

**ADOPTION OF THE NEW FUNDING MODEL AND ITS INFLUENCE ON THE
QUALITY OF TERTIARY EDUCATION IN KENYA**

BY

ABDUL NDAU MWAKIO

MASTER OF BUSINESS ADMINISTRATION (CORPORATE MANAGEMENT)

KCA UNIVERSITY

2025

**ADOPTION OF THE NEW FUNDING MODEL AND ITS INFLUENCE ON THE
QUALITY OF TERTIARY EDUCATION IN KENYA**

BY

ABDUL NDAU MWAKIO

**A RESEARCH DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF
DEGREE OF MASTER IN BUSINESS ADMINISTRATION (CORPORATE
MANAGEMENT OPTION) OF KCA UNIVERSITY**

NOVEMBER, 2025

DECLARATION

Declaration by the Student:

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

Name:..... ABDUL NDAU MWAKIO.....Reg No:..... 21/01450.....

Signed: 

Date: ...30.10.2025.....

Recommendation by the Supervisor:

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

ABDUL NDAU MWAKIO

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

Signed: 

Date: ...30.10.2025.....

PROF. EDWARD OWINO

ADOPTION OF THE NEW FUNDING MODEL AND ITS INFLUENCE ON THE QUALITY OF TERTIARY EDUCATION IN KENYA

ABSTRACT

Quality in tertiary education is multifaceted and includes aspects such as faculty competence, research output, student support services, curriculum impact, and employability of graduates. Funding models directly affect all these variables. The main objective of this research was to examine the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. The study was led by the following objectives: to investigate the impact of financial sustainability, staffing and teaching resources, stakeholder's perceptions research and innovation on the new funding model and quality of tertiary education in Kenya. This study examined the theory of access to finance and development, the household capital structure theory and the Keynesian theory to diagnose the adoption of new funding model and quality of tertiary education in Kenya. The study adopted an explanatory research design. Explanatory research is executed to get to the root cause of a problem and goes ahead to detail why the problem exists as is. The target demographic for this study was the nation's 2469 TVET institutions and 39 commissioned public universities. Questionnaires that are self-administered were used to gather primary data. At the public universities and TVET institutions, the researcher distributed the questionnaires to all 96 respondents with the assistance of two qualified research assistants. On financial sustainability, respondents moderately agreed that the funding model enhanced financial planning and efficiency, with an overall mean of 3.487, while regression results confirmed a positive contribution ($\beta=0.210$, $p=.019$). Staffing and teaching resources emerged as the strongest predictor of education quality, with an overall mean of 3.796 and a significant regression coefficient ($\beta=0.374$, $p=.021$). The correlation analysis ($r=.722$, $p=.022$) also confirmed its strong relationship with education quality. Stakeholders' perceptions, though moderate (overall mean=3.159), were found to significantly predict education quality ($\beta=0.150$, $p=.006$), reflecting that stakeholder trust and confidence remain vital to sustaining reforms. On research and innovation, institutions rated this highly, with an overall mean of 3.967, indicating strong investment in research activities, industry collaborations, and student-led projects.

ACKNOWLEDGMENT

First and foremost, I would like to express my gratitude to the Highest, the Almighty God for giving me the aptitude to complete this course by his grace, love, and power. I would like to acknowledge Dr. Edward Owino, my principal supervisor, for his guidance during this thesis process. Likewise, I would like to express my sincere gratitude to the KCA university staff and colleagues who assisted me in putting this thesis together.

TABLE OF CONTENTS

DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGMENT	v
TABLE OF CONTENTS	vi
DEDICATION	ix
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS AND ACRONYMS	xii
DEFINITION OF TERMS	xiii
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	6
1.3 Objectives of the Study	7
1.4 Research Questions	8
1.5 Significance of the Study	8
1.6 Scope of the Study	9
CHAPTER TWO: LITERATURE REVIEW	10
2.1 Introduction	10
2.2 Theoretical Review	10
2.3 Empirical Review	14
2.4 Conceptual Framework	28
2.5 Operationalization of Variables	30
CHAPTER THREE: RESEARCH METHODOLOGY	31
3.1 Introduction	31

3.2 Research Design.....	31
3.3 Target Population.....	31
3.4 Sample Size and Sampling Procedure	33
3.5 Data Collection Instruments and Procedures	34
3.6 Pilot Test	35
3.7 Data Processing, Analysis and Presentation	36
3.8 Testing the Assumptions of Multiple Regression Model	37
3.9 Ethical Considerations	39
3.9.4 Anonymity	40
CHAPTER FOUR: FINDINGS AND DISCUSSION	42
4.1 Introduction.....	42
4.2 Response Rates	42
4.3 Pilot Test Results	43
4.4 Demographic Analysis Results	44
4.4.4 Position in the Institution	47
4.5 Descriptive Analysis Results	49
4.6 Correlational Analysis Results.....	57
4.7 Test for Regression Assumptions	58
4.8 Regression Analysis Results	62
4.9 Discussion of Findings.....	65
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS	68
5.1 Introduction.....	68
5.2 Summary of Findings.....	68
5.3 Conclusions.....	69
5.4 Recommendations of the Study	70

