.7619

Source: Author's computation using STATA

All five constructs returned Cronbach's alpha values exceeding the 0.70 threshold, indicating acceptable to good internal consistency. Investment Decisions and Technological Determinants demonstrated the strongest reliability at 0.8538 and 0.8188, respectively, while Environmental Determinants recorded the lowest at 0.7720, though still within the acceptable range. These results confirm that the questionnaire items reliably measure their intended constructs.

Multicollinearity was assessed using Variance Inflation Factors (VIF) and Tolerance values. A VIF below 10 and a tolerance above 0.1 indicated the absence of problematic multicollinearity (Lindner et al., 2022). In the pilot study, the mean VIF for the three independent variable constructs was 1.484, indicating no multicollinearity concern (Table 4.10 in the pilot results section).

Heteroskedasticity was tested using the Breusch-Pagan/Cook-Weisberg test. A p-value greater than 0.05 ($\text{Chi}^2 = 2.15$; $\text{Prob} > \text{Chi}^2 = 0.1427$ in the pilot) indicated homoskedastic residuals, satisfying the Ordinary Least Squares (OLS) assumption. To further safeguard inference,

Variance-Covariance Estimation (VCE) with robust standard errors was applied in all final regression models.

Normality of residuals was examined using histograms, Normal Q-Q plots, and the Shapiro-Wilk test. In line with the Central Limit Theorem, with sample sizes approaching and exceeding 300 observations, the distribution of parameter estimates tends toward normality even when the residuals are not perfectly normally distributed (Wooldridge, 2019). The use of robust standard errors further ensured the validity of t-statistics under non-normality.

3.10 Ethical Considerations

The study adhered to the ethical principles outlined by the Strathmore University Institutional Scientific Ethics Review Committee (SU-ISERC). A research permit was sought from the National Commission for Science, Technology, and Innovation (NACOSTI), where applicable. Participants were volunteers, and informed consent was obtained before administering the questionnaire. Respondents were assured of confidentiality, anonymity, and their right to withdraw at any point without penalty. All electronic data were encrypted and stored securely to prevent unauthorized access, data protection (Creswell & Creswell, 2022).

3.11 Chapter Summary

This chapter describes the study's methodological framework, starting with the procedures for gathering data, with a minimum target sample of 384 respondents for a final collection of 321 replies. This was followed by the analytical methods and econometric models that would be used. Further details on the analytical tools and software, the measures adopted to ensure research quality, including reliability and validity, and the ethical safeguards to protect participants. By employing robust econometric techniques alongside rigorous pre-testing and ethical compliance, the study ensures that findings will be reliable, valid, and relevant to the research objectives.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.1 Introduction

This chapter analyzes and interprets the data collection process and presents the empirical findings on the investigation of the determinants of investment decisions among Generation Z university students in Nairobi, Kenya. The analysis is guided by the study objectives, which examine the influence of personal, environmental, and technological determinants on investment decisions, as well as the moderating role of financial literacy.

The chapter begins with an evaluation and presentation of the response rate and data cleaning procedures, followed by a detailed presentation of the demographic characteristics of the respondents. It then proceeds to assess the reliability of the measurement instruments before presenting descriptive statistics of the study variables. Subsequent sections provide inferential analysis, including correlation analysis and regression results, to test hypothesized relationships and moderation effects. The findings are interpreted in relation to the theoretical framework and empirical literature discussed in previous chapters.

4.2 Response Rate

The study targeted a minimum sample of 384 respondents, as determined using Yamane's (1967) formula and supported by statistical power requirements for regression and moderation analysis (Cohen, 1992). To account for an anticipated non-response rate of approximately 25% ($r=0.75$), a total of 512 undergraduate students enrolled in their third (3rd) and fourth (4th) years of study at selected universities in Nairobi County were invited to participate.

A total of 496 responses were initially collected through the online questionnaire. However, a systematic data cleaning process was conducted to ensure that only valid and relevant observations were retained. After applying the criteria below in Table 4.1, a final sample of 321 valid responses was retained for analysis.

Table 4.1: Data Cleaning and Final Sample Determination

Description	Number of Responses	Percentage
Target respondents	512	100.00
Responses Received	496	96.88% of distributed
Excluded - missing university information	(54)	10.89% of received
Excluded - universities outside Nairobi County	(92)	18.55% of received
Excluded - Incomplete/missing key variables	(27)	5.44% of received
Excluded - Outliers	(2)	0.40% of received
Total excluded	(173)	34.88% of received
Final valid sample	321	64.7% of received
Minimum required sample (Cochran, 1977)	384	-

Source: Author's computation using Microsoft Excel and STATA

Table 4.1 summarizes the data cleaning process and the determination of the final analytical sample. The study initially targeted 512 respondents to account for potential non-response, based on a minimum required sample size of 384 derived using Cochran's (1977) formula (Eq. 3.1). A total of 496 responses were collected, representing 96.88% of the distributed questionnaire target.

Following data screening, 173 responses (34.88%) were excluded due to meet study's inclusion criteria or data quality standards. Specifically, 54 responses (10.89%) lacked university identification, 92 responses (18.55%) were from universities located outside Nairobi County, 27 responses (5.44%) contained incomplete or missing key variables required for analysis, and 2 responses (0.44%) were identified as outliers.

Although the exclusion process strengthened the internal validity of the dataset by ensuring consistency with the predefined eligibility criteria, the relatively high exclusion rate may introduce some degree of selection bias if excluded respondents systematically differed from retained respondents in terms of investment behavior, financial literacy, or institutional characteristics (Little & Rubin, 2019). Consequently, the findings should be interpreted primarily within the context of eligible Generation Z students enrolled in Nairobi-based universities.

After data screening and eligibility verification, the final analytical sample consisted of 321 valid responses. Although this fell below the initially targeted minimum of 384 observations derived from Cochran's (1977) large-population formula, the achieved sample remained sufficient for the statistical procedures employed in this study.

The final sample of 321 respondents was considered adequate for the study based on population, statistical, and representativeness considerations. Given the finite nature of the accessible population, the achieved sample exceeded commonly recommended thresholds for multivariate behavioral research and was sufficient for reliable statistical analysis (Krejcie & Morgan, 1970; Cochran, 1977). Additionally, the sample size met statistical power requirements for multiple regression analysis involving several predictors and interaction effects, resulting in stable parameter estimates and statistically significant model outcomes (Cohen, 1992).

The sample also maintained diversity across key demographic and institutional characteristics, including gender, university type, year of study, and income categories, supporting meaningful analysis of Generation Z investment behavior. Although the study employed a stratified institutional sampling framework, variations in response rates across universities resulted in some differences between the planned and achieved sample allocations. Consequently, Table 4.2 compares the targeted and actual respondent distribution across the selected universities to assess the extent of these variations.

Table 4.2: Distribution of Target and Actual Respondents by University

Institution	% of Total	Target Respondents	Response Received	Variance
PUBLIC UNIVERSITIES				
Jomo Kenyatta University of Agriculture and Technology (JKUAT)	13.68%	70	46	24
University of Nairobi	12.92%	66	47	19
Kenyatta University	6.49%	33	19	14
Public Sub-total	33.10%	169	112	57
PRIVATE UNIVERSITIES				
Catholic University of Eastern Africa (CUEA)	8.32%	43	13	30
Daystar University	4.45%	23	10	13
KCA University	12.43%	64	42	22

Mount Kenya University	20.48%	105	69	36
Africa Nazarene University	2.65%	14	1	13
Riara University	2.27%	12	10	2
Strathmore University	4.86%	25	23	2
The Presbyterian University of East Africa (PUEA)	1.72%	9	5	4
United States International University-Africa (USIU-Africa)	3.51%	18	17	1
Zetech University	6.20%	32	19	13
Private Sub-total	66.91%	343	209	134
COMBINED TOTAL	100.00%	512	321	191

Source: Author's computation using Microsoft Excel; CUE (2025), 2025 Universities Graduation Ceremony Booklet, and their respective websites.

The results indicate that, although the sampling design was based on proportional allocation, the realized sample exhibits variations across institutions. Some universities such as United States International University-Africa (USIU-Africa) and Strathmore University, recorded response levels that closely matched or exceeded their proportional targets. In contrast, other institutions, including Africa Nazarene University and the Catholic University of Eastern Africa, recorded lower response rates relative to their assigned quotas.

Variations between the targeted and achieved institutional allocations were expected due to differences in student accessibility, institutional engagement, voluntary participation, and response willingness across universities. Such deviations are common in online survey-based behavioral research involving non-probability participation mechanisms (Cook et al., 2000).

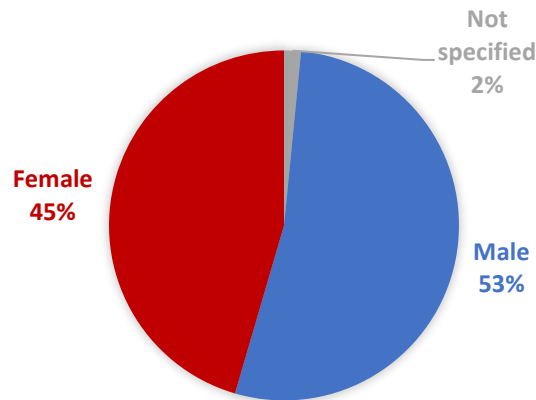
4.3 Demographic Characteristics of Respondents

This section presents the demographic profile of respondents, including gender, age, income level, type of university, and year of study. These Characteristics provide contextual insight into the sample and are important in interpreting the empirical findings.

4.3.1 Gender Distribution

The questionnaires included structured questions on gender, as shown in Figure 4.1 below. This helps assess the representativeness of the sample across gender categories.

Figure 4.1: Gender Distribution



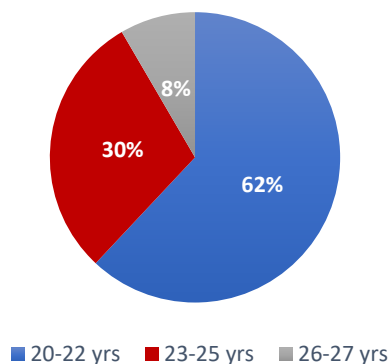
Source: Author's computation using STATA

The results indicate a relatively balanced gender distribution, with male respondents represents 52.96% and female respondents accounting for 45.48%. A small proportion (1.56%) did not specify their gender, enhancing the representativeness of the sample and reducing gender-related bias in the analysis.

4.3.2 Age Distribution

Figure 4.2 below summarizes the age distribution of respondents, which is important in confirming alignments with the defined Generation Z population.

Figure 4.2: Age Group Distribution



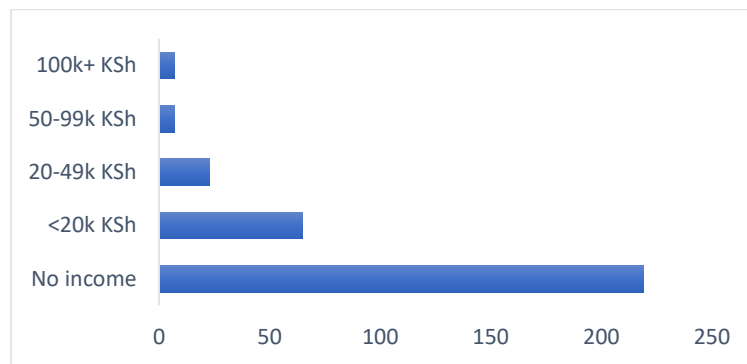
Source: Author's computation using STATA

The majority of respondents (61.99%) fall within the 20–22 years age bracket, followed by 23–25 years (29.60%), and 26–27 years (8.41%). This distribution aligns with the study’s focus on Generation Z students at advanced undergraduate levels, who are transitioning into financial independence.

4.3.3 Income Distribution

Table Figure 4.3 presents respondents’ monthly income levels, which are a critical factor influencing investment capacity and behavior.

Figure 4.3: Income Group Distribution



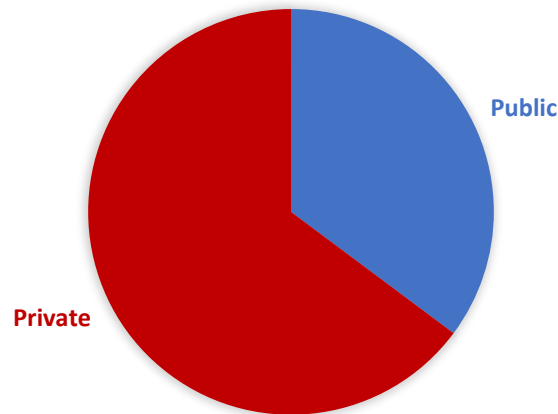
Source: Author’s computation using STATA

A substantial proportion of respondents (68.22%) reported having no personal income, reflecting their status as full-time students. Only a small fraction reported higher income levels. The characteristics of the income level in Figure 4.3 suggest that investment behavior in those decisions may be based more on intentions, knowledge, and access to opportunities rather than actual capital deployment. This is important, as limited income may constrain investment participation and influence risk-taking behavior among Generation Z students (Lusardi & Mitchell, 2014). To address this, the study operationalized investment decisions not only through actual participation but also through investment decision quality indicators, allowing inclusion of respondents with and without income. This ensures capturing both behavioral readiness and actual participation, rather than excluding a large segment of the population.

4.3.4 University Type

The Figure below (4.4) shows the distribution of respondents across public and private universities in Nairobi County.

Figure 4.4: Type of University



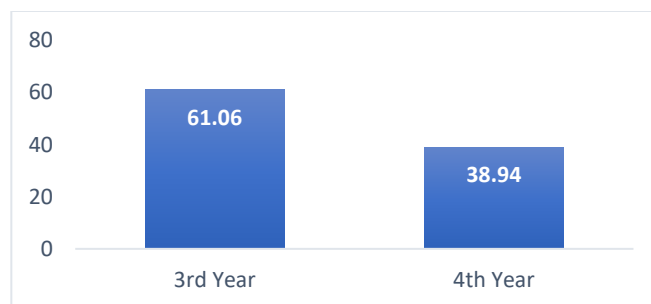
Source: Author's computation using STATA

The majority of respondents (208, 67%) are drawn from private universities, while 33% (113) are from public institutions. This distribution may reflect differences in access to digital platforms, financial education, and exposure to investment opportunities.

4.3.5 Year of study

Figure 4.5 presents the distribution of respondents by year of study, ensuring alignment with the defined study population.

Figure 4.5: Year Distribution



Source: Author's computation using STATA

The sample consists of 61.06% (196) third-year students and 38.94% (125) fourth-year students, consistent with the study's defined population. These students are more likely to exhibit emerging financial autonomy and engagement in investment-related activities.

4.4 Reliability Analysis

The reliability measurement instruments were assessed using Cronbach's alpha (α), which evaluates the internal consistency of the items used to measure each construct. As recommended in the literature, a threshold of 0.70 is considered acceptable for exploratory research, while values above 0.80 indicate good reliability (Nunnally, 1975; Taber, 2018).

Table 4.3: Reliability Statistics (Cronbach's Alpha)

Construct	No of Items	Cronbach's Alpha (α)
Investment Decisions (ID)	7	0.8538
Personal Determinants (PERS_D)	6	0.8149
Environmental Determinants (ENV_D)	5	0.7720
Technological Determinants (TECH_D)	5	0.8188
Financial Literacy (FL)	3	0.7619

Source: Author's computation using STATA

The results in Table 4.3 indicate that all constructs demonstrate satisfactory to high levels of internal consistency. Specifically, the Investment Decision (ID) construct recorded a Cronbach's alpha of 0.8538, indicating strong reliability and suggesting that the items used to capture investment decision behavior are highly consistent. Similarly, the Personal Determinants (PERS_D) construct yielded an alpha value of 0.8149, while the Technological Determinants (TECH_D) construct recorded 0.8188, both exceeding the recommended threshold and confirming the reliability of the scales used to measure individual and technological influences.