5.5 Suggestions for Further Studies	71
APPENDIX I: INTRODUCTION LETTER.....	78
APPENDIX II: RESEARCH PERMIT	79
APPANDIX III: RESEARCH QUESTIONNAIRE	80

DEDICATION

I am incredibly grateful to my family and friends for their unwavering support during my studies, especially my dear wife Ms. Albina Mkawughanga Mwanyika, My daughters Juliet Wacharo Ndau, Stacy Samba Ndau, Bernice Manga Ndau, My brothers namely; Anthony Ndule Mwakio, John Mndanyi Mwakio and David Mwamburi Mwakio. I also want to thank my good friend Sir Fred for showing me the ropes in my thesis.

LIST OF TABLES

TABLE 1: Operationalization of Variables	30
TABLE 2: Target Population.....	32
TABLE 3: Sample Size	34
TABLE 4: Variable Description and Measurement	39
TABLE 5: Response Rates.....	42
TABLE 6: Reliability Test Results.....	43
TABLE 7: Financial Sustainability	50
TABLE 8: Staffing and Teaching Resources	51
TABLE 9: Stakeholders Perceptions.....	53
TABLE 11: Quality of Tertiary Education.....	56
TABLE 12: Correlational Results	57
TABLE 13: Normality Test Results	59
TABLE 14: Multicollinearity Test Results	60
TABLE 15: Heteroscedasticity Test.....	61
TABLE 16: Model Summary.....	62
TABLE 17: Analysis of Variance.....	63
TABLE 18: Regression Coefficients.....	64

LIST OF FIGURES

FIGURE 1: Conceptual Framework	29
FIGURE 2: Age of respondent.....	44
FIGURE 3: Gender of Respondent.....	45
FIGURE 4: Highest Level of Education.....	46
FIGURE 5: Position in the Institution	47
FIGURE 6: Type of Tertiary Institution.....	48
FIGURE 7: Highest Level of Education.....	60

LIST OF ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
BETA	Bottom-Up Economic Transformation Agenda
CUE	Commission for University Education
DUC	Differentiated Unit Cost
GOK	Government of Kenya
HELB	Higher Education Loans Board
IQMS	Integrated Quality Management System
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
KTTC	Kenya Technical Trainers College
KUSO	Kenya University Students Organization
MTI	Means-Testing Instrument
NFM	New Funding Model
NSFAS	National Student Financial Aid Scheme
OECD	Organization for Economic Co-operation and Development
PBF	Performance-Based Financing
PPPs	Public-Private Partnerships
TETFund	Tertiary Education Trust Fund
TVET	Technical and Vocational Education and Training
UASU	Universities Academic Staff Union
UNESCO	United Nations Educational, Scientific and Cultural Organization

DEFINITION OF TERMS

Financial Sustainability: It refers to the capacity of higher education institutions to generate adequate resources over time to meet their educational goals while maintaining fiscal health and abating dependency on volatile sources like government subventions or donor aid (Johnstone, 2020).

Quality Of Tertiary Education: It refers to the availability, adequacy, and quality of academic personnel and instructional materials needed for effective teaching and learning (Odhiambo, 2021).

Research and Innovation: Stakeholders' perceptions of resources in a new funding model are critical in shaping the quality and sustainability of tertiary education in Kenya. Resources in this context refer to both financial allocations and non-financial that support teaching, learning, and research in universities and colleges (CUE, 2023).

Staffing and Teaching Resources: It refers to the human and instructional assets that support academic delivery, with qualified lecturers, tutors, support staff, instructional materials, teaching technologies, laboratories, libraries, and digital infrastructure. These resources are fundamental to ensuring high-quality education and positive learning outcomes at universities and colleges (CUE, 2021).

Stakeholders' Perceptions: It refers to the views, attitudes, and interpretations of various actors such as students, parents, lecturers, institutional administrators, government agencies, and development partners about the implementation and outcomes of a new funding model in the tertiary education sector (Wanzala, 2023).

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Quality in tertiary education is multifaceted and includes aspects such as faculty competence, research output, student support services, curriculum impact, and employability of graduates. Funding models directly affect all these variables. For example, inadequate or delayed funding can result in large class sizes, limited learning resources, unmotivated staff, and low research productivity all of which compromise educational quality. Conversely, calculated and equitable allocation of financial resources can empower institutions to innovate, hire qualified faculty, upgrade infrastructure, and enhance student learning experiences (Varghese, 2018).

The quality of tertiary education globally has become a central apprehension for policymakers, teachers, and stakeholders, largely due to increasing demand, changing labor market needs, and financial constraints faced by governments. Traditional models of public funding for higher education, which largely relied on state subsidies and grants, are gradually proving untenable in many countries due to budgetary pressures and competing national priorities. Consequently, numerous nations have adopted new funding models aimed at diversifying income sources and enhancing institutional efficiency, with the goal of sustaining or improving educational quality (OECD, 2021).

In the European context, countries such as Germany and the Netherlands have shifted towards formula funding models that contemplate both input and output indicators, including student numbers, research productivity, and completion rates (Jongbloed & Vossensteyn, 2011). These models intend to foster competition and encourage universities to become more responsive to societal and economic needs. Evidence from the Netherlands suggests that this shift has led to enhanced transparency and a realistic increase in performance metrics, though concerns remain about potential overemphasis on measurable outcomes at the cost of broader educational goals (de Boer et al., 2015).

Developing countries, such as those in Sub-Saharan Africa and parts of Asia, have also begun experimenting with alternative funding frameworks to cope with the massification of tertiary education. In countries like Malaysia and South Africa, Public-Private Partnerships (PPPs), viable research grants, and graduate employability schemes have been introduced to enhance traditional funding mechanisms (Salmi, 2017). While these models have shown promise in improving infrastructure, research, and graduate outcomes, implementation challenges such as capacity constraints, corruption, and institutional resistance continue to limit their full impact on quality (Teferra, 2014).

Empirical studies in other developing economies offer comparable narratives. In Nigeria, the introduction of the Tertiary Education Trust Fund (TETFund) was intended at addressing infrastructural decay and research underfunding. While TETFund has led to improvements in physical infrastructure and academic staff development, bureaucratic blocks and inequitable distribution of resources have limited its effectiveness in enhancing overall educational quality (Obasi & Eboh, 2019). In South Africa, performance-based funding has increased liability but also sparked challenges in institutions serving disadvantaged societies, which often struggle to meet performance thresholds, thereby receiving less funding and further spreading inequalities (Cloete, 2016).

1.1.1 New Funding Model

In recent years, the financing of tertiary education has undergone major transformation across many developing countries, including Kenya. The traditional funding models, largely based on capitation and blanket subsidies from government, have faced intense scrutiny for their failure to address growing enrolment, disparities in institutional needs, and persistent quality concerns (World Bank, 2021). In Kenya, the demand for tertiary education has surged due to population growth, increased completion rates at the secondary level, and public acuity of higher education as a path to socio-economic mobility. However, this growth has not been matched by relative

increases in government funding, leading to overstretched facilities, overcrowded lecture halls, and diminished instructional quality (Nganga, 2022).

The Kenyan NFM also introduced a category of students into four bands vulnerable, extremely needy, needy, and less needy to guide the allocation of scholarships and loans throughout the Higher Education Loans Board (HELB). Under this model, students from low-income families receive a higher proportion of scholarships, while those from wealthier families are expected to bear a larger cost burden (GOK, 2023). Additionally, universities are required to demonstrate advances in academic outputs, research, and graduation rates to access enhanced capitation. This approach is expected to improve quality by encouraging competition, accountability, and better resource utilization (Owino, 2023).

However, while the NFM is designed to enhance equity and quality, it raises several questions about institutional autonomy, the sustainability of funding, and its actual impact on learning results. Studies have shown that sudden changes in financing structures can disrupt institutions, particularly those that are already under-resourced (Wangenge-Ouma & Cloete, 2008). For example, some public universities in Kenya have already reported challenges in planning and budgeting due to uncertainties surrounding the new funding disbursement timelines. Moreover, there are fears that the model may deepen inequalities between well-established and newer institutions that lack competitive advantage (Standard Media, 2023).

1.1.2 Quality of Tertiary Education

Globally, the sector has expanded rapidly due to raised demand for education and technological advancements. According to UNESCO (2022), global enrolment in tertiary education increased from 19% in 2000 to 38% in 2020, showing a growing emphasis on higher education as a tool for personal and national development. However, the increased access has not certainly translated into improved quality. In many evolving and even developed countries, the rapid

growth in enrolment has outpaced investments in academic base, faculty development, and quality assurance systems (OECD, 2020).