The Environmental Determinants (ENV_D) construct reported a Cronbach's alpha of 0.772, which, although slightly lower than other constructs, still falls within the acceptable range, indicating adequate internal consistency. Financial Literacy (FL), with an alpha value of

approximately 0.7619, also demonstrates acceptable reliability, supporting its use as a moderating construct in the study.

4.5 Descriptive Statistics

Descriptive statistics (Table 4.4) were computed to summarize the central tendency and distributional characteristics of the study variables, including Investment Decision (ID), Personal Determinants (PERS_D), Environmental Determinants (ENV_D), Technological Determinants (TECH_D), and Financial Literacy (FL).

Table 4.4: Descriptive Statistics of All Study Constructs

Composite Variables	Mean	Standard Deviation	Kurtosis	Skewness
ID	4.673E-09	7.440E-01	2.825E+00	3.335E-01
PERS_D	1.776E-08	6.946E-01	3.905E+00	-1.377E+00
ENV_D	-2.025E-08	7.361E-01	1.129E+00	-8.928E-01
TECH_D	2.492E-08	6.807E-01	2.903E+00	-1.088E+00
FL	-3.738E-09	7.691E-01	8.389E-01	-8.624E-01

Source: Author's computation using STATA

The mean values for all variables are approximately zero, which reflects the standardization of the composite indices prior to analysis. This transformation facilitates comparability across variables and ensures that regression coefficients can be interpreted without scale-related distortions.

The standard deviation values range between 0.6807 and 0.7691, indicating moderate variability across the constructs. ID exhibits a standard deviation of 0.7440, suggesting a relatively dispersed distribution of responses regarding investment behavior among respondents. FL shows the highest variability (0.7691), implying notable differences in knowledge and financial capability levels among Generation Z students.

The skewness values reveal that most variables exhibit negative skewness, particularly PERS_D (-1.377), TECH_D (-1.088), and ENV_D (-0.893). This suggests that responses are concentrated toward higher values of the scale, indicating that respondents generally report relatively strong personal confidence, technological engagement, and environmental influence in their investment

behavior. ID, however, shows slight positive skewness (0.3335), indicating a more balanced distribution.

Regarding kurtosis, PERS_D (3.905) and ID (2.825) display values close to or slightly above the normal distribution benchmark of 3, suggesting moderate peaked ness. ENV_D and FL constructs exhibit lower kurtosis values (1.129 and 0.8389, respectively), indicating flatter distributions and greater dispersion of responses.

4.6 Correlation Analysis

A pairwise correlation analysis was conducted to examine the relationships between the variables in the study and to assess the degree of association prior to regression analysis. The result from Table 4.5 indicates that all reported coefficients are accompanied by their respective p-values, indicating statistical significance levels.

Table 4.5: Pairwise Correlations Matrix

Variables	(1)	(2)	(3)	(4)	(5)
(1) ID	1				
(2) PERS_D	0.508*** (0.000)	1			
(3) EVEN_D	0.342*** (0.000)	0.426*** (0.000)	1		
(4) TECH_D	0.415*** (0.000)	0.544*** (0.000)	0.479*** (0.000)	1	
(5) FL	0.452*** (0.000)	0.473*** (0.000)	0.343*** (0.000)	0.385*** (0.000)	1

*** $p < 0.01$

Source: Author's computation using STATA

All independent variables are positively and statistically significantly correlated with Investment Decision) at the 1% significant ($p < 0.001$) indicating strong evidence of association between the constructs.

Personal Determinants (PERS_D) exhibit the strongest relationship with Investment Decision ($r = 0.508$), suggesting that individual characteristics such as risk tolerance, self-efficacy, and future orientation play a critical role in shaping investment behavior among Generation Z students. This finding is consistent with behavioral finance literature, which emphasizes the importance of psychological and individual-level factors in financial decision-making (Lusardi & Mitchell, 2014).

Technological Determinants (TECH_D) also show a moderately strong positive correlation with Investment Decision ($r = 0.415$), indicating that access to and use of digital investment platforms significantly influence investment participation. This aligns with existing evidence that digital financial tools enhance perceived behavioral control and facilitate market participation among young investors (Venkatesh et al., 2012)

Financial Literacy (FL) demonstrates a substantial positive correlation with Investment Decision ($r = 0.452$), reinforcing its critical role in enabling informed financial behavior. This supports the argument that individuals with higher financial knowledge are better equipped to evaluate risks and opportunities, leading to more rational investment decisions (Lusardi & Mitchell, 2014).

Environmental Determinants (ENV_D) exhibit a weaker but still significant positive correlation with Investment Decision ($r = 0.342$), indicating that, although to a lesser degree than personal and technological factors, social influences like peer behavior and family expectations contribute to investment participation.

Furthermore, correlations among independent variables are moderate and statistically significant, with values ranging from 0.343 to 0.544. The highest intercorrelation is observed between Personal and Technological Determinants ($r = 0.544$), indicating a potential interaction between individual capabilities and technological engagement. However, these correlations remain below the commonly accepted multicollinearity threshold of 0.80, suggesting that multicollinearity is not a major concern in the regression analysis (Alin, 2010).

The correlation analysis provides preliminary evidence supporting the hypothesized relationship among variables and justifies the inclusion of all constructs in the subsequent regression models.

4.7 Diagnostic Tests

4.7.1 Multicollinearity Test (VIF)

To ensure that the independent variables. Including Personal, Environmental, and Technological determinants, which are not highly correlated with each other, a Variance Inflation Factor (VIF) analysis was conducted and presented in Table 4.6, as follows:

Table 4.6: Multicollinearity Results

Independent Variables	VIF	1/VIF
TECH_D_mean	1.59	.629
PERS_D_mean	1.496	.668
ENV_D_mean	1.366	.732
Mean VIF	1.484	.

Source: Author's computation using STATA

According to Hair et al. (2018), a VIF value exceeding 10 indicates problematic multicollinearity. As the mean VIF is 1.48, well below the conservative threshold of 5.0, it is concluded that multicollinearity does not pose a threat to the stability of the regression coefficients.

4.7.2 Heteroskedasticity Test

The Breusch-Pagan/Cook-Weisberg test was employed to test the assumption of constant variance (homoskedasticity) among the residuals.

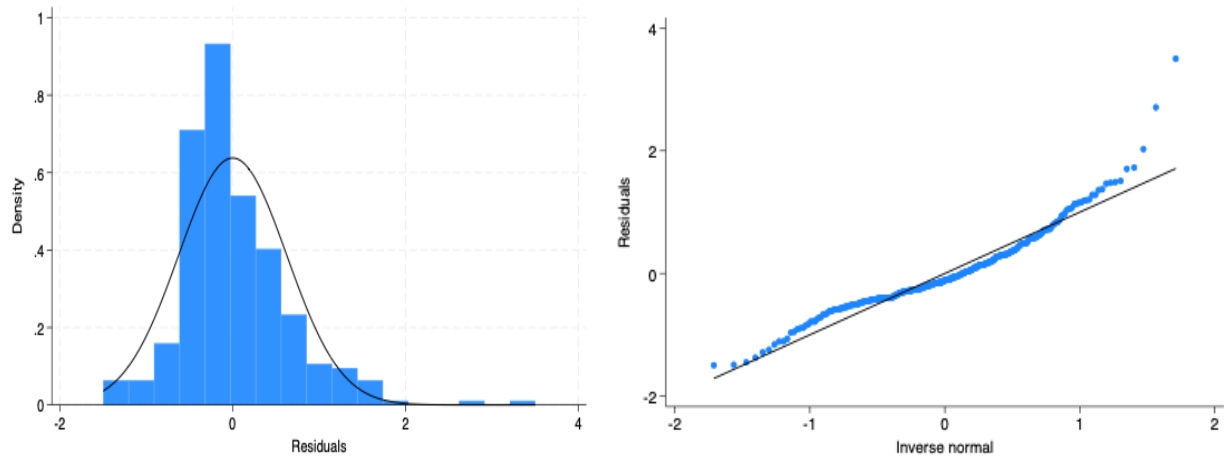
- Chi^2 : 2.15
- Prob > Chi^2 : 0.1427

The null hypothesis (H_0) for this test assumes constant variance. Since the p-value (0.1427) is greater than the significance level of 0.05, we fail to reject the null hypothesis. This indicates that the error terms have a constant variance, fulfilling the homoskedasticity assumption.

4.7.3 Normality of Residuals

The distribution of the residuals was examined using both graphical and statistical methods (Figure 4.6).

Figure 4.6: Normality of Residuals: Histogram and Normal Q-Q Plot



Source: Author's computation using STATA

The Histogram and the Normal Q-Q Plot indicate that while the central mass of the residuals follows the normal curve, there are distinct outliers in the upper tail. This is confirmed by the Shapiro-Wilk test ($W = 0.929$, $p < 0.0001$), which rejects the null hypothesis of normality.

In large samples ($N = 321$), the Central Limit Theorem (CTL) suggests that the distribution of the parameter estimates will tend toward normality even if the errors are not perfectly normal (Wooldridge, 2019). However, the presence of these outliers justifies the use of VCE Robust standard errors in the final inference section to ensure the validity of the t -statistics.

4.7.4 Model Specification (Ramsey RESET Test)

The Ramsey RESET test was conducted to check for omitted variable bias or non-linearities in the model.

- $F(3, 314): 7.31$
- $Prob > F: 0.0001$

The significance p -value suggests that the model may benefit from non-linear terms or that certain variables are omitted. However, given the study's specific focus on the theoretical determinants of Gen Z investing, the model was maintained in its linear form to preserve

interpretability, with the acknowledgement that “*Financial Literacy*” functions as the primary moderating adjustment.

4.7.5 Outlier and Influence Diagnostics

To identify observations with excessive influence on the model, Cook’s Distance and standardized residuals were calculated in Table 4.7, as follows:

Table 4.7: Influence Analysis (Standardized Residuals > |3|)

Obs	Standardized Residual	Cook's D	Leverage
15	3.24	0.029	0.0109
24	5.58	0.0339	0.0043
303	4.32	0.0178	0.0038

Source: Author’s computation using STATA

Three cases (15, 24, and 303) exhibited standardized residuals greater than 3, indicating they are significant outliers. Despite their high residuals, their Cook’s Distance values remain significantly below 1.0, suggesting they do not single-handedly distort the regression coefficients. These cases likely represent "Super-Investors" or unique Gen Z outliers in the Nairobi market

4.8 Inferential Statistics

The analysis proceeded in two stages. First, separate bivariate regression models were estimated to assess the isolated effects of each determinant on investment decisions (Eq 3.3 to 3.5). Second, a combined multivariate regression model and moderation model were estimated using the full specification outlined in Equation 3.6 and Equation 3.7.

4.8.1 Simple Linear Regression Analysis

The regression results in Table 4.8-4.11 provide evidence that personal, environmental, and technological determinants are associated with investment decisions among Generation Z university students in Nairobi, while financial literacy plays both a direct and, in one case, a moderating role. At the same time, the results also show that investment decision-making remains only partially explained by the variables in the model, which is both substantively

meaningful and methodologically expected in behavioral and social research (Chishti, et al., 2025).

4.8.1.1 Influence of Personal Determinants (PERS_D) on Investment Decisions (ID)

The first objective of this study was to assess the influence of personal determinants on investment decisions among Generation Z university students in Nairobi, Kenya. Specifically, this objective sought to examine how individual-level characteristics such as risk tolerance, self-efficacy, and future orientation shape the quality of investment decision-making.

To operationalize this objective, Personal Determinants (PERS_D) were constructed as a composite index derived from multiple Likert-scale items capturing key dimensions of individual investment behavior, including willingness to take risk, confidence in making investment decisions, and long-term financial planning and goal setting. These items were aggregated using mean scores after confirming internal consistency through Cronbach's alpha ($\alpha = 0.8149$), indicating good reliability (Nunnally, 1975; Taber, 2018). The ordinary least squares (OLS) regression was utilized to assess Investment Decision (ID), measured as a composite index of investment quality. The results are presented in Table 4.8.

Table 4.8: Individual Regression Between PERS_D & ID

ID	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
PERS_D_mean	.544	.056	9.78	0.000	.434	.653	***
Constant	-2.087	.218	-9.58	0.000	-2.516	-1.658	***
Mean dependent var		0.000	SD dependent var			0.744	
R-squared		0.258	Number of obs			321	
F-test		95.561	Prob > F			0.000	
Akaike crit. (AIC)		628.449	Bayesian crit. (BIC)			635.992	

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Author's computation using STATA

$$ID_i = -2.087 + 0.544 * PERS_D_i + \epsilon_i$$

Table 4.8 shows that personal determinants have a positive and statistically significant association with investment decisions ($\beta=0.544$, $t= 9.78$, $p < 0.001$). This finding implies that students with stronger financial confidence, clearer long-term orientation, and greater tolerance for calculated financial risk are more likely to engage in structured and informed investment

behavior. A one-unit increase in the composite personal determinants index is associated with an increase of approximately 0.544 units in the standardized investment decision score, suggesting that psychological and behavioral readiness materially improves the quality of investment decision-making among Generation Z students.

The model explains 25.8% of the variance in investment decisions ($R^2 = 0.258$). In social and behavioral research, R^2 of this size should not be dismissed as weak. The coefficient of determination measures the proportion of variance in the outcome explained by the predictors. Still, its interpretation depends heavily on the phenomenon being modeled and the purpose of the analysis. In social science settings, especially when human attitudes, perceptions, and self-reported behaviors are involved, models often yield lower R^2 values because behavior is shaped by many unobserved, context-specific factors.

The result in Table 4.7 indicates that personal determinants are important, but they do not fully account for students' investment decisions. That outcome is substantively plausible. Investment behavior among students is shaped not only by internal dispositions but also by income constraints, parental and peer influences, institutional trust, digital platform design, prior experience, product familiarity, and immediate liquidity needs, many of which are only partially captured in the present model. The relatively moderate R^2 , therefore, reflects the multicausal nature of investment behavior, rather than a defective model per se (Ozili, 2023).

A further way to assess the practical importance of this model is through effect size. Using Cohen's f^2 , where, $f^2 = \frac{R^2}{1-R^2}$, the value for this model is approximately $f^2 = 0.258/0.742 = 0.35$, which is at the threshold Cohen classified as a large effect in multiple regression contexts. Cohen's conventional benchmarks are $f^2 = 0.02$ (small), $f^2 = 0.15$ (medium), and $f^2 = 0.35$ (large) (Selya et al., 2012).

Based on the empirical results in Table 4.7, the study finds strong evidence to conclude that individually, personal determinants significantly influence investment decisions among Gen Z university students in Nairobi. The results confirm that individual characteristics such as risk tolerance, financial self-efficacy, and future orientation play a central role in shaping investment behavior.

4.8.1.2 Effects of Environmental Determinants (ENV_D) on Investment Decisions (ID)

The second objective of this study was to examine the effects of environmental determinants on investment decisions among Gen Z university students in Nairobi. This objective aimed to assess how external social and contextual factors, such as peer influence, family background, and social norms, shape students' investment behavior.

Environmental Determinants (ENV_D) was operationalized by constructing a composite index derived from Likert-scale items capturing peer influence, family financial socialization, social norms toward investing, and exposure to investment behavior within one's immediate environment. These items were aggregated into a mean index after confirming acceptable internal consistency (Cronbach's alpha = 0.772), indicating reliable measurement (Nunnally, 1975; Taber, 2018). Table 4.9 presents the result of the individual relation between ENV_D and ID.