In Africa, and particularly Sub-Saharan Africa, quality concerns in tertiary education remain a pressing issue. The African Development Bank (AfDB) (2021) notes that although university enrolment in the region has more than doubled in the past two decades, quality indicators such as graduation rates, employability of graduates, and global rankings of colleges have remained low. For instance, the majority of African universities do not appear in top 500 global university rankings (QS World University Rankings, 2023), highlighting major gaps in research output, academic staff qualifications, and learning resources. In Kenya, the Commission for University Education (CUE) has raised concerns about the declining quality of university education owing to commercialization, inadequate faculty-to-student ratios, and weak governance constitutes (CUE, 2022).

The quality of tertiary education is influenced by several crucial factors as well as curriculum relevance, quality of teaching staff, research output, governance structures, and the availability of learning resources. According to a study by Oketch et al. (2021), many universities in East Africa operate with outdated curricula that do not align with modern labor market demands, leading to a mismatch between graduate skills and employment opportunities. Also, inadequate funding has hindered research and innovation, essential factors of quality tertiary education. For example, public universities in Kenya receive limited government capitation, which affects their ability to attract and maintain qualified lecturers, capitalize in infrastructure, and support postgraduate research (Mukhwana et al., 2022).

Recent data reveals worrying trends. A tracer study by the Kenya National Bureau of Statistics (KNBS) and Ministry of Education (2023) showed that 38% of university graduates in Kenya take more than two years to find gainful employment, and many are underemployed, suggesting possible shortcomings in the quality and relevance of education. Besides, academic

corruption, including plagiarism and the sale of academic credentials, has also weakened quality assurance efforts in several institutions (Transparency International Kenya, 2022).

1.1.3 Kenyan Perspective

The quality of tertiary education is intricately connected to the tolerability, competence, and sustainability of its financing models. In recent years, many countries, including Kenya, have adopted or reformed funding models for higher education to address growing concerns around access, equity, quality, and accountability (Koinange et al, 2021). Traditional funding contexts mostly reliant on government capitation grants have faced increasing pressure due to expanding student populations, inflationary restraints, and limited public budgets. As a result, the adoption of new funding models, including performance-based funding, public-private partnerships, student loan schemes, and differentiated unit cost approaches, has emerged as a pivotal strategy for ensuring the sustainability and quality of tertiary education (World Bank, 2020).

Besides, the Higher Education Loans Board (HELB) has been a critical pillar of the funding framework in Kenya, providing loans and bursaries to students. Nevertheless, HELB has faced persistent challenges such as low recovery rates, increasing loan defaults, and derisory funding compared to rising student demand (Chege & Odhiambo, 2020). These financial constraints have compelled universities to look for other income streams, including commercialization of services, partnerships, and increased fees for parallel programs. While these strategies have bridged funding gaps to some extent, they have also raised concerns about commercialization affecting educational integrity and access for marginalized populations (Onsongo, 2018).

The introduction of the NFM seeks to correct these inefficiencies by making funding restricted on institutional performance metrics and by strengthening oversight mechanisms. For instance, universities are now required to prove prudent financial management, relevance of academic programs, and alliance with national development goals in order to access

government support (Ministry of Education, 2023). A key expectation is that institutions will now invest more in quality assurance mechanisms, staff development, modern learning amenities, and research output, all of which are vital indicators of quality in tertiary education (Oketch, 2020).

1.2 Statement of the Problem

The enactment of the new funding model in Kenya's tertiary education sector has introduced both opportunities and challenges, raising significant apprehensions regarding its impact on the quality of education. While this model is intended to ensure equity and viability, it may have unintended consequences on the quality of education in public universities and technical and vocational education and training (TVET) institutions (Ministry of Education, 2023). One major concern is the potential underfunding of universities, especially those with a large population of students classified as 'less needy'. These institutions might not receive adequate financial resources to maintain academic infrastructure, employ and retain qualified faculty, or invest in research and innovation, all of which are critical signs of quality education (Otieno, 2022). A study by Nganga (2023) on public university funding in Kenya found that a decline in government funding correlated strongly with deteriorating student services, reduced library resources, and overcrowded lecture halls, negatively affecting learning outcomes and academic satisfaction.

Furthermore, the administrative complexities of the new model particularly the need to assess and verify each student's financial need can strain institutional capacity and delay the dispersal of funds. In some universities, students have reported delays in getting loans and scholarships, leading to interruptions in their academic journey, mental stress, and in some cases, dropout (CHE, 2023). This is mainly detrimental in technical institutions where hands-on training and timely access to materials are crucial for learning. Moreover, the emphasis on household contribution in the new model places a disproportionate burden on middle-income

families, some of whom may not qualify for sufficient support but still struggle to meet tuition and accommodation costs. As Wambua and Murunga (2024) note, this creates a funding gap that can compromise student attention and participation, indirectly affecting academic performance and institutional outputs. Additionally, reduced funding force colleges and universities to increase parallel programs or privatize services, potentially commercializing education and eroding academic standards.

While the new funding model is a well-intentioned effort to promote social justice in access to tertiary education, its impact on the quality of education remains a critical concern. Without adequate defenses to ensure steady and sufficient financing, support for academic structures, and institutional autonomy, the quality of tertiary education in Kenya may suffer, leading to a decline in graduate competencies, reduced global competitiveness, and failing of the country's knowledge economy. This trend not only threatens academic quality but may also exacerbate dropout rates among students from marginalized backgrounds who cannot bridge the funding gap.

1.3 Objectives of the Study

1.3.1 General Objective

The purpose was to assess the adoption of the new funding model and its influence on the quality of tertiary education in Kenya.

1.3.2 Specific Objectives

- i. To determine how financial sustainability affects the relationship between the new funding model and quality of tertiary education
- ii. To evaluate the effect of staffing and teaching resources on quality under the new model
- iii. To assess stakeholder perceptions and their influence on implementation outcomes
- iv. To examine the role of research and innovation in linking the new funding model to educational quality

1.4 Research Questions

- i. How does financial sustainability affect the relationship between the new funding model and quality of tertiary education?
- ii. What is the effect of staffing and teaching resources on quality under the new model?
- iii. How does stakeholder perceptions influence the implementation outcomes?
- iv. What is the role of research and innovation in linking the new funding model to educational quality?

1.5 Significance of the Study

1.5.1 To Government and Policy Makers

Policymakers are at the forefront of putting this new finance model into practice, and the government is key to the education sector. The findings of this study guides the government in adjusting its education policies to ensure a more equitable distribution of resources to tertiary institutions, ultimately improving the overall educational experience. The insights gained could also inform future education reforms and drive the formulation of policies aimed at improving quality standards in public universities and colleges.

1.5.2 To Higher Education Loans Board (HELB)

The leadership and management of tertiary institutions, including university chancellors, vice-chancellors, and other administrators, are major investors in the new funding model. This study offers them a deeper understanding of how funding allocations directly affect institutional performance, faculty recruitment, student results, and infrastructure expansion. HELB can use the study findings to advocate for adequate funding, enhance their financial management plans, and prioritize academic programs that will benefit from the new funding allocations.

1.5.3 Employers and Industry Stakeholders

Employers, both in the public and private sectors, have a vested interest in quality of education provided by tertiary institutions, as they are the ultimate recipients of the graduates. This study

assessed how the funding model influences the employability of graduates by supplementing curriculum, providing industry-relevant skills, and fostering collaborations between academia and the workforce. Employers can benefit from a well-funded education system that produces skilled graduates who are ready to meet the challenges of the labor market.

1.5.4 To Academicians

Prospective researchers' subsequent literature was amplified by the literature and findings from this study, providing them with a point of comparison for their findings as well as a chance to enrich their empirical literature. Academicians gain from this study by getting references for pertinent, cutting-edge research topics. Prospective scholars' libraries are also enhanced by the literature and study outcomes.

1.6 Scope of the Study

The study was confined into the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. The independent variables utilized in the study were; financial sustainability, staffing & teaching resources, stakeholders' perceptions and research & innovation while the dependent variable is quality of tertiary education. In this study, an explanatory research design will be utilized. The strategy known as explanatory research design was created to analyze a trend that had either never been studied before or had not been adequately explained in the past. The target group comprised of the academic staff, university administrators, government officials and students' union representatives correspondingly. The data collection tool was structured questionnaires which were given to respondents between September and October 2025.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In addition to providing an overview of major concepts and philosophies advancing in the field of the new funding model and its influence on the quality of tertiary education in Kenya, this segment will dwell deeper into earlier studies and research on theories and concepts of financial sustainability, staffing & teaching resources, stakeholders insights and research & innovation.

2.2 Theoretical Review

According to Nduati *et al.* (2019), a theory is a pool of related ideas, definitions, and claims that offer a methodical explanation of incidences by edging the relationships between variables in order to actualize or forecast the occurrences. This study scrutinized the theory of access to finance and development, the household capital structure theory and the Keynesian theory to diagnose the adoption of the new funding model and its influence on the quality of tertiary education in Kenya.

2.2.1 Theory of Access to Finance and Development

According to Beck and Demirguc-Kunt's (2008) theory of access to finance and development, the poor's inability to obtain financing limits their ability to accumulate both human and physical capital. The economic worth of the skills and attributes of labor that affect productivity is referred to as human capital. Higher education is one of these attributes, among many others. Theoretically, pupils from low-income groups have lower retention rates the further the private money they receive (Mbugua, 2009). The education system disproportionately disadvantages students from low-income families because their financial circumstances prevent them from saving money to stay in school.