Table 4.9: Individual Regression Between ENV_D & ID

ID	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENV_D_mean	.346	.065	5.34	0	.218	.473	***
Constant	-1.241	.245	-5.07	0	-1.722	-.759	***
Mean dependent var		0.000	SD dependent var		0.744		
R-squared		0.117	Number of obs		321		
F-test		28.470	Prob > F		0.000		
Akaike crit. (AIC)		684.183	Bayesian crit. (BIC)		691.725		

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Author's computation using STATA

$$ID_i = -1.241 + 0.346 * ENV_D_i + \epsilon_i$$

Table 4.9 indicates that environmental determinants also have a positive and statistically significant relationship with investment decisions in the bivariate model ($\beta=0.346$, $t= 5.34$, $p < 0.001$). This suggests that family influence, peer encouragement, social norms, and exposure to investment activity within the respondent's environment are associated with stronger investment decision outcomes. However, the explanatory power of this model is lower than that of personal determinants (PERS_D), with an $R^2 = 0.117$. This reveals that environmental determinants explain 11.7% of the variance in investment decisions. That is modest, but still meaningful. In

fact, Ozili (2023) argues that in social science modeling, R^2 values above 0.10 may still be acceptable when the explanatory variables are theoretically important and statistically significant (Setia, 2023).

This lower explanatory power should not be interpreted as evidence that environmental influences are unimportant. Rather, it suggests that such influences may operate more diffusely and indirectly. Social norms and peer influence often shape exposure, interest, and perceived acceptability of investing, but they may not always translate directly into higher-quality decision behavior once personal agency, financial literacy, and access to technology are considered. In student populations, environmental cues can encourage participation without necessarily guaranteeing disciplined or informed investment behavior. This may explain why the simple model is significant, but the environmental predictor becomes statistically non-significant in the full multivariate specification (Table 4.9).

The study concludes that environmental determinants have a significant but relatively weaker influence on investment decisions among Gen Z students. While social and contextual factors contribute to investment behavior, their effect is largely indirect and less dominant compared to personal determinants.

4.8.1.3 Effects of Technological Determinants (TECH_D) on Investment Decisions (ID)

The third objective of this study was to evaluate the effects of technological determinants on investment decisions among Gen Z university students in Nairobi, Kenya. this objective focused on understanding how digital platforms, fintech tools, and technological accessibility influence investment behavior. Technological Determinants (TECH_D) were constructed as a composite index derived from Likert-scale items capturing components such as ease of use of digital platforms, trust in technology, accessibility of mobile and online investment tools, and influence of digital features such as dashboards and notifications. The relationship between technological determinants and investment decisions was analyzed using OLS regression, with the results presented in Table 4.10.

Table 4.10: Individual Regression Between TECH_D & ID

ID	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
TECH_D_mean	.453	.06	7.51	0	.335	.572	***

Constant	-1.761	.238	-7.41	0	-2.228	-1.293	***
Mean dependent var		0.000	SD dependent var			0.744	
R-squared		0.172	Number of obs			321	
F-test		56.418	Prob > F			0.000	
Akaike crit. (AIC)		663.596	Bayesian crit. (BIC)			671.139	

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Author's computation using STATA

$$ID_i = -1.761 + 0.453 * TECH_D_i + \epsilon_i$$

Table 4.10 shows that technological determinants are positively and significantly associated with investment decisions ($\beta=0.453$, $t= 7.51$, $p < 0.001$). This implies that ease of use of digital platforms, trust in technology, app-based accessibility, and digital convenience are important predictors of investment behavior among Generation Z students. Given the digital-native orientation of this population, such a result is consistent with expectations from the Technology Acceptance Model and related digital adoption frameworks.

The model explains 17.2% of the variance in investment decisions ($R^2 = 0.172$). This level of explanatory power is lower than that of personal determinants but higher than that of environmental determinants. In the behavioral finance context, this suggests that technology is a meaningful enabler of investing, though not sufficient by itself to explain decision quality (Flor & Hansen, 2012). Digital tools can reduce transaction costs and increase access, but access alone does not guarantee rational or well-evaluated investment decisions (Solanki et al., 2019). Students may find platforms usable and attractive while still lacking the knowledge, discipline, or financial resources needed for consistent investment participation

The approximate effect size here is $f^2 = \frac{0.172}{0.82} = 0.21$, which falls in the medium range using Cohen's guidelines. This indicates that technological factors contribute meaningfully to the outcome, even if they do dominate the decision process.

The study finds that technological determinants significantly influence investment decisions among Generation Z university students, primarily by enhancing accessibility and participation through digital platforms. Therefore, with the evidence showing that technology acts as an important enabler of investment behavior, although its effectiveness depends on complementary factors such as personal characteristics and financial literacy.

4.8.2 Combined Regression Model

To provide a more comprehensive assessment of the determinants of investment decisions, a multiple regression model was estimated incorporating personal determinants (PERS_D), environmental determinants (ENV_D), technological determinants (TECH_D), and financial literacy (FL) simultaneously. This approach allows for the evaluation of the independent effect of each variable while controlling for the influence of the others, thereby offering a more realistic representation of decision-making behavior. The results of the combine regression model are presented in Table 4.11.

Table 4.11: Combined Regression Between PERS_D, ENV_D, TECH_D & ID

ID	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
PERS_D	.315	.071	4.46	0	.176	.454	***
ENV_D	.075	.051	1.48	.14	-.025	.175	
TECH_D	.139	.063	2.20	.028	.015	.263	**
FL	.231	.05	4.63	0	.133	.329	***
Constant	0	.034	0.00	1	-.067	.067	
Mean dependent var		0.000	SD dependent var			0.744	
R-squared		0.335	Number of obs			321	
F-test		51.041	Prob > F			0.000	
Akaike crit. (AIC)		599.027	Bayesian crit. (BIC)			617.885	

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Author's computation using STATA

$$ID_i = 0.315 * PERS_{Di} + 0.075 * ENV_{Di} + 0.139 * TECH_{Di} + 0.231 * FL_i + \epsilon_i$$

The result in Table 4.11 presents the combined model, including personal determinants, environmental determinants, technological determinants, and financial literacy as predictors of investment decisions. The model explains 33.5% of the variation in investment decisions ($R^2 = 0.335$), indicating a meaningful level of explanatory power within a behavioral research context.

Compared to the individual regression models presented earlier (Tables 4.8-4.10), the combined model demonstrates how the determinants behave when considered jointly. Specifically, personal determinant ($\beta = 0.315$, $p < 0.001$) remain positive and statistically significant, confirming that individual level characteristics retain independent explanatory power even after controlling for environmental, technological and financial literacy factors.

Similarly, technological determinants ($\beta=0.139$, $p < 0.028$) remain statistically significant, although the magnitude of the coefficient is smaller than in the bivariate model (Table 4.10). This reduction suggests that part of the effect of technology overlaps with other variables, particularly persona; determinants and financial literacy indicating shared explanatory influence across these constructs.

In contrast, environmental determinants are no longer statistically significant ($\beta=0.75$, $p < 0.140$). This change, relative to the bivariate results in Table 4.13, suggest that effect of environmental factors may be indirect or mediated through other variables, particularly personal characteristics and financial literacy. In other words, the influence of peers, family, and social norms may operate through how individuals interpret information, develop confidence, or acquire financial knowledge, rather than exerting a direct effect on decision quality.

Financial literacy emerges as a positive and statistically significant ($\beta=0.231$, $p < 0.001$), indicating that students with higher levels of financial knowledge and capability tend to exhibit stronger investment decision-making outcomes. This finding reinforces the theoretical expectation that financial literacy enhances individuals' ability to evaluate risk and make informed financial choices (Lusardi & Mitchell, 2014).

The model's explanatory power ($R^2 = 0.335$) implies that approximately one-third of the variation in investment decisions is explained by the included variables, while the remaining variation reflects other factors not captured in the model, such as income constraints, prior financial experience, institutional trust, and behavioral biases. In social and behavioral sciences, such levels of explanatory power are common, given the inherently complex and multifactorial nature of human decision-making.

To further assess the magnitude of the model, the effect size was computed using Cohen's f^2 :

$$f^2 = \frac{0.335}{0.665} = 0.50$$

This indicates a large effect size, suggesting that the combined set of determinants makes a substantively meaningful contribution to explain investment decisions among Gen Z students.

4.8.3 Moderations Role of Financial Literacy

The fourth objective of this study was to determine the moderating role of financial literacy on the relationships between personal, environmental, and technological determinants and investment decisions among Generation Z university students in Nairobi, Kenya. To achieve this, interaction terms were introduced into the regression model to assess whether financial literacy alters the strength or direction of these relationships.

Specifically, three interaction terms were constructed: PERS_D*FL, ENV_D*FL, and TECH_D*FL, following mean-centering procedures to reduce multicollinearity (Baron & Kenny, 1986; Hayes, 2018). The results of the moderation analysis are presented in Table 4.12.

Table 4.12: Moderating Role of Financial Literacy and Interaction Factors

ID	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
PERS_D	.273	.074	3.71	0	.128	.418	***
ENV_D	.073	.05	1.45	.147	-.026	.172	
TECH_D	.131	.063	2.08	.038	.007	.254	**
FL	.213	.051	4.19	0	.113	.314	***
int_PERS_D*_FL	-.14	.05	-2.79	.006	-.239	-.041	***
int_ENV_D*FL	.062	.058	1.07	.286	-.052	.175	
int_TECH_D*FL	-.007	.059	-0.12	.903	-.123	.108	
Constant	.025	.036	0.70	.487	-.045	.095	
Mean dependent var		0.000	SD dependent var		0.744		
R-squared		0.350	Number of obs		321		
F-test		69.863	Prob > F		0.000		
Akaike crit. (AIC)		597.810	Bayesian crit. (BIC)		627.982		

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Author's computation using STATA

$$ID_i = 0.025 + 0.273 * PERS_{Di} + 0.073 * ENV_{Di} + 0.131 * TECH_{Di} + 0.213 * FL_i - 0.14 \\ * (PERS_{Di} * FL_i) + 0.062 * (ENV_{Di} * FL_i) - 0.007 * (TECH_{Di} * FL_i) + \epsilon_i$$

The results in Table 4.16 indicate that the moderation model is statistically significant overall ($F = 69.863$, $p < 0.001$), confirming that the inclusion of interaction terms improves the explanatory capacity of the model. The model explains 35% of the variation in investment decisions ($R^2 = 0.350$), representing an increase from $R^2 = 0.335$ in the combined (Table 4.11).

This increase of 0.015 (1.5 percentage points) indicates that the interaction terms contribute additional explanatory power. While this increment may appear modest, it is consistent with moderation analysis in behavioral research, where interaction effects tend to explain smaller portions of variance because they capture conditional rather than direct relationships (Hayes, 2018).

At the level of main effects, personal determinants ($\beta = 0.273$, $p < 0.001$), technological determinants ($\beta = 0.131$, $p = 0.038$), and financial literacy ($\beta = 0.213$, $p < 0.001$) remain statistically significant predictors of investment decisions. Environmental determinants remain statistically insignificant ($\beta = 0.073$, $p = 0.147$), consistent with the findings of the combined model. The key focus of this analysis, however, lies in the interaction terms.

First, the interaction between personal determinants and financial literacy (PERS_D $\times$ FL) is negative and statistically significant ($\beta_i = -0.140$, $p_i = 0.006$). This indicates that financial literacy moderates the relationship between personal determinants and investment decisions. Specifically, as financial illiteracy increases, the strength of the positive relationship between personal determinants and investment decisions decreases. This result suggests that financially illiterate students rely less on personal predispositions, such as confidence or risk tolerance, when making investment decisions, and instead incorporate more objective evaluation and analytical reasoning. In this sense, financial literacy acts as a disciplining mechanism, reducing the extent to which subjective personal traits drive decision outcomes.

Second, the interaction between environmental determinants and financial literacy (ENV_D $\times$ FL) is not statistically significant ($\beta_i = 0.062$, $p_i = 0.286$). This indicates that financial literacy does not significantly alter the relationship between environmental influences and investment decisions within this sample. The implication is that social and peer influences affect students in relatively similar ways regardless of their level of financial literacy.

Third, the interaction between technological determinants and financial literacy (TECH_D $\times$ FL) is also not statistically significant ($\beta = -0.007$, $p = 0.903$). This suggests that financial literacy does not significantly condition the effect of technological factors on investment decisions. In practical terms, digital accessibility and platform usability appear to influence students' investment behavior consistently across different levels of financial literacy. The moderation

results indicate that financial literacy plays a selective moderating role, significantly influencing only the relationship between personal determinants and investment decisions.

4.9 Chapter Summary

This chapter presents the analysis and interpretation of data on the determinants of investment decisions among Generation Z university students in Nairobi, Kenya. It described the response rate, respondent characteristics, reliability assessment, descriptive statistics, correlation analysis, diagnostic tests, and regression results. The findings established that personal determinants, technological determinants, and financial literacy significantly influence investment decisions, while environmental determinants were not significant in the combined model. The moderation analysis further revealed that financial literacy significantly moderates the relationship between personal determinants and investment decisions. Overall, the results indicate that investment decision-making among Generation Z students is primarily influenced by individual attributes, technological factors, and financial capability. The next chapter discusses these findings in relation to the study objectives, theoretical framework, and existing literature.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This Chapter presents a critical discussion of the empirical findings reported in Chapter Four. The central objective of the study was to examine the determinants of investment decisions among Generation Z students in Nairobi, Kenya, with particular emphasis on the moderating role of financial literacy. By relating the regression and moderation results to the theoretical framework and empirical literature reviewed in Chapters One and Two, this chapter interprets the extent to which personal, environmental, and technological determinants explain investment decision-making in the Kenyan university context.

5.2 Summary of the Study Findings

The study found that investment decisions among Generation Z university students in Nairobi are shaped mainly by personal determinants, technological determinants, and financial literacy. Personal determinants emerged as the strongest predictor, suggesting that risk tolerance, financial self-efficacy, and future orientation are central to investment decision-making. Technological determinants also significantly influenced investment decisions, confirming the importance of digital platforms and fintech access in shaping youth investment behavior. Environmental determinants were significant when examined independently but lost significance in the combined model, implying that social and peer influences may operate indirectly through personal confidence, financial exposure, or technology use. Financial literacy had a significant direct effect on investment decisions and moderated the relationship between personal determinants and investment decisions, suggesting that financial knowledge disciplines reliance on subjective confidence and personal heuristics. Overall, the findings show that investment behavior among Generation Z students is not driven by one factor alone but by the interaction of individual agency, digital access, and financial capability.

5.3 Discussions of Findings

This section discusses the empirical findings in relation to the study objectives, theoretical framework, and the empirical literature. Specifically, the discussion examines how personal, environmental, and technological determinants influence investment decisions among

Generation Z university undergraduate students in Nairobi, and how financial literacy moderates these relationships. The findings are interpreted against the propositions of the Theory of Planned Behavior, Modern Portfolio Theory, and Decision Theory, while also drawing on behavioral finance and technological adoption literature.

5.3.1 Relationship between Personal Determinants and Investment Decisions

The first specific objective of this study was to assess the influence of personal determinants on investment decisions among Generation Z university students in Nairobi. The empirical results consistently support the hypothesis that personal determinants exert a positive and statistically significant influence on investment decisions. In the bivariate model, personal determinants recorded the largest coefficient and the highest explanatory power among the three determinant categories tested individually. This effect remained the strongest in the combined model, confirming that individual-level factors are central in shaping investment decision quality among Generation Z students.

This finding is consistent with the theoretical and empirical arguments presented in the literature review. The Theory of Planned Behavior posits that behavioral intentions, and by extension, decisions, are shaped by attitudes formed through personal beliefs, values, and self-evaluations of behavioral control (Ajzen, 1991). The personal determinants construct in this study, which encompasses risk tolerance, financial self-efficacy, and future financial orientation, directly operationalizes Ajzen's (1991) notion of perceived behavioral control: students who are more confident in their financial ability, more willing to tolerate calculated risk, and more oriented toward future financial goals are more likely to make structured and deliberate investment decisions. This interpretation also aligns with Modern Portfolio Theory, which assumes that individual investor preferences and risk-return expectations shape asset allocation behavior (Markowitz, 1952). The stronger means observed for financial orientation and self-efficacy, relative to risk tolerance, suggest that students first require confidence and long-term orientation before they are willing to engage more actively with investment risk.

Empirically, the result is consistent with a substantial body of evidence. Lusardi and Mitchell (2014) identify personal financial attitudes and confidence as foundational determinants of investment participation across all age cohorts, while Tikhomirova (2020) documents that Gen

Z's investment behavior is strongly shaped by individual preferences for digitally accessible, high-return assets. Bajo et al. (2023) further confirm that financial self-efficacy, the belief in one's capability to make informed decisions, is among the most robust predictors of investment engagement among young adults. In the Kenyan context, Waweru and Kamau (2023) corroborate these findings, demonstrating that income stability, savings orientation, and personal financial goals are significant enablers of investment participation among university-educated youth. The current study extends this literature by showing that among Nairobi-based Generation Z students, personal determinants remain significant even after controlling for environmental, technological, and financial literacy effects.

The dominance of personal determinants over environmental and technological factors in the combined model is noteworthy and merits critical reflection. It challenges the frequently advanced thesis in African behavioral finance literature that environmental and social influences are the primary drivers of youth investment behavior (Changwasha & Mutezo, 2023; Ndou, 2023). The present findings suggest that for Generation Z students in Nairobi, a population that is both digitally literate and increasingly financially independent, individual agency and internal psychological predispositions matter more than external social pressure when the full set of determinants is controlled for simultaneously. This aligns more closely with the individualistic agency assumptions embedded in Decision Theory (von Neumann & Morgenstern, 1944; Pathak & Thapa, 2024) than with purely social or environmental frameworks. In practical terms, this means that even in a socially connected and digitally saturated environment, Gen Z students in Nairobi do not appear to rely solely on social cues; rather, their personal confidence, goal orientation, and willingness to engage with risk remain foundational.

Although personal determinants are the strongest predictor, the $R^2 = 0.258$ from the bivariate model indicates that individual-level factors alone account for roughly one quarter of the variance in investment decisions. This implies that no single personal trait or constellation of traits is deterministic. Investment behavior among students is also shaped by income constraints, 68.22% of respondents reported no personal income, which interacts with risk tolerance and financial goals to limit actual participation, even where intentions are strong. Prospect Theory (Kahneman & Tversky, 1979) offers a useful explanatory lens here: for income-constrained students, loss aversion may override favorable personal dispositions, creating a gap between

intention and behavior. This is consistent with Armansyah et al.'s (2023) observation that behavioral biases such as overconfidence and fear of missing out complicate personal investment strategies even among high-literacy individuals.

The finding also has an important methodological implication. The use of a standardized composite for personal determinants means that the regression coefficient reflects the joint influence of risk tolerance, self-efficacy, and financial orientation rather than the influence of any single sub-construct. Future disaggregated analysis at the sub-construct level may reveal heterogeneous effects; for instance, risk tolerance may matter more for participation in cryptocurrencies, while financial orientation may be more predictive of diversification breadth.

Theoretically, this finding strengthens the relevance of the Theory of Planned Behavior because personal determinants reflect attitudes and perceived behavioral control, both of which shape investment intentions and actions (Ajzen, 1991). It also supports Modern Portfolio Theory to the extent that students with stronger financial orientation and risk awareness are more likely to evaluate investment decisions through a risk-return lens (Markowitz, 1952). However, the finding also shows that Gen Z investment behavior is not purely rational, as income constraints and behavioral biases may prevent personal confidence from translating into optimal portfolio choices. This reinforces the need to interpret MPT alongside behavioral finance, particularly Prospect Theory, which explains how loss aversion and subjective risk perception affect financial decisions under uncertainty (Kahneman & Tversky, 1979).

5.3.2 Relationship between Environmental Determinants and Investment Decisions

The second specific objective of this study was to examine the effects of environmental determinants on investment decisions among Generation Z university students. The empirical results show that environmental determinants have a positive and statistically significant relationship with investment decisions in the bivariate model. However, in the combined model, the coefficient becomes statistically insignificant. This pattern is an important empirical result because it suggests that environmental determinants matter, but their influence may be indirect or contingent on other factors.

The bivariate result resonates with a substantial empirical tradition. Social Learning Theory (Bandura, 1977) and the Theory of Planned Behavior (Ajzen, 1991) both position environmental

cues, including peer behavior, family norms, and social media content, as significant determinants of behavioral intentions. Legenzova and Lecké (2025) document that online investment communities and financial influencers are among the most impactful environmental signals for Gen Z investment behavior globally, while Bursztyn et al. (2014) demonstrate that peer observational learning strongly predicts financial market participation among young adults. In the Kenyan context, Kamunzyu and Kariuki (2019) argued that Gen Z investors in Nairobi frequently rely on social cues to compensate for limited personal financial knowledge, making environmental influences particularly salient. The positive bivariate coefficient and the significant positive correlation ($r = 0.342$) are therefore consistent with these theoretical and empirical expectations.

The most defensible interpretation is that the effect of environmental determinants operates partly through personal dispositions and financial literacy rather than independently of them. Specifically, peer influence and social media exposure may enhance students' financial confidence and future orientation, two dimensions captured in the personal determinants construct. When personal determinants are included in the same model, they absorb the variance that environmental factors explain through these mediating pathways, rendering the direct environmental coefficient insignificant. This interpretation is consistent with the hierarchical mediation argument advanced by Ajzen (1991), where subjective norms, the environmental component of TPB, influence behavior primarily through their effect on perceived behavioral control and attitudes rather than directly.

This finding stands in partial tension with studies that assign primary explanatory weight to environmental factors in African investment contexts. Sabri and MacDonald (2010) and Changwesha and Mutezo (2023) both identify peer and family influence as dominant predictors of youth investment behavior in similar population contexts, while Ndou (2023) emphasizes macroeconomic environmental conditions as the primary moderator of asset preferences among African Gen Z investors. The current study's evidence suggests that, when personal and technological variables are jointly modeled, environmental factors function as contextual enablers rather than independent drivers. This is not a contradiction of those earlier findings but rather a refinement: environmental influences matter most where personal agency is weak or

underdeveloped, a condition that does not uniformly hold across all Gen Z students in a digitally active, university-educated sample in Nairobi.

Notably, the non-significance of the environmental determinant in the full model does not mean that social context is irrelevant to investment decisions in this population. It means, more precisely, that the variance that environmental factors contribute is shared with, and statistically absorbed by, personal and technological factors when all three are modeled simultaneously. This interpretation aligns with Ozili's (2023) methodological argument that bivariate significance combined with multivariate non-significance often signals mediation or variable overlap rather than the absence of a true effect. Future research employing structural equation modeling would be well-positioned to disaggregate these pathways and empirically test mediation, an analytical step that is beyond the scope of the current cross-sectional regression design.

Another consideration relates to the sample's composition. With 68.22% of respondents reporting no personal income and the majority drawn from private universities, where family economic resources may be higher than average, the environmental influence may already be indirectly embedded in baseline personal predispositions. Students from families with an investment culture may inherit financial orientations that manifest in the personal determinants construct rather than in a separate, externally measurable environmental factor. This potential confounding between personal and environmental origins of financial attitude warrants careful longitudinal investigation.

In theory, the findings partially support the Theory of Planned Behavior and Social Learning Theory. The bivariate significance of environmental determinants confirms that subjective norms, peer influence, and family financial socialization matter in shaping investment attitudes (Ajzen, 1991; Bandura, 1977). However, the loss of significance in the combined model suggests that these social influences may not directly determine investment decisions once personal agency and technological access are considered. This implies that environmental influences may function as background conditions that shape attitudes indirectly, rather than as independent predictors of investment decision quality.

5.3.3 Relationship between Technological Determinants and Investment Decisions

The third specific objective was to evaluate the effects of technological determinants on investment decisions among Generation Z university students. The findings show that technological determinants are positively and significantly associated with investment decisions in both the bivariate and combined regression models. Although the strength of the relationship declines when other predictors are included, technological determinants remain statistically significant, indicating that they exert an independent influence on investment behavior.

This finding is highly consistent with the Technology Acceptance Model (Davis, 1989) and its extensions in the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2012), both of which frame perceived usefulness and ease of use as the primary antecedents of technology adoption in behavioral contexts. For Generation Z students, a cohort characterized by digital nativity, smartphone ubiquity, and exposure to fintech platforms such as M-Pesa, DhowCSD, and mobile brokerage applications, the reduction in transaction costs, enhancement of information accessibility, and intuitive interface design offered by digital investment tools directly strengthen perceived behavioral control and investment intention (Davis, 1989; Vangala, 2024). The present finding confirms what Nganga (2025) documents in the Kenyan fintech landscape: that mobile-based investment platforms are actively reshaping participation patterns, particularly among youth with limited access to traditional brokerage infrastructure.

The result also aligns with the broader empirical literature. Mou (2024) and Purnamasari et al. (2025) both demonstrate that access to digital investment platforms is a significant predictor of investment participation among young adults in emerging economies, while Tollefson (2023) confirms that digital platform accessibility reduces the behavioral entry barriers that traditionally constrain younger, income-limited investors. In the Kenyan context specifically, the finding reflects the analytical puzzle posed in the study's problem statement: despite over 84% mobile-money penetration among youth (CBK, 2023), fewer than 18% of Gen Z invest in formal financial assets (FSD Kenya, 2024). The present result suggests that technological determinants do positively influence investment decisions where students have exposure to investment-specific digital platforms; the limiting factor is therefore not technology acceptance per se, but broader access and awareness of investment-specific applications beyond general mobile payment tools.

The attenuation of the technological determinant coefficient in the combined model (from $\beta = 0.453$ in the bivariate to $\beta = 0.139$ in the multivariate specification) warrants critical attention. This reduction indicates that a portion of the variance in investment decisions attributed to technology in isolation is shared with personal determinants, particularly self-efficacy, and with financial literacy. This is theoretically coherent: students with stronger personal financial confidence and higher financial literacy are more likely to adopt and effectively use digital investment tools. The high intercorrelation between TECH_D and PERS_D ($r = 0.544$) identified in the correlation matrix reinforces this overlap, though both constructs retain unique explanatory power sufficient to sustain statistical significance in the multivariate model.

A critical tension in the literature deserves acknowledgment. While the present finding affirms the enabling role of technology, a parallel strand of evidence cautions against technological optimism. Chen et al. (2022) demonstrate that information overload and exposure to unverified financial content on digital platforms can distort investment judgment, particularly among inexperienced investors. Changweshia and Mutezo (2023) similarly document that viral financial misinformation on social media platforms fosters herd behavior and speculative trading among Gen Z. The descriptive finding that 39.9% of respondents in this study reported cryptocurrency participation, an asset class notably volatile and susceptible to social media-driven price movements, may reflect precisely this dynamic. Technological access, in other words, is a double-edged enabler: it democratizes participation but also amplifies behavioral vulnerabilities that only financial literacy can mitigate.

Thus, the findings affirm that technological determinants are a major component of Generation Z investment behavior in Nairobi. They support the proposition that digital tools enhance market participation, but they also reinforce the need, identified in the literature, for complementary financial capability and critical evaluation skills if technology is to improve not only access but also decision quality.

This finding extends the Theory of Planned Behavior by showing that technology strengthens perceived behavioral control: when students find digital platforms accessible, trustworthy, and easy to use, they are more likely to engage in investment decision-making. The result is also consistent with the Technology Acceptance Model, which identifies perceived usefulness and

perceived ease of use as drivers of technology adoption (Davis, 1989). However, from the perspective of Modern Portfolio Theory, access to technology alone does not guarantee efficient portfolio allocation; students still require financial knowledge to evaluate risk, diversification, and expected returns. Therefore, technology should be understood as an enabler of participation rather than a substitute for rational investment capability.

5.3.4 The Moderating Role of Financial Literacy

The fourth specific objective was to determine the moderating role of financial literacy on the relationships between personal, environmental, and technological determinants and investment decisions. The findings show that financial literacy has a strong and significant direct effect on investment decisions across the models. This confirms that students with higher financial literacy tend to make better-quality investment decisions, even when other determinants are held constant. In addition, moderation analysis reveals that financial literacy significantly moderates only the relationship between personal determinants and investment decisions, while its interactions with environmental and technological determinants are not statistically significant. This is consistent with Lusardi and Mitchell's (2014) foundational argument that financial literacy is not merely a background characteristic but an active cognitive resource that shapes how individuals process financial information and evaluate investment opportunities.

Among the three interaction terms, only the PERS_D*FL interaction is statistically significant ($\beta = -0.140$, $p = 0.006$). This negative sign indicates that financial literacy attenuates the positive relationship between personal determinants and investment decisions: as financial literacy increases, the strength of the association between personal dispositions and investment behavior weakens. This is the central and most theoretically provocative finding of the moderation analysis, and it merits extended critical engagement.

The conventional expectation in the literature is that financial literacy amplifies the positive relationships between behavioral determinants and investment outcomes, that financially literate individuals convert their personal dispositions, environmental signals, and technological access into better decisions more efficiently (Lusardi & Mitchell, 2014; Wang et al., 2024; Hussain et al., 2022). The negative moderation coefficient challenges this expectation, at least in the specific context of personal determinants. Rather than amplifying the effect of personal

dispositions, financial literacy appears to discipline or equalize them. A plausible and theoretically defensible interpretation is that students with higher objective financial knowledge rely less exclusively on personal confidence, future orientation, and risk preferences as the basis for investment decisions, and instead incorporate more formal, evidence-based evaluation criteria, asset fundamentals, diversification principles, risk-adjusted returns, into their decision process. In this sense, financial literacy functions as a disciplining mechanism that reduces the decision's dependence on potentially biased personal heuristics, consistent with Zhu and Xiao's (2022) finding that financial literacy reduces susceptibility to behavioral biases, including overconfidence and loss aversion.

This interpretation is further corroborated by the observed discrepancy between financial self-efficacy (mean = 4.06, reflecting strong confidence) and objective financial knowledge (mean = 3.42 out of 5, reflecting moderate actual knowledge). This gap is a manifestation of the Dunning-Kruger effect (Kruger & Dunning., 1999) in a financial context: students with high personal dispositions but moderate actual knowledge may exhibit inflated confidence that drives investment intentions beyond what objectively justified financial knowledge would warrant. As objective knowledge increases, this overconfidence premium diminishes, producing the observed negative attenuation of the personal determinants effect. Lührmann et al. (2018) document a closely analogous mechanism in a study of adolescent financial decision-making, finding that improved financial knowledge reduced the weight placed on subjective self-assessments in investment-related choices. The present finding thus confirms, in a Kenyan Gen Z context, a pattern that has been identified in European youth financial behavior.

This result also has an important implication for the theoretical frameworks deployed in this study. Decision Theory (von Neumann & Morgenstern, 1944) assumes that better-informed agents make decisions that more closely approach expected utility maximization. The negative moderation result is consistent with this prediction: financially literate students move toward more objective, analytically grounded investment decisions and away from affect-driven or heuristic-based choices rooted in personal traits. Modern Portfolio Theory (Markowitz, 1952) similarly predicts that rational, informed investors optimize portfolios based on risk-return analysis rather than personal confidence or emotional orientation. The attenuation of personal determinants by financial literacy is therefore not a contradiction of these theories but their

empirical actualization: literacy corrects the deviation from rationality that personal heuristics introduce.