Therefore, it is anticipated that poor families will have low salaries, which will make it difficult for them to afford the costs associated with attending university. They are unable to invest in the human capital of their children because, according to Becker and Tomes (1962),

poorer households are financially inhibited. As a result, they are unable to provide their children with prospects to develop their potential. According to Zhang and Zhou (2017), the discrepancies in household spending on education may contribute to the failing of educational gaps that exist across different social groups. The theory of private funding done by the heads of impoverished families and its association with the retention of students from these households in college or university is something that is fairly essential, and the concept of access to money and development is useful in this regard. In addition, the concept of development is relevant in this regard.

In the context of Kenya's tertiary education system, this theory was particularly relevant when examining the financial sustainability of new funding models. Traditional methods of financing tertiary education often disproportionately disadvantage students from low-income families, hindering their ability to persist and succeed in university because of the financial barriers they face. By adopting alternative funding models, such as public-private partnerships, scholarships, and student loans, Kenya can improve the financial accessibility of education for these students, thus raising greater retention rates and academic success. Thus, aligning financial sustainability with equitable access to education is crucial for enhancing the quality and inclusivity of higher education in Kenya.

2.2.2 The Household Capital Structure Theory

In financial management, capital structure theory is a methodical approach to funding ventures through a mix of liabilities and equity. The mix of debt and equity that economic enterprises utilize to finance their assets is referred to as their capital structure (Ammerman, 2017). Rural families in emerging nations rely heavily on the unofficial credit market for their intertemporal resource transfers. These households habitually employ sophisticated financial techniques to boost their capacity for production and spread out their spending over the course of their lives.

Rural households rely on informal credit sources such as moneylenders, friends, neighbors, family, and merchants (Sekyi, 2017).

According to Cunha et al. (2006), household liquidity shows parallels that are consistent with empirical business studies, and there are similar or common factors of household and corporate leverage. Like businesses, households use financial techniques to fund their operations. Their internal operations are occasionally funded by their earnings or the use of savings that have accrued over time. Sometimes families lack the financial resources to meet their basic needs, therefore they turn to debt and other obligation instruments to cover these costs. The household often considers a variety of potential funding sources while making financial decisions (Cunha et al, 2006).

The theory, which emphasizes the reliance on both formal and informal financial resources for funding, can be integrated with stakeholders' perceptions of adopting a new funding model for tertiary education in Kenya. Stakeholders, such as government bodies, financial institutions, families, and educational institutions, have varied opinions on how these funding models can improve the quality of education. For rural homes in Kenya, the use of informal credit sources, such as moneylenders and family support, mirrors the theory's notion of relying on internal resources for meeting educational expenses. Furthermore, stakeholders believe that access to better funding models would enable rural families to invest more in tertiary education, allowing students to pursue higher-paying non-farm work and thereby improving long-term financial outcomes.

2.2.3 The Keynesian Theory

Keynes (1930), one of the leading economists who examined the connection between economic growth and public spending, views public spending as an exogenous factor that may be utilized as a tool for policy to support economic expansion. Keynes emphasizes that public spending can make a weighty and legitimate contribution to economic growth. According to his theory,

the government's increased expenditures will have a corresponding impact on full employment, profitability, and significant returns on citizen investment due to multiplier effects on aggregate demand. An increase in output will result from the supply being triggered to increase due to the rise in aggregate demand.

Because the regular budget is insufficient to cover all of the public needs that the government should be meeting, borrowing money results in a pool of public debt toward the nation. In order to adequately service its population, the government will in turn provide or create additional public sector jobs. As a result of persons having money to spend, the multiplier effect produced a cumulative demand. When a result, new prospects arise when the government provides added funding for public works projects.

The theory, which underscores the role of public spending in stimulating economic growth and reducing unemployment through multiplier effects, can be unified into the context of Kenya's tertiary education sector. In Kenya, the government's increased investment in higher education, mainly through innovative funding models like the introduction of student loans and public-private partnerships, mirrors Keynesian principles. By using public funds to bolster the quality and accessibility of tertiary education, the government can stimulate demand for education, which in turn fosters economic growth. The infusion of capital into public universities allows for the expansion of infrastructure, improved educational resources, and increased employment opportunities for educators and support staff. This creates a cycle of increased utilization and economic activity, benefiting both the specific student and the broader economy. Moreover, just as Keynes argued that government mediation is necessary when markets fail, Kenya's adoption of new funding models in tertiary education aims to address the market failure in private sector provision of quality education. The resultant effect is a higher standard of education, increased human capital, and a more competitive labor force, contributing to the country's long-term economic development.