The non-significant moderation effects for environmental and technological determinants ($\beta = 0.062$, $p = 0.286$ and $\beta = -0.007$, $p = 0.903$, respectively) are equally informative, though they must be interpreted with appropriate caution. The absence of a significant interaction between financial literacy and environmental determinants suggests that the influence of peer pressure, family norms, and social media on investment decisions does not meaningfully vary with literacy level in this sample. This implies that environmental cues are processed in broadly similar ways by students irrespective of their financial knowledge. A plausible explanation is that social influence operates through affective and normative channels, the desire to conform, the fear of social exclusion, the excitement of peer participation, which are fundamentally emotional rather than cognitive processes and therefore less susceptible to modification by financial knowledge (Bandura, 1977; Bursztyjn et al., 2014). Madinga et al. (2022) note that the social dimensions of investment behavior are more resistant to literacy-based interventions precisely because they engage emotional rather than analytical processing systems.

The non-significant interaction between financial literacy and technological determinants suggests that platform usability, digital accessibility, and perceived trust in technology influence investment decisions in broadly similar ways regardless of literacy level. This finding is noteworthy given the prevailing hypothesis in the literature that financial literacy amplifies the benefits of technological access (Vangala, 2024; Purnamasari et al., 2025). One interpretation is that, at the usage and participation level captured by this study's TECH_D construct, the threshold of digital skill required to participate in available investment platforms is modest enough that financial literacy does not meaningfully differentiate user behavior. More sophisticated digital behaviors, such as algorithmic trading, derivatives usage, or robo-advisor optimization, might require higher financial literacy thresholds to execute, and a moderation effect might become detectable in a sample with more advanced technological engagement.

In general, the moderation results suggest that financial literacy functions primarily as a cognitive regulatory mechanism that disciplines individual-level heuristics and dispositions, rather than as a universal amplifier of all investment-relevant behavioral channels.

The finding that financial literacy significantly moderates the relationship between personal determinants and investment decisions suggests that the influence of individual attributes such as risk tolerance, financial attitudes, and confidence depends partly on the level of financial knowledge possessed by the student. Students with higher levels of financial literacy are better able to interpret financial information, evaluate investment alternatives, and align their personal preferences with informed investment choices. Consequently, personal determinants are more likely to translate into sound investment decisions when supported by adequate financial knowledge and understanding.

This finding supports the Theory of Planned Behavior, which posits that perceived behavioral control influences decision-making outcomes. Financial literacy enhances an individual's ability to understand and evaluate investment opportunities, thereby strengthening the effect of personal characteristics on investment decisions. The result therefore indicates that financial literacy functions as an enabling factor that improves the quality and effectiveness of investment decision-making among Generation Z university students rather than merely increasing their willingness to invest.

5.4 Conclusions

This study examined the determinants of investment decisions among Generation Z university students in Nairobi, Kenya, and assessed the moderating role of financial literacy. The findings indicate that personal determinants significantly influence investment decisions, suggesting that factors such as financial confidence, risk tolerance, and future financial orientation play an important role in shaping investment behavior among Generation Z students.

The study further concludes that environmental determinants do not exert a significant independent influence on investment decisions when considered alongside personal and technological factors. Although social influences such as peers, family, and social media may contribute to investment awareness and exposure, their effect appears secondary to individual characteristics and digital engagement.

The findings also establish that technological determinants significantly influence investment decisions. Access to digital financial platforms, investment applications, and online financial

information enhances students' ability to engage in investment-related activities and supports informed decision-making.

Finally, the study concludes that financial literacy plays both a direct and a moderating role in investment decision-making. Financial literacy significantly improves investment decision quality and strengthens the relationship between personal determinants and investment decisions. However, it does not significantly moderate the relationships between environmental determinants, technological determinants, and investment decisions. Overall, the study concludes that investment decision-making among Generation Z university students is primarily driven by personal factors, technological accessibility, and financial literacy.

5.5 Policy and Practical Recommendations

5.5.1 Strengthen Financial Literacy Programmes in Universities

This study recommends that universities should integrate practical financial literacy programmes into undergraduate education to improve students' ability to make informed investment decisions. The programmes should go beyond basic financial concepts and emphasize investment planning, risk assessment, portfolio diversification, and evaluation of investment opportunities. This recommendation is informed by the finding that financial literacy has both a direct effect on investment decisions and a significant moderating effect on the relationship between personal determinants and investment decisions. Enhancing students' financial knowledge would therefore improve their capacity to translate personal confidence and financial aspirations into sound investment choices.

5.5.2 Utilize Digital Platforms for Investment Education

Further the study recommends that Universities, fintech firms, and the Capital Markets Authority should leverage digital platforms to deliver accessible and engaging investment education to Generation Z students. Given the significant influence of technological determinants on investment decisions, digital investment applications and financial platforms should incorporate educational features such as investment tutorials, portfolio guidance, risk alerts, and financial

planning tools. Such initiatives would enable students to access investment information through platforms they already use while promoting informed and responsible investment behavior.

5.5.3 Promote Affordable Investment Opportunities for Students

The study also recommends that financial institutions and investment service providers should develop investment products that are accessible to university students and young investors with limited financial resources. Products with low minimum investment requirements, flexible contribution structures, and simplified onboarding processes would reduce financial barriers to participation. Considering that a large proportion of respondents reported having limited or no personal income, creating affordable investment opportunities would enable students to apply their financial knowledge in practice and gradually develop long-term investment habits.

5.5.4 Support Structured Peer-Based Financial Learning

Further, the study recommends that Universities should establish and strengthen investment clubs, mentorship programmes, and peer-learning forums to promote positive financial socialization among students. Although environmental determinants were not significant in the combined regression model, they demonstrated significant relationships with investment decisions in the bivariate analysis, indicating that peers, family, and social networks continue to influence financial behavior. Structured peer-learning initiatives can therefore provide students with opportunities to share experiences, discuss investment strategies, and access credible financial information in a supportive environment.

5.5.5 Enhance Investor Protection and Youth Investment Policies

The study also recommends that Financial regulators, particularly the Capital Markets Authority, should strengthen youth-focused investor education and investor protection initiatives within the rapidly growing digital investment environment. This may include simplified risk disclosures, awareness campaigns on investment fraud, and guidelines for digital investment platforms targeting young investors. As technology increasingly shapes investment decisions among Generation Z students, regulatory interventions are necessary to ensure that greater access to investment platforms is accompanied by adequate protection and informed decision-making.

5.6 Limitations of the Study

This study is subject to several limitations that qualify the scope and generalizability of the findings and should be considered when interpreting the results. First, the cross-sectional research design, while appropriate for examining associations among variables at a single point in time, precludes causal inference. The regression and moderation results establish the direction and strength of associations between determinants and investment decisions but cannot confirm causal directionality. It is equally plausible, for instance, that students who already make high-quality investment decisions develop stronger financial self-efficacy as a consequence of their investment experience, reversing the assumed causal pathway from personal determinants to investment decisions. Longitudinal panel data designs would be necessary to establish causality and to track how determinants evolve alongside investment behavior over students' academic trajectories.

Second, the study's final sample of $N = 321$, while analytically adequate based on post-hoc power analysis, falls below the pre-specified minimum target of 384. This shortfall limits statistical power for detecting small moderation effects. The non-significance of the FL*ENV_D and FL*TECH_D interaction terms should therefore be interpreted as insufficient evidence rather than definitive evidence of no moderation, particularly given that interaction terms are inherently underpowered in typical behavioral survey samples (Hayes, 2018). Future studies with larger samples, ideally above 500, would improve the precision of moderation estimates.

Third, all independent variables, the moderator, and the dependent variable were measured through self-reported survey responses from the same respondents at the same time, introducing the possibility of common method bias. Although Harman's single-factor test found the first unrotated factor to account for only 31.4% of total variance, well below the 50% threshold of concern, this test is recognized as a conservative and imperfect diagnostic (Podsakoff et al., 2003). Future research should employ procedural remedies for common method bias, such as temporal separation of predictor and outcome measurement, or physiological markers of investment intention, to supplement the statistical test applied here.

Fourth, the Investment Participation Profile (IDPP) construct was operationalized as a multiple-response categorical question and analyzed through frequency counts and a composite breadth score, rather than as a continuous outcome variable. This limits the comparability of IDPP findings with IDQ-based regression results and precludes fully integrated structural modeling of both dependent variable components. The two components of the investment decision construct, quality and participation profile, reflect distinct behavioral dimensions that may have different determinant structures, a differentiation that the present study could only partially explore.

Fifth, the sample is restricted to third- and fourth-year undergraduate students at selected universities in Nairobi County recognized by the Commission for University Education. While this restriction ensures a focused and methodologically consistent population, it limits the external validity of the findings. Generation Z students in other Kenyan counties, those enrolled in technical and vocational education, those in earlier years of study, and working Gen Z youth not in formal education may exhibit systematically different investment behaviors and determinant structures. The findings are therefore best understood as contextually specific to educated, urban Gen Z students in Kenya's principal metropolitan financial center.

5.7 Areas for Future Research

Several directions for future research emerge from this study's findings, limitations, and theoretical contributions. First, future research should employ longitudinal designs to track how personal, environmental, and technological determinants of investment decisions evolve as Generation Z students' progress from university to early professional life. A panel study following the same cohort from their third year of university through their first five years of employment would provide causally richer evidence on the determinants of investment behavior and the mechanisms through which financial literacy moderates these relationships over time.

Second, the non-significant moderation effects for environmental and technological determinants should be revisited using larger samples and more granular constructs. The present TECH_D construct captures general digital platform adoption; future research should disaggregate this into advanced digital investment behaviors, including algorithmic trading, robo-advisor usage, cryptocurrency portfolio management, and digital asset diversification, where financial literacy thresholds may be higher and moderation effects more detectable. Similarly, the environmental

determinants construct could be decomposed into distinct social influence channels (peer-to-peer, family, social media, and institutional trust) to test whether financial literacy moderates some channels but not others.

Third, the study's finding that environmental determinants are absorbed by personal and technological controls in the full model warrants structural equation modeling analysis to formally test mediation pathways. Specifically, future research should examine whether financial self-efficacy and financial orientation mediate the relationship between environmental determinants and investment decisions, thereby explaining the pattern observed in the present study's multivariate findings.

Fourth, this study restricted its scope to university-educated Gen Z students in Nairobi. Extending the research to non-university-educated Gen Z youth, to students in other Kenyan counties outside Nairobi, and to cross-country comparative studies within the East African Community would illuminate the extent to which the present findings are generalizable and how institutional, cultural, and infrastructural differences across settings shape investment determinants. Cross-country studies involving comparable Gen Z populations in Uganda, Tanzania, Rwanda, and Ethiopia, all experiencing rapid fintech penetration, would be particularly valuable.

Fifth, the qualitative dimensions of investment decision-making among Generation Z were not captured in this quantitative design. Future mixed-methods studies should integrate in-depth interviews or focus group discussions with Gen Z investors to explore the subjective meanings attached to investment decisions, the role of trust and perceived legitimacy in platform adoption, and the emotional dynamics of risk-taking in digitally mediated environments. Qualitative inquiry would be particularly valuable for understanding the cryptocurrency participation pattern observed in this study, why nearly 40% of income-constrained, risk-averse students engage with a highly volatile asset class, a question that regression analysis cannot fully answer.

Finally, the study identified a Dunning-Kruger-type discrepancy between financial self-efficacy and objective financial knowledge in this sample. Future intervention research should test whether targeted financial literacy programs, specifically those that expose students to their own knowledge gaps through calibrated self-assessment instruments, can reduce this discrepancy and

whether doing so improves investment decision quality. Such experimental designs would provide the most direct evidence on the causal effectiveness of financial literacy education as a policy tool, moving beyond the correlational evidence produced by cross-sectional studies such as the present one.

REFERENCES

- Abbasi, G. A., Kumaravelu, J., Goh, Y. N., & Dara Singh, K. S. (2021). Understanding the intention to revisit a destination by expanding the theory of planned behaviour (TPB). *Spanish Journal of Marketing - ESIC*, 25(2). <https://doi.org/10.1108/SJME-12-2019-0109>
- Abdelsalam, O., Chantziaras, A., Joseph, N. L., & Tsileponis, N. (2024). Trust matters: A global perspective on the influence of trust on bank market risk. *Journal of International Financial Markets, Institutions and Money*, 93.
- Abdul Kareem, A. A., Fayed, Z. T., Rady, S., Amin El-Regaily, S., & Nema, B. M. (2023). Factors Influencing Investment Decisions in Financial Investment Companies. *Systems*, 11(3). <https://doi.org/10.3390/systems11030146>
- Adel, N. (2024). The impact of digital literacy and technology adoption on financial inclusion in Africa, Asia, and Latin America. *Heliyon*, 10(24).
- Ademola, S. A., Musa, A. S., & Innocent, I. O. (2019). Moderating Effect of Risk Perception on Financial Knowledge, Literacy and Investment Decision. *American International Journal of Economics and Finance Research*, 1(1). <https://doi.org/10.46545/aijefr.v1i1.60>
- Ager, P. (2018). *Location, Location, Location: The Making of Nairobi As a Financial Hub*. (Oraro) Retrieved April, 2026 from <https://www.oraro.co.ke/location-location-location-the-making-of-nairobi-as-a-financial-hub/>
- Ahinful, G. S., Otieku, J. K., Anokye, F. K., & Owusu, G. M. Y. (2021). What influences the willingness of Gen Z Alumni in accumulation phase to invest in stocks. *International Journal of Education Economics and Development*, 12(2). <https://doi.org/10.1504/ijeed.2021.10035302>
- Ahmed, S. K. (2024). How to choose a sampling technique and determine sample size for research: A simplified guide for researchers. *International Journal of Business and Management Invention*, 12.
- Ahmed, Z., Noreen, U., Ramakrishnan, S. A. L., & Binti Abdullah, D. F. (2021). What explains the investment decision-making behaviour? The role of financial literacy and financial risk tolerance. *Afro-Asian Journal of Finance and Accounting*, 11(1). <https://doi.org/10.1504/AAJFA.2021.111814>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4). <https://doi.org/10.1002/hbe2.195>
- Akkaya, M. (2021). Behavioral portfolio theory. In Applying particle swarm optimization: new solutions and cases for optimized portfolios . Cham: Springer International Publishing., 29-48.
- Al-tamimi, H. A. H., & Kalli, A. A. Bin. (2019). Financial Literacy and Investment Decisions of UAE Investors. *The Journal of Risk Finance*, 10(5).