2.3 Empirical Review

An empirical review is a significant analysis and synthesis of preceding studies and research that involve the collection and analysis of data through observation or research. It focuses on reviewing and summarizing findings from empirical studies to identify patterns, trends, gaps, or liaisons in a specific area of study (Creswell, 2014). The variables are deliberated below;

2.3.1 Financial Sustainability and Funding Model of Tertiary Education

From a financial sustainability perspective, the government aims to shift part of the funding burden to households and the Higher Education Loans Board (HELB). Still, HELB continues to grapple with low loan recovery rates, which affects its ability to sustainably support students under the new model (Wesangula & Muganda, 2023). According to Commission for University Education (CUE), universities are already reporting budget shortages and rising debt, which undermines their capacity to invest in quality teaching and research structure. For example, the University of Nairobi and Kenyatta University have both issued public statements expressing concerns about growing financial constraints affecting operations, leading to late staff salaries and constrained student services (CUE, 2023).

The introduction of the New Funding Model (NFM) in tertiary education in Kenya marks a significant policy shift aimed at guaranteeing equitable, efficient, and sustainable financing of higher education. Financial sustainability in this framework consigns to the ability of tertiary institutions to maintain financial health over time while continuing to meet increasing demand for quality education (Ministry of Education, 2023). Under the NFM, the régime led a student-centered approach, replacing the flat-rate capitation model with a needs-based system that sorts learners based on their level of need: vulnerable, extremely needy, needy, and less needy. This new plan seeks to reduce blanket subsidies and instead distribute funds through scholarships, loans, and household contributions. While this approach promotes

equity, queries remain about its long-term viability and the capacity of institutes to generate additional income (Mwaluko et al, 2021).

Furthermore, the function of the Higher Education Loans Board (HELB) has become even more central under the NFM. HELB is tasked with disbursing loans to students based on their assessed financial need. However, the Board has faced chronic underfunding and challenges in loan recovery. As of 2022, HELB had an outstanding loan portfolio of over KES 15 billion, largely due to defaults by jobless graduates. For the NFM to be sustainable, loan disbursement must be matched by well-organized recovery mechanisms, reinforced by policies that stimulate graduate employment and income growth. Introducing incentives such as lower interest rates for timely repayment and adding loan repayments into the tax system may enhance recoveries (HELB Annual Report, 2022).

The model also transfers part of the financial obligation to households, which raises concerns about affordability and access, mostly among poor and marginalized communities. According to the Kenya National Bureau of Statistics (KNBS, 2022), over 35% of households live below the poverty line, potentially straining their ability to contribute to tertiary education financing. If not well-implemented, this shift could widen educational inequalities. To address this, the government has committed to fully funding vulnerable students through scholarships and loans, with the goal of maintaining access while improving equity. Still, the verification process for sorting student needs must be robust, transparent, and inclusive to prevent exclusion blunders (Omondi & Were, 2021).

The quality of tertiary education is innately connected to how well institutes are funded. Cash strapped universities frequently struggle to maintain adequate teaching staff, update learning resources, and modernize infrastructure. Mukhwana et al. (2023) in a study conducted by the Kenya Institute for Public Policy Research and Analysis (KIPPRA), found that reduced funding and reliance on student fees threaten research output, staff development, and student

support services. For instance, public universities have seen deteriorating enrolment in self-sponsored programmes, which previously served as a major revenue source, thereby deepening financial challenges (Mukhwana et al, 2023).

Besides, stakeholders have questioned whether the new funding model provides enough fiscal predictability and stability for institutions to undertake long-term planning. According to a report by the Universities Academic Staff Union (UASU, 2023), the model risks compromising academic autonomy by aligning funds strictly to compliance and performance metrics without recognizing the cost disparities across programmes like medicine or engineering, which require higher operational costs (UASU, 2023). While the new funding model presents a progressive framework for equitable access, its current implementation reveals major gaps in ensuring financial sustainability and quality assurance in Kenya's tertiary education. Continuous policy reviews, prolonged public-private partnerships, and reinforcement of student loan recoveries are critical in strengthening the funding structure to support high-quality and globally competitive higher education (CUE, 2023).

2.3.2 Staffing and Teaching Resources and Funding Model of Tertiary Education

The New Funding Model (NFM) introduced in Kenya's tertiary education sector has notably impacted staffing dynamic forces in universities and Technical and Vocational Education and Training (TVET) institutions. The NFM, which prioritizes student-centered funding based on vulnerability and academic merit, indirectly shifts focus from blanket institutional financing to individualized support (Oanda & Jowi, 2023). While this needs-based style promotes equity, it places considerable pressure on institutions to optimize the use of available human and teaching resources. As a result, the model demands improved efficiency in staffing and greater novelty in resource deployment (Ministry of Education, 2023).