- Alam, B. (2019). Qualitative Research Framework: Integrating Philosophical and Methodological Assumptions. *Journal of Philosophy, Culture and Religion*, 40, 1-3.
- Aleño, S. M., Basañes, K. H., Dios, F. A., & Bacatan, J. (2025). SOCIAL INFLUENCE AND FINANCIAL LITERACY AS PREDICTORS OF SAVINGS BEHAVIOR AMONG JUNIOR HIGH SCHOOL STUDENTS. *European Journal of Economic and Financial Research*, 8(8).
- Alharahsheh, H. H., & Pius, A. (2020). A review of key paradigms: positivism vs interpretivism.
- Ali, H., & Purwandi, L. (2017). The Urban Middle-Class Millennials Indonesia: Financial and Online Behavior. In *PT. ALVARA STRATEGI INDONESIA*.
- Ali, S. S., Ren, i., & Wu, J. (2023). Framework to improve software effort estimation accuracy using novel ensemble rule. *Journal of King Saud University - Computer and Information Sciences*, 36(9).
- Alin, A. (2010). Multicollinearity. *WIREs Computational Statistics*, 2(3), 370-374.
- Almansour, B. Y., Elkrghli, S., & Almansour, A. Y. (2023). Behavioral finance factors and investment decisions: A mediating role of risk perception. In *Cogent Economics and Finance* (Vol. 11, Issue 2). <https://doi.org/10.1080/23322039.2023.2239032>
- Alp, E., & Seven, Ü. (2019). The dynamics of household final consumption: The role of wealth channel. *Central Bank Review*, 19(1), 21-32.
- Alshebami, A. S., & Aldhyani, T. H. H. (2022). The Interplay of Social Influence, Financial Literacy, and Saving Behaviour among Saudi Youth and the Moderating Effect of Self-Control. *Sustainability (Switzerland)*, 14(14). <https://doi.org/10.3390/su14148780>
- Amisi, S. (2012). The Effect of Financial Literacy on Investment Decision Making by Pension Fund Managers in Kenya. *Unpublished Article*, July.
- Amokeoja, O. (2024). *Study Finds Nigeria's Gen Z More Inclined To Saving Than Investing*. (Forbes Africa) Retrieved September, 2025 from [forbesafrica.com: https://www.forbesafrica.com/current-affairs/2024/03/11/study-finds-nigerias-gen-z-more-inclined-to-saving-than-investing/](https://www.forbesafrica.com/current-affairs/2024/03/11/study-finds-nigerias-gen-z-more-inclined-to-saving-than-investing/)
- Armansyah, R. F., Ardianto, H., & Rithmaya, C. L. (2023). Understanding Gen Z Investment Decisions: Capital Market Literacy and Emotional Biases. *Jurnal Manajemen Dan Kewirausahaan*, 25(2), 105-119.
- Ashwitha, & Suresh, D. G. (2025). The Influence of Digital Literacy on Employee Confidence and Risk Management in Promoting and Selling Investment Products in Banking . *International Journal for Multidisciplinary Research* .
- Ashwitha, & Suresh, D. G. (2025). The Influence of Digital Literacy on Employee Confidence and Risk Management in Promoting and Selling Investment Products in Banking . *International Journal for Multidisciplinary Research* .
- Assefa, M., Durga Rao, P., & Rao, D. P. (2018). Financial Literacy and Investment Behavior of Salaried Individuals: A Case Study of Wolaita Sodo Town. In *International Journal of Business and Management Invention (IJBMI) ISSN* (Vol. 7).

- Baihaqqy, M. R. I. (2020). Investment Decisions Of Investors Based On Generation Groups. *Coopetition : Jurnal Ilmiah Manajemen*, 11(3). <https://doi.org/10.32670/coopetition.v11i3.136>
- Bajo, E., Cecchini, M., & Oliver, B. (2023). Psychological profile and investment decisions. *Finance Research Letters Volume 58, Part A, December 2023, 104245*, 58(Part A).
- Balagobei, S., & Prashanthan, V. (2021). Impact of Financial Literacy on Investment Decisions: Evidence from Individual Investors in Jaffna District. *International Journal of Accounting and Business Finance*, 7(0). <https://doi.org/10.4038/ijabf.v7i0.113>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.
- Barnes, P. (2018). Cryptocurrency and its susceptibility to speculative bubbles, manipulation, scams and fraud. *Journal of Advanced Studies in Finance (JASF)*, 9(2 (18)), 60-77.
- Barno, L. J., Cheboi, J., & Muganda, C. (2021). Moderating Effect of Financial Literacy on Relationship between Anchoring and Investment Decision among SMEs in Nairobi County. *East African Journal of Business and Economics*, 3(1). <https://doi.org/10.37284/eajbe.3.1.305>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *ournal of Personality and Social Psychology*, 51(6), 1173–1182.
- Bayakhmetova, A., Leyla, B., & Bayakhmetova, L. (2023). Impact of financial literacy on investment decisions in developing countries: The example of Kazakhstan. In *Asian Development Policy Review* (Vol. 11, Issue 3). <https://doi.org/10.55493/5008.v11i3.4917>
- Bayar, Y., Sezgin, H. F., Öztürk, Ö. F., & Şaşmaz, M. Ü. (2020). Financial Literacy and Financial Investor profile of Individual Investors: Multinomial Logistic Regression Approach. *SAGE Open*, 10(3). <https://doi.org/10.1177/2158244020945717>
- Bayram, K., Salaudeen Olasubomi, S., & Thartori, V. (2021). The Level of Financial Literacy among Muslim Millennial Gen Z Alumni in the accumulation phase . *Al Qasimia University Journal of Islamic Economics*,
- Berk, C., & Tutarlı, B. (2021). Dead or alive: Modern portfolio theory based on financial analysis. *Universal Journal of Accounting and Finance*.
- Bethania, S., Simbolon, P., & Siagian, H. L. (2022). Analysis of Differences in Levels of Financial Behavior towards Investment Preferences among Generation X and Generation Y in Urban Areas. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(1).
- Bhalerao, A. K. (2015). Application and performance of Google Forms for online data collection and analysis: A case of North Eastern Region of India. *Indian Journal of Extension Education*, 49-53.
- Bikhchandani, S., & Sharma, S. (2000). *Herd Behavior in Financial Markets: A Review*. (International Monetary Fund (IMF)) Retrieved November, 2025 from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3923377

- Bosnjak, M., Ajzen, I., & Schmidt, P. (2020). The Theory of Planned Behavior: Selected Recent Advances and Applications. *Europe's Journal of Psychology*, 16(3), 352–356.
- Bunyamin, M., & Abdul Wahab, N. (2022). The Influence of Financial Behaviour on Financial Investor profile In Investment Decision: A Conceptual Paper. *International Journal of Industrial Management*, 14(1). <https://doi.org/10.15282/ijim.14.1.2022.7435>
- Bursztyn, L., Ederer, F., Ferman, B., & Yuchtman, N. (2014). Understanding Peer Effects in Financial Decisions: Evidence from a Field Experiment. *Journal of the Econometrica Society*, 82(4), 1273–1301.
- Canikli, S., & Aren, S. (2019). *Effect Of Financial Literacy And Risk Perception On Individual Investors' Investment Choices*. <https://doi.org/10.15405/epsbs.2019.01.02.68>
- CBK. (2023). *CBK Dhow Central Securities Depository (DhowCSD) User Guide: Investor Portal and Mobile Apps*. (Central Bank of Kenya)
- CFA Institute. (2023). *Genz and Investing: social media, crypto, FOMO, and family*. https://rpc.cfainstitute.org/-/media/documents/article/industry-research/Gen_Z_and_Investing.pdf
- CFA Institute. (2025). *Clicks and Credibility: Understanding Finfluencers' Role in Investment Decisions*. CFA.
- Chandra, P. K., Pangkey, L. B., & Soetanto, T. V. (2023). Young Adults' Investment Decisions in Surabaya: The Influence of Financial Literacy and Risk Perception. *International Journal of Organizational Behavior and Policy*, 2(2). <https://doi.org/10.9744/ijobp.2.2.87-96>
- Changwesha, M., & Mutezo, A. T. (2023). The relationship between financial literacy and financial access among SMES in the Ekurhuleni municipality. *Independent Research Journal in the Management Sciences*, 23(1).
- Chege, K., & Otieno, O. (2020). Research Philosophy Design and Methodologies: A Systematic Review of Research Paradigms in Information Technology. *Global Scientific Journals*, 8(5).
- Chen, C. L., & Dosinta, N. F. (2023). The Investment Decision on Gen Z Alumni of University in Pontianak.
- Chen, L. (2025, February). Risk and Return: Using Portfolio Theory in Practical. In *Proceedings of the International Workshop on Navigating the Digital Business Frontier for Sustainable Financial Innovation (ICDEBA 2024)*. 315, p. 354. Springer Nature.
- Chishti, M. F., Ali, F., Khan, M. R., Khan, I., Luong, N. T., & Ghouri, A. M. (2025). Understanding behavioural biases in investment decisions: empirical insights from an emerging market. *Cogent Economics & Finance*, 13(1).
- Chu, Z., Wang, Z., Xiao, J. J., & Zhang, W. (2017). Financial Literacy, Portfolio Choice and Financial Well-Being. *Social Indicators Research*, 132(2). <https://doi.org/10.1007/s11205-016-1309-2>
- Cochran, W. G. (1977). *Sampling Techniques* (3rd Edition ed.). New York.
- Cohen, J. (1992). Statistical Power Analysis. *Association for Psychological Science*, 1(3).

- Cote, C. (2021, Bovember). *What Is Descriptive Analytics? 5 Examples*. (Harvard Business School Online) Retrieved March, 2025 from <https://online.hbs.edu/blog/post/descriptive-analytics#:~:text=Descriptive%20analytics%20is%20the%20process,but%20doesn't%20dig%20deeper>.
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.
- Creswell, J. W., & Creswell, J. D. (2022). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches* (6th ed.). SAGE Publications, Inc.
- Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry & research design: choosing among five approaches.
- CUE. (2025). *Universities Data Report 2024-2025*.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340.
- DeCuir-Gunby, J. T., & McCoy, W. N. (2023). Mixed methods research proposal. *International Encyclopedia of Education (Fourth Edition)*, 729-738.
- Dimock, M. (2019). *Defining generations: Where Millennials end and Generation Z begins*. (Pew Research Center) Retrieved March, 2026 from [pewresearch.org: https://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/](https://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/)
- Elseknidy, M., Al-Mhdawi, M., Qazi, A., Ojiako, U., Mahammedi, C., & Rahimian, F. P. (2025). Developing a sustainability-driven risk management framework for green building projects: A literature review. *Journal of Cleaner Production*, 519.
- Fahlin, H., & Gustafsson, L. (2024). How Gen Z and Gen X Battle Biases: A study on the impact of psychological biases in investment decisions across generations.
- Farrell, L., Fry, T. R., & Risse, L. (2016). The significance of financial self-efficacy in explaining women's personal finance behaviour. *Journal of Economic Psychology*, 54, 85-99.
- Federal Reserve Bank of Atlanta. (2022). *We're Getting Older, and the Labor Market Shows It*. file:///C:/Users/Owate/Downloads/Universities_Data_Report_2023-2024.pdf
- Flor, C. R., & Hansen, S. L. (2012). Technological advances and the decision to invest. *Annals of Finance*, 9, 383-420.
- French, N. (2001). Decision theory and real estate investment: An analysis of the decision-making processes of real estate investment fund managers. *Managerial and Decision Economics*,
- FSD Kenya. (2024). *2024 FinAccess Household Survey: Key insights into Kenya's financial landscape*. (FSD Kenya) Retrieved Novemnber, 2025 from [fsdkenya.org: https://www.fsdkenya.org/blogs-publications/2024-finaccess-household-survey-key-insights-into-kenyas-financial-landscape/](https://www.fsdkenya.org/blogs-publications/2024-finaccess-household-survey-key-insights-into-kenyas-financial-landscape/)
- Global Academic Journal of Humanities and Social Sciences*, 2(3).

- Grable, J. E., & Joo, S.-H. (2004). Environmental and Biophysical Factors Associated with Financial Risk Tolerance. *Journal of Financial Counseling and Planning*, 15(1), 8.
- Greene, P., Latham, A., Miller, K., & Nielsen, M. (2024). The implicit decision theory of non-philosophers. *Synthese*, 203(2). <https://doi.org/10.1007/s11229-023-04478-8>
- Griffin, S. A., & Sibilang, N. P. (2022). The Influence of Financial Attitude and Financial Knowledge on Financial Management Behavior Moderated by Locus of Control in Gen Z Alumni of University . *Jurnal Multidisiplin Madani*, 2(12).
- Guo, Q. (2022, April). Review of research on markowitz model in portfolios. In 2022 7th International Conference on Social Sciences and Economic Development (ICSSED 2022) . *Atlantis Press*, 786-790.
- Haghani, M. (2023). The notion of validity in experimental crowd dynamics. *International Journal of Disaster Risk Reduction*, 93.
- Hair, J. F., Ringle, C. M., Gudergan, S. P., Fischer, A., Nitzl, C., & Menictas, C. (2018). Partial least squares structural equation modeling-based discrete choice modeling: an illustration in modeling retailer choice. *Business Research*, 12, 115–142.
- Hajj, M. E., & Farran, I. (2024). The Cryptocurrencies in Emerging Markets: Enhancing Financial Inclusion and Economic Empowerment. *Journal of Risk and Financial Management*, 17(10), 467.
- Hansson, S. O. (2005). *Decision Theory: A Brief Introduction*. Royal Institute of Technology.
- Hao, R. R. (2025). Novel Portfolio Designs Based on Markowitz Portfolio Theory and Various Assets.
- Hartono, H., Halim, E., Aswieri, A., Suharli, D., & Aurella, M. (2023). The Influence of Financial Literacy and Heuristic Behavior on Gen Z Alumni of University 's Investing Decisions During a Global Pandemic. *E3S Web of Conferences*, 426. <https://doi.org/10.1051/e3sconf/202342602008>
- Hasan, F. F., & Bakar, M. S. (2022). From Google Forms to Data Repository: A New Methodology in Data Collecting, Data Transforming, and Information Systems Evaluation. In 2022 International Symposium on Multidisciplinary Studies and Innovative.
- Hayes, A. F. (2018). *Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation*. Retrieved March, 2026 from https://afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.Html?utm_source=chatgpt.com
- Hernandez-Perez, J., & Rambaud, S. C. (2025). Uncovering the factors of financial well-being: the role of self-control, self-efficacy, and financial hardship. *Future Business Journal*, 11(70).
- Hidayat, F. S., & Hartono, U. (2022). Factors affecting financial investment decisions: undergraduate student context. *BISMA (Bisnis dan Manajemen)*, 15(1), 40-59.
- Hirose, M., & Creswell, J. W. (2023). Applying Core Quality Criteria of Mixed Methods Research to an Empirical Study. *Journal of Mixed Methods Research*, 7(1).

- Hussain, A., Kijasiwat, P., Ur Rehman, H. K., & Ullah, M. Z. (2022). Financial Literacy and Investment Decisions: Evidence from Pakistan. *South Asian Journal of Finance*, 2(2). <https://doi.org/10.4038/sajf.v2i2.46>
- Imran, H. (2024). Pragmatic critical realism and Mixed methods in Inter-disciplinary Research— Management and Information systems. *International Journal of Scientific Research and Management (IJSRM)*, 12(03). <https://doi.org/10.18535/ijrm/v12i03.em01>
- Iwanicz-Drozdowska, M., Rogowicz, K., & Smaga, P. (2023). Market-moving events and their role in portfolio optimization of generations X, Y, and Z. *International Journal of Management and Economics*, 59(4). <https://doi.org/10.2478/ijme-2024-0001>
- Jamieson Gilmore, K., Bonciani, M., & Vainieri, M. (2022). A comparison of census and cohort sampling models for the longitudinal collection of user-reported data in the maternity care pathway: Mixed methods study. *JMIR Medical Informatics*, 10(3), e25477.
- Jayasuriya, N. (2023). Paradigm: Positivism, interpretivism, pragmatists, and critical thought. In *Social Research Methodology and Publishing Results: A Guide to Non-Native English Speakers*. <https://doi.org/10.4018/978-1-6684-6859-3.ch002>
- John, T., Jena, D. A., Deepika Swain 3, D. M., Gupta, D. D., & Singh, D. J. (2025). The Influence of Behavioral Biases on Investment Decisions: A Conceptual Analysis of Retail Investor Psychology. *Journal of Marketing & Social Research*, 2(5), 453 - 457.
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263-292.
- Kamunzyu, B. I., & Kariuki, D. G. (2019). Effect of financial literacy on employees' investment decisions at Kenya Ports Authority, Mombasa Kenya. *Strategic Journal of Business & Change Management*, 6(2). <https://doi.org/10.61426/sjbcm.v6i2.1132>
- Kangwa, D., Mwale, J. T., & Shaikh, J. M. (2021). Co-evolutionary dynamics of financial inclusion of Gen Z Alumni of University in a sub-Saharan digital financial ecosystem. *Copernican Journal of Finance & Accounting*, 9(4). <https://doi.org/10.12775/cjfa.2020.020>
- Khalid, S. (2020). *Effect of Financial Literacy on Financial Decision of the Youth at Youth Enterprise Development Fund in Mombasa County*. Retrieved September 2025, from erepository.uonbi.ac.ke: <https://erepository.uonbi.ac.ke/handle/11295/154463#:~:text=This%20study%20finds%20that%20financial,financial%20literacy%20and%20provide%20more>
- Khatik, S. K., Joshi, R., & Adwani, V. K. (2021). Inferring The Role Of Social Media On Gen Z Alumni of University 'S Investments Decisions. *Journal of Content, Community and Communication*, 14(7). <https://doi.org/10.31620/JCCC.12.21/24>
- Kolade, T., Orekoya, S., & Adeniyi, O. (2022). Determinants of Financial Literacy and Its Effects on the Financial Behaviour of Undergraduates in a Nigerian University. *Ife Social Sciences Review*, 30(1), 11-26.

- Korankye, T., Pandey, I., & Ahmmed, F. (2026). Enhancing financial self-efficacy through financial literacy: leveraging financial education mandates as an instrument variable to examine causal pathways . *International Journal of Bank Marketing*, 1-17.
- Kothari, C., & Garg, G. (2014). Design of Sample Surveys. In C. Kothari, & G. Garg, *Research Methodology: Methods and Techniques* (pp. 59-61). Delhi: New Age International Publishers.
- Koutsoyiannis, A. (1982). The Traditional Theory of the Investment Decision Under Risk and Uncertainty. In *In: Non-Price Decisions*. Palgrave.
- Krause, D. (2024). Generational Investment Strategies: Bridging the Divide in Cryptocurrency Adoption.
- Kruger, J., & Dunning., D. (1999). Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of personality and social psychology*, 77(6).
- Kumar, V. R., & Kasilingam, R. (2017). Does the Demographics and Selected Investor Profile Factors Influence Financial Literacy? - An Investor Perception Study. *Sumedha Journal of Management*, 6(2).
- Kumari, D. A. (2020). The Impact of Financial Literacy on Investment Decisions: With Special Reference to Undergraduates in Western Province, Sri Lanka. *Asian Journal of Contemporary Education*, 4(2), 110-126.
- Lathief, J. T., Kumaravel, S. C., Velnadar, R., Vijayan, R. V., & Parayitam, S. (2024). Quantifying Risk in Investment Decision-Making. *Journal of Risk Financial Management*, 17(2), 82.
- Lauria, P. (2024). *Generation Z: Stepping into Financial Independence*. Retrieved September, 2025 from investopedia.com: <https://www.investopedia.com/generation-z-stepping-into-financial-independence-5224362>
- Lee, W., & Kim, B. (2019). Business sustainability of start-ups based on government support: An empirical study of Korean start-ups. *Sustainability*, 11(18), 4851.
- Legenzova, R., & Leckè, G. (2025). The Link between Family Financial Socialization in Adulthood and Investment Literacy of P2P Investors. *Journal of Family and Economic Issues*, 46, 525–544.
- Lotto, J. (2020). Towards improving households' investment choices in tanzania: Does financial literacy really matter? *International Journal of Financial Studies*, 8(2). <https://doi.org/10.3390/ijfs8020029>
- Loukonen, V., & Lunjova, V. (2023). *Young adult's knowledge of financial literature*.
- Ludeny, J. I., & Mule, R. K. (2019). Effect of Financial Literacy on Teacher Investment Decision in Vihiga sub-county, Kenya. *IOSR Journal of Business and Management*, 21(5).
- Lusard, A., & Messy, F.-A. (2023). The importance of financial literacy and its impact on financial well-being. *Journal of Financial Literacy and Wellbeing*, 1(1).

- Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52(1), 5-44.
- Lusardi, A., & Streeter, J. L. (2023). Financial literacy and financial well-being: Evidence from the US. *Journal of Financial Literacy and Wellbeing*, 1(2). <https://doi.org/10.1017/flw.2023.13>
- Luvako, M. N. (2023). Financial Sector Development, Savings and Economic Performance: A Theoretical Analysis. *International Journal of Finance*, 8(6).
- Lytovka, V., & Prushkivska, E. (2023). The correlation between the formation of the digital economy and the emergence of cryptocurrency. *Sworld-Us Conference Proceedings, usc21-01*. <https://doi.org/10.30888/2709-2267.2023-21-01-027>
- Ma, Y. (2023). Research on the Investment and Financial Management Tendency of College Students from the Perspective of Behavioral Finance. *Financial Engineering and Risk Management*, 6(9), 114-121.
- Made, N., Utami, M. A., & Wedasuari, P. R. (2023). The effect of financial literacy and investor profile on investment decisions. *Jurnal Penelitian Ekonomi Dan Akuntansi*, 8(1).
- Madinga, N. W., Maziriri, E. T., Chuchu, T., & Magoda, Z. (2022). An Investigation of the Impact of Financial Literacy and Financial Socialization on Financial Satisfaction: Mediating Role of Financial Risk Attitude. *Global Journal of Emerging Market Economies*, 14(1).
- Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance*, 7(1), 77-95.
- Martiny, A., Tagliatalata, J., Testa, F., & Iraldo, F. (2024). Review Determinants of environmental social and governance (ESG) performance: A systematic literature review. *Journal of Cleaner Production*, 456.
- Masanya, R. W. (2018). Measuring student investment potential: a mixed methods approach.
- Mbarire, T. T., & Ali, A. I. (2014). Determinants of financial literacy levels among employees of Kenya Ports Authority in Kenya. *Research Journal of Finance and Accounting*, 5(16).
- Mohta, A., & Shunmugasundaram, V. (2023). Millennials' financial literacy and risk behavior: evidence from India. *International Review of Economics*, 70(4). <https://doi.org/10.1007/s12232-023-00425-8>
- Mohta, A., & Shunmugasundaram, V. (2023). Millennials' financial literacy and risk behavior: evidence from India. *International Review of Economics*, 70, 419–435.
- Mohta, A., & Shunmugasundaram, V. (2024). Moderating role of millennials' financial literacy on the relationship between investor profile and risky investment behavior: evidence from India. *International Journal of Social Economics*, 51(3). <https://doi.org/10.1108/IJSE-12-2022-0812>
- Mou, Y. (2024). The impact of digital finance on technological innovation across enterprise life cycles in China. *Heliyon* <https://doi.org/10.1016/j.heliyon.2024.e33965>, 10(14).
- Mwenda, E. (2024). *Where Gen Zs are investing their money*. (businessdailyafrica.com, Producer, & Business Daily) Retrieved September 2025, from

- <https://www.businessdailyafrica.com/bd/lifestyle/personal-finance/where-gen-zs-are-investing-their-money-4548346>
- Ndou, A. (2023). Financial literacy of young black adults in rural and low-income areas in South Africa. *Financial Studies*, 27(3), 6–24.
- Ndou, A. (2023). The relationship between demographic factors and financial literacy. *International Journal of Research in Business and Social Science* (2147- 4478), 12(1), 155–164.
- Ndungu, J. M., & Abdul, F. (2022). Influence Of Financial Literacy on Personal Investment Decisions Among Kenya Football Premier League Players in Kenya. *International Journal of Current Aspects in Finance, Banking and Accounting*, 4(2). <https://doi.org/10.35942/ijcfa.v4i2.272>
- Neumann, J. v., & Morgenstern, O. (1944). *Theory of Games and Economic Behavior*. Princeton University Press.
- Nganga, S. (2025). *The Rise of Digital Financial Services and Fintech Innovation in Kenya*. Retrieved August 2025, from aaeafrika.org: <https://aaeafrika.org/kenya/the-rise-of-digital-financial-services-and-fintech-innovation-in-kenya/>
- Nogueira, M. C., Almeida, L., & Tavares, F. O. (2025). Financial Literacy, Financial Knowledge, and Financial Behaviors in OECD Countries. *Journal of Risk Financial Management*, 18(3), 167.
- Nomoyi, S. (2024). *Millennials and Gen Z Alumni of University are shaping the future of investing*. Independent Online. <https://www.iol.co.za/personal-finance/financial-planning/millennials-and-gen-z-are-shaping-the-future-of-investing-e5853a34-70b3-4aab-be6b-b64eb04bbfc4>
- Nugraha, R. K., Eksanti, A. P., & Haloho, Y. O. (2022). The Influence Of Financial Literacy And Financial Behavior On Investment Decision. *Jurnal Ilmiah Manajemen Dan Bisnis*, 8(1). <https://doi.org/10.22441/jimb.v8i1.13535>
- Nunnally, J. C. (1975). Psychometric Theory. 25 Years Ago and Now. *Educational Researcher*, 4(10), 7-14+19-21.
- OECD. (2024). *OECD Survey on Drivers of Trust in Public Institutions – 2024 Results: Building Trust in a Complex Policy Environment*. Organisation for Economic Co-operation and Development (OECD). Paris: OECD Publishing - <https://doi.org/10.1787/9a20554b-en>.
- Ovami, D. C., Lubis, H. Z., Setiana, E., Mustika, I., & Wulandari, S. (2024). Beyond age: Decoding the investment DNA of generations Z and Y in Indonesia. *Investment Management and Financial Innovations*, 21(3), 385-398.
- Owusu-Manu, D.-G., Mankata, L., El-Gohary, H., & Hussain, J. (2021). A Cognisance of Green Bond Features, Preferential to Renewable Energy Project Financing in Ghana. *IEEE Transactions on Engineering Management*.
- Owusu, G. M. Y., Anokye, F. K., Otieku, J. K., & Ahinful, G. S. (2021). What influences the willingness of Gen Z Alumni in the accumulation phase to invest in stocks? *International*

- Journal of Education Economics and Development*, 12(2).
<https://doi.org/10.1504/ijeed.2021.114366>
- Owusu, G. M. Y., Korankye, G., Otchere, O. A. S., & Kriese, M. (2022). Money on the mind: emotional and non-cognitive predictors and outcomes of financial behaviour of young adults. *SN Business & Economics*, 2(11). <https://doi.org/10.1007/s43546-022-00340-0>
- Ozili, P. K. (2023). The acceptable R-square in empirical modelling for social science research. *Munich Personal RePEc Archive (MRPA)*: <https://mpra.ub.uni-muenchen.de/115769/>.
- Pandurugan, V., & Shammakhi, B. N. (2024). Modelling the theory of planned behaviour to evaluate the investment intention of generation Z in the speculative market: stocks, Forex and cryptocurrencies. *Arab Gulf Journal of Scientific Research*, 42(4), 1900–1916.
- Pangestu, S., & Karnadi, E. B. (2020). The effects of financial literacy and materialism on the savings decision of Gen Z Alumni of University Indonesians. *Cogent Business and Management*, 7(1). <https://doi.org/10.1080/23311975.2020.1743618>
- Panova, G. S. (2020). Cryptocurrency – Money of the Digital Economy. In *Lecture Notes in Networks and Systems* (Vol. 84). https://doi.org/10.1007/978-3-030-27015-5_72
- Pašiušienė, I., Podvieszko, A., Malakaitė, D., Žarskienė, L., Liučvaitienė, A., & Martišienė, R. (2024). Exploring Generation Z's Investment Patterns and Attitudes towards Greenness. *Sustainability*, 16(1), 352.
- Patel, P., & Nayak, D. K. (2024). A STUDY OF FINANCIAL BEHAVIOR BASED ON THEORY OF PLANNED BEHAVIOR. *ShodhKosh: Journal of Visual and Performing Arts*, 4(2).
- Pathak, D. D., & Thapa, B. S. (2024). Behavioral Insights Into Investment Decision-Making: Evidence From the Nepal Stock Exchange. *Management Science*, 10(2).
- Pham, K. D., & Le, L. (2023). Nexus between financial education, literacy, and financial behavior: Insights from Vietnamese young generations. *Sustainability*, 15(20).
- Phung, N. T., & Quyen, N. L. (2025). Finfluencer Exposure and Gen Z Investment Behavior: Risk Perception and Social Influence in Play. *Journal of Economics, Finance and Management Studies*, 8(17), 5692-5704.
- Purnamasari, R., Hasanudin, A. I., Zulfikar, R., & Yazid, H. (2025). Technological infrastructure and financial resource availability in enhancing public services and government performance: The role of digital innovation adoption in Indonesia. *Social Sciences & Humanities Open*.
- Putra, P. H., Wijaya, P. A., Putra, I. B., Yulistyawan, M. I., Wiguna, K. A., Cahyani, N. P., . . . Amerta, D. P. (2025). Politics at the Fingertips: Institutional Trust Deficit and Generation Z's Digital Political Culture. *The 7th International Conference on Law, Social Sciences and Education (ICLSSE 2025)*. 221, p. 12. Singaraja, Indonesia: SHS Web Conf.
- Putri, C. T., & Soedarsa, H. G. (2024). Influencing factors investment decision in Gen Z Alumni of University (case study of Feb Bandar Lampug Gen Z Alumni in accumulation phase). *International Journal of Accounting, Management, Economics and Social Sciences (IJAMESC)*, 2(1), 328–341. <https://doi.org/10.61990/ijamesc.v2i1.186>

- Rabbani, A. G., Yao, Z., Wang, C., & Grable, J. E. (2021). Financial Risk Tolerance, Sensation Seeking, and Locus of Control Among Pre-Retiree Baby Boomers. *Journal of Financial Counseling and Planning*, 32(1). <https://doi.org/10.1891/JFCP-18-00072>
- Rabbani, A., Grable, J. E., Woodyard, A., & Yao, Z. (2018). Describing investor profiles: A test of the associations among financial knowledge, confidence, and help and information sources. *Financial Services Review*, 27, 209–230.
- Ranganathan, P., Caduff, C., & Frampton, C. M. (2024). Designing and validating a research questionnaire - Part 2. *Perspectives in Clinical Research*, 15(1), 42-45.
- Ratnawati, R. (2024). Gen Z Alumni of University Investment Decisions Influenced by Financial Behavior: Mediated by Financial Literacy. *East African Scholars Multidisciplinary Bulletin*, 7(01). <https://doi.org/10.36349/easjmb.2024.v07i01.001>
- Raut, R. K., Das, N., & Kumar, R. (2018). Extending the theory of planned behaviour: Impact of past behavioural biases on the investment decision of Indian investors. *Asian Journal of Business and Accounting*, 11(1). <https://doi.org/10.22452/ajba.vol11no1.9>
- Rosdiana, R. (2020). Analysis of Investment Interests, Motivation, Social Environment, Financial Literacy (Comparative Study of Gen Z Alumni of University and Millennial Generation). *International Journal of Business, Economics and Law*, 22(1), 11.
- Rosdiana, R. (2023). Millennial and Z Generation Behavior in Stock Market Investment Decision Making. *International Journal of Business, Economics and Law*, 22.
- Sabri, M. F., & Macdonald, M. (2010). Savings Behavior and Financial Problems Among College Students: The Role of Financial Literacy in Malaysia. *Cross-cultural Communication*, 6(3), 103-110.
- Saivasan, R., & Lokhande, M. (2022). Influence of risk propensity, behavioural biases and demographic factors on equity investors' risk perception. *Asian Journal of Economics and Banking*, 6(3), 373-403.
- Santoso, R., & Marzuki, M. (2020). Assessment of learning outcomes based on Google Forms to reduce paper use. In *Teacher Education and Professional Development In Industry 4.0*. CRC Press, 296-302.
- Saunders, M. N., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students* (Vol. 8th Edition). New York, USA: Pearson.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). Understanding research philosophy and approaches to theory development. In *Research Methods for Business Gen Z Alumni in the accumulation phase* (pp. 128-171). Pearson Education.
- Selya, A. S., Rose, J. S., Dierker, L. C., Hedeker, D., & Mermelstein, R. J. (2012). A Practical Guide to Calculating Cohen's f^2 , a Measure of Local Effect Size, from PROC MIXED. *Sec. Quantitative Psychology and Measurement*, 17(3).
- Senthilnathan, S. (2019). Usefulness of Correlation Analysis. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3416918>
- Senyo, P., & Osabutey, E. L. (2020). Unearthing antecedents to financial inclusion through FinTech innovations. *Technovation*, 98.