As a result, institutions must now compete for students to secure funding, creating pressure to optimize staff numbers and improve teaching quality. For instance, public

universities like Egerton University and University of Nairobi have been forced to re-evaluate staff placement to maintain quality education amidst fluctuating enrolments and reduced capitation. Therefore, the model has raised apprehensions over potential job losses and increased workloads among academic and non-academic staff (Kinyanjui, 2023).

Moreover, under the NFM, institutions must demonstrate performance-based results to receive funding, which has prompted stricter hiring policies and intensified performance appraisals for teaching staff. Universities are gradually hiring contract-based and adjunct faculty to maintain flexibility and reduce recurrent expenditure on permanent staff. This trend is evident in TVET colleges, where teachers are recruited on short-term contracts tied to specific training programs funded under the model (Munyoki & Mwangi, 2023). While this enhances responsiveness to industry needs, it undermines job security and long-term academic planning. For example, Kisii National Polytechnic reported difficulty in retaining specialized tutors due to short contracts and lower remuneration compared to industry offers (Commission for University Education, 2023).

Teaching resources, including libraries, laboratories, and digital infrastructure, have also been profoundly influenced by the New Funding Model. Since institutional funding now depends on the number of enrolled students and their funding category, universities with fewer students receive less capital for maintaining and expanding teaching resources (Gudo, 2023). Institutes like Masinde Muliro University of Science and Technology have noted challenges in upgrading laboratory equipment due to erratic funding streams. This has negatively affected courses in engineering, medicine, and natural sciences, where modern and well-equipped labs are crucial for practical learning (Wambua & Njoroge, 2023).

Furthermore, the NFM inspires institutions to prioritize investments that support employability and innovation. This has led to a greater prominence on digital teaching tools and e-learning platforms, remarkably after lessons learned during the Covid-19 pandemic.

However, unequal access to ICT infrastructure among institutions has exposed disparities, particularly in rural TVET colleges, which lack stable internet and modern devices (Okoth & Ndung'u, 2023). For instance, Kabete National Polytechnic has struggled to fully implement virtual learning due to limited digital teaching aids and insufficient training for instructors. This scenario highlights a discrepancy between the model's prediction and the existing teaching resource capacity across Kenya's tertiary institutions (Ministry of Education, 2023).

The shift in funding mechanisms has led to major changes in how tertiary institutions manage academic staff. Universities are now incentivized to disclose productivity and performance, which may result in rationalization or reallocation of teaching staff based on program demand (Otieno, 2023). For instance, programs with lower enrolment may face staffing cuts, while those aligned with the Bottom-Up Economic Transformation Agenda (BETA) are on the point of receiving enhanced support. This realignment has heightened job insecurity among part-time lecturers, who traditionally filled gaps in staffing but now face reduced opportunities due to constrained institutional budgets (Kemboi et al, 2023).

Despite these changes, many public universities continue to deal with understaffing, mostly in specialized STEM and technical grounds. The NFM has not provided sufficient flexibility or additional funding to recruit experts in niche areas such as artificial intelligence, data science, and engineering, leading to heavy workloads on existing lecturers (Ng'ethe & Simiyu, 2023). A good example is Moi University, which has repeatedly cited staff shortages in its engineering faculty, limiting its ability to meet the demands of competency-based curricula introduced in recent years (Standard Media, 2023).

The NFM also affects the allocation of teaching and learning resources such as laboratories, digital tools, and instructional materials. Institutions that fail to attract students under the new model may experience reduced capitation, leading to reduced capacity to procure or maintain essential teaching resources (MoE, 2023). For instance, technical training

institutions like the Kenya Technical Trainers College (KTTC) have reported delays in getting new lab equipment needed for TVET courses due to reduced funding per student. So, students are often forced to rely on outdated resources, affecting the quality of instruction (World Bank, 2023).

According to Altbach, Reisberg, and Rumbley (2009), the massification of higher education globally has strained staffing levels, with many institutions struggling to maintain acceptable student-to-faculty ratios. This is mainly evident in developing countries where faculty absences are compounded by limited professional development chances. A study by Teferra and Altbach (2014) revealed that in many African universities, high workloads and low salary contribute to brain drain, reducing the capacity of institutions to deliver quality education.

In relation to teaching resources, research has shown that access to libraries, laboratories, digital platforms, and other instructional materials is imperative for effective pedagogy. OECD (2018) emphasized that the availability