- Seraj, A. H. A., Alzain, E., & Alshebami, A. S. (2022). The roles of financial literacy and overconfidence in investment decisions in Saudi Arabia. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1005075>
- Setia, M. S. (2023). 13 - Cross-Sectional Studies. In *from Part III - Data Collection: The Cambridge Handbook of Research Methods and Statistics for the Social and Behavioral Sciences*. (Vol. Volume 1: Building a Program of Research, pp. 269 - 291). Cambridge University Press.
- Shachak, A., Kuziemy, C., & Petersen, C. (2019). Beyond TAM and UTAUT: Future directions for HIT implementation research. *Journal of Biomedical Informatics*, 100.
- Shaikh, R., & Sharif, S. (2024). *From Banking to Bytes: Investigating the Relationship Between Gen Z's Digital Financial Literacy and Adoption of Digital Wallets in Pakistan*. Retrieved September, 2025 from [ssrn.com: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4940363#:~:text=The%20study%20will%20examine%20the,identify%20the%20factors%20that%20potentially](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4940363#:~:text=The%20study%20will%20examine%20the,identify%20the%20factors%20that%20potentially)
- Shati, P., Cohen, E., & McIlraith, S. (2023). Optimal Decision Trees For Interpretable Clustering with Constraints. *International Joint Conference on Artificial Intelligence*, 2022-2030.
- Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial Socialization of First-year College Students: The Roles of Parents, Work, and Education. *Journal of Youth and Adolescence*, 1457–1470.
- Shintawati, M. P. D., & Budidarma, I. G. A. M. (2023). The Effect Of Income And Financial Literacy On Investment Decisions With Financial Behavior As An Intervening Variable. *International Journal of Science and Society*, 5(5). <https://doi.org/10.54783/ijssoc.v5i5.864>
- Shroff, S. J., Paliwal, U. L., & Dewasiri, N. J. (2024). Unraveling the impact of financial literacy on investment decisions in an emerging market. *Business Strategy and Development*, 7(1). <https://doi.org/10.1002/bsd2.337>
- Shukla, S., & Shukla, S. K. (2025). Exploring the Impact of Cognitive Biases on StockInvestment Choices: A Scale DevelopmentPerspective. *European Journal of Business & Management Research*, 10(4).
- Silva, D. H., & Townsend, R. M. (2018). Risk-taking over the Life Cycle: Aggregate and Distributive Implications of Entrepreneurial Risk. *2018 Meeting Papers*. Society for Economic Dynamics. Retrieved from [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://economics.mit.edu/sites/default/files/2024-02/Risk_taking_over_life_cycle.pdf](https://economics.mit.edu/sites/default/files/2024-02/Risk_taking_over_life_cycle.pdf)
- Singla, J., & Singh, D. A. (2025). Impulsive Attitude and Cryptocurrency investment Behaviour: Investigating the Interplay with trust, risk, and facilitating conditions. *International Journal of Information Technology and Management (IJITM)*, 20(1).
- Sniehotta, F. F., Presseau, J., & Araújo-Soares, V. (2014). Time to retire the theory of planned behaviour. *Health psychology review*, 8(1), 1-7.

- Solanki, S., Wadhwa, S., & Gupta, S. (2019). Digital Technology: An Influential Factor in Investment Decision Making. *International Journal of Engineering and Advanced Technology* (, 8(6S4), 27-31.
- Srivastava, H., Naela, S. M., & Rushdi, J. (2025). Risk Tolerance and Stock Market Investment Decisions: A Bibliometric Analysis. *Metamorphosis: A Journal of Management Research*.
- Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance*, 14, 30-38.
- Sussman, R., & Gifford, R. (2019). Causality in the Theory of Planned Behavior. *Personality and Social Psychology Bulletin*, 45(6). <https://doi.org/10.1177/0146167218801363>
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296.
- Taherdoost, H. (2018). Validity and Reliability of the Research Instrument: How to Test the Validation of a Questionnaire/Survey in Research. *SSRN Electronic Journal*.
- Taherdoost, H. (2021). Data Collection Methods and Tools for Research. In *International Journal of Academic Research in Management (IJARM)* (Vol. 2021, Issue 1).
- Tanuwijaya, K., & Setyawan, I. R. (2021). Can financial literacy become an effective mediator for investment intention? *Accounting*, 7(7), 1591-1600.
- Tikhomirova, D. (2020). *Investing views, habits, and tendencies of millennial generation in USA*. Retrieved August 2025, from <https://urn.fi/URN:NBN:fi:amk-2020121428028>
- Tollefson, K. (2023). Coming of Age: Young Investors and the Rise in Riskier Investments. *RANGE: Undergraduate Research Journal*.
- Turner, D. P. (2020). Sampling Methods in Research Design. In *Headache* (Vol. 60, Issue 1). <https://doi.org/10.1111/head.13707>
- Utami, N., Sitanggang, M. L., & Sitanggang, M. L. (2021). The Analysis of Financial Literacy and Its Impact on Investment Decisions: A Study on Gen Z Alumni of University In Jakarta. *Inovbiz: Jurnal Inovasi Bisnis*, 9(1). <https://doi.org/10.35314/inovbiz.v9i1.1840>
- Vangala, S. (2024). *Impact Of Technological Advancements On Investment Behavior Across Age Demographics In The Digital Era*. ESSEC Global BBA Dissertation.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36(1), 157-178.
- Verma, A., & Srivastava, T. (2024). Portfolio Construction Using Markowitz's Portfolio Theory: A Study of Selected Stocks of BSE 100. *International Research Journal of Economics and Management Studies IRJEMS*, 3(2).
- Viphindartin, S., Muslihatinningsih, F., & Sari, M. I. (2020). Effect of investment-savings gap, financial development, and government fiscal performance on economic growth in Indonesia. *International Journal of Scientific and Technology Research*, 9(1).

- von Neumann, J., & Morgenstern, O. (1944). *Theory of Games and Economic Behavior* (3rd Edition ed.). Princeton University Press.
- Wambugu, S. (2024). *Inside Gen Z World of Sophisticated Investments*. (Business Today) Retrieved September, 2025 from [businesstoday.co.ke](https://businesstoday.co.ke/inside-gen-z-world-of-sophisticated-investments/): <https://businesstoday.co.ke/inside-gen-z-world-of-sophisticated-investments/>
- Wang, G., Zhang, M., & He, B. (2024). Financial literacy and investment returns: The moderating effect of education level. *Financial Literacy and Investment Returns*, 67, 105781. <https://doi.org/https://doi.org/10.1016/j.frl.2024.105781>
- Wang, X., & Cheng, Z. (2020). Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. In *Chest* (Vol. 158, Issue 1). <https://doi.org/10.1016/j.chest.2020.03.012>
- Wangechi Mwathi, A. (2017). Effects of Financial Literacy on Personal Financial Decisions among Egerton University Employees, Nakuru County, Kenya. *International Journal of Economics, Finance and Management Sciences*, 5(3). <https://doi.org/10.11648/j.ijefm.20170503.16>
- Warsame, M. H., & Ileri, E. M. (2016). Does the theory of planned behaviour (TPB) matter in Sukuk investment decisions? *Journal of Behavioral and Experimental Finance*, 12. <https://doi.org/10.1016/j.jbef.2016.10.002>
- Weixiang, S., Qamruzzaman, M., Rui, W., & Kler, R. (2022). *An empirical assessment of financial literacy and behavioral biases on investment decision: Fresh evidence from small investor perception*. Retrieved September, 2025 from <https://doi.org/10.3389/fpsyg.2022.977444>
- Wendy, W. (2024). The nexus between financial literacy, risk perception and investment decisions: Evidence from Indonesian investors. *Investment Management and Financial Innovations*, 21(3), 134–147.
- Wooldridge, J. M. (2019). *Introductory Econometrics: A Modern Approach* (7th Edition ed.). Thomson South-Western.
- World Economic Forum. (2025). *2024 Global Retail Investor Outlook*. World Economic Forum. World Economic Forum.
- Yakoboski, P. J., Lusardi, A., & Hasler, A. (2022). Financial literacy and well-being in a five generation America: The 2021 TIAA Institute-GFLEC Personal Finance Index. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4256797>.
- Yamashita, T. (2022). Analyzing Likert scale surveys with Rasch models. *Research methods in applied linguistics*, 1(3), 100022.
- Yu, R. X., & Ganju, J. (2022). Sample size formula for a win ratio endpoint. *Statistics in Medicine*,
- Yulandreano, E., & Rita, M. R. (2023). Investment Decisions on the Crowdfunding Platform Based on the Theory of Planned Behavior. *Jurnal Manajemen Bisnis*, 14(1). <https://doi.org/10.18196/mb.v14i1.16494>

- Yusup, A. K., & Gunawan, K. (2024). Gen Z Alumni of University investment decision: role of financial literacy, interest, and investor profile using logistic regression. *Ultima Management: Journal of Management*, 16(1), 136–149.
- Zahwa, A. F. N., & Soekarno, S. (2023). The Influence of Financial Literacy, Risk Tolerance, and Demographic Factors on Investment Decision among Gen Z Alumni of University and Millennial in Greater Jakarta and Greater Bandung. *International Journal of Current Science Research and Review*, 6(6), 3517–3527.
- Zhang, Y., Lu, X., & Xiao, J. J. (2023). Does financial education help to improve the return on stock investment? Evidence from China. *Pacific Basin Finance Journal*, 78. <https://doi.org/10.1016/j.pacfin.2023.101940>
- Zhu, A. Y. F. (2021). Financial Literacy Types and Financial Behaviors Among Adolescents: Role of Financial Education. *Journal of Financial Counseling and Planning*, 32(2). <https://doi.org/10.1891/JFCP-19-00051>
- Zhu, T., & Xiao, J. J. (2022). Consumer financial education and risky financial asset holding in China. *International Journal of Consumer Studies*, 46(1). <https://doi.org/10.1111/ijcs.12643>

APPENDIX

Appendix 1: Ethical Clearance



21st January 2026

Ms Umutoniwase Belyse,
belyse.kalisa@strathmore.edu

Dear Ms Umutoniwase,

RE: Determinants of Investment Decisions Among Generation Z University Students in Nairobi, Kenya: The Moderating Effect of Financial Literacy

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC3191/25**. The approval period is from **21st January 2026 to 20th January 2027**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, and MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ambrose Rachier".

**Mr Ambrose Rachier,
Chairperson; SU-ISERC**

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

Appendix 2: NACOSTI – Research License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 940737	Date of Issue: 19/February/2026
RESEARCH LICENSE	
	
This is to Certify that Miss.. UMUTONIWASE BELYSE BELYSE of Strathmore 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: Determinants of Investment Decisions Among Generation Z University Students in Nairobi, Kenya: The Moderating Effect of Financial Literacy for the period ending : 19/February/2027.	
License No: NACOSTI/P/26/4185005	
940737	
Applicant Identification Number	Ag. 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 3: Plagiarism Report

Appendix 4: Questionnaire

SECTION A: DEMOGRAPHICS

1. Gender: ☐ Male ☐ Female ☐ Prefer not to say
2. Age: ☐ 20–22 ☐ 23–25 ☐ 26–27
3. Monthly Income Range (in KSh): ☐ No personal income ☐ <20,000 ☐ 20,000–49,999
☐ 50,000–99,999 ☐ 100,000+
4. Type of University: ☐ Public ☐ Private
5. Field of Study:
6. Employment Status: ☐ Student ☐ Employed ☐ Self-employed ☐ Other

SECTION B: INVESTMENT DECISIONS

Part 1:

(Scale: 1 = Strongly Disagree to 5 = Strongly Agree)

1. I am willing to allocate part of my income or allowance to investments.
2. I actively seek opportunities to invest when available.
3. I compare different investment options before making a decision.
4. I evaluate potential risks before investing in any asset.
5. I prefer long-term investments over short-term speculative ones.
6. I follow a structured process when making investment decisions.

Part 2: Investment Assets

1. Which assets do you currently invest in? (Select all that apply)
 - ☐ Bank savings
 - ☐ Treasury bills/bonds
 - ☐ Stocks
 - ☐ Mutual funds/Unit trusts
 - ☐ Derivatives (futures, options)
 - ☐ Cryptocurrencies
 - ☐ Real estate
 - ☐ Other (specify)

SECTION C: PERSONAL DETERMINANTS

(Scale: 1 = Strongly Disagree to 5 = Strongly Agree)

Risk Tolerance

1. I am comfortable taking financial risks in pursuit of higher returns.
2. I remain calm even when my investments experience losses.

Self-Efficacy

1. I am confident in my ability to make good investment decisions.
2. I believe I can analyze investment information effectively.

Future Orientation

1. I prefer financial decisions that benefit me in the long term.
2. I save and invest with future goals in mind.

SECTION D: ENVIRONMENTAL DETERMINANTS

(Scale: 1 = Strongly Disagree to 5 = Strongly Agree)

1. My parents influence my investment decisions.
2. My friends or peers encourage me to invest.
3. I tend to invest in options recommended by people close to me.
4. People in my social environment consider investing important.
5. I observe others around me making investments, which motivates me to do the same.

SECTION E: TECHNOLOGICAL DETERMINANTS

(Scale: 1 = Strongly Disagree to 5 = Strongly Agree)

1. I prefer using mobile apps to invest (e.g., M-Pesa, DhowCSD, online brokers).
2. I trust digital investment platforms to secure my funds and data.
3. The ease of use of digital platforms encourages me to invest.
4. Features such as dashboards, reminders, and notifications influence my investment behavior.
5. Technology has made investment more accessible and convenient for me.

SECTION F: FINANCIAL LITERACY (MODERATOR)

Part 1: Objective Knowledge Questions

(Corrected Lusardi & Mitchell items + reviewer recommended items)

1. Suppose you had KSh 100 in a savings account earning 2% interest per year. After 5 years, how much would you have?
☐ More than KSh 102 ☐ Exactly KSh 102 ☐ Less ☐ Don't know
2. If inflation is 2% and the interest rate is 1%, after one year you can buy:
☐ More ☐ Same ☐ Less ☐ Don't know
3. True or False: "Buying a single company's stock is safer than investing in a mutual fund."
☐ True ☐ False ☐ Don't know
4. If you take a loan of KSh 10,000 at an annual interest rate of 10%, how much will you owe after one year?
☐ 10,010 ☐ 10,100 ☐ 11,000 ☐ Don't know
5. Which best describes diversification?
☐ Increases returns without risk
☐ Reduces risk by spreading investments
☐ Guarantees profits
☐ Don't know

Part 2: Financial Literacy Self-Efficacy

(Scale: 1 = Strongly Disagree to 5 = Strongly Agree)

1. I can use my financial knowledge to make sound investment decisions.
2. I can evaluate the risk–return characteristics of different assets.
3. I am confident interpreting financial statements or investment reports.

The End

Thank you for participating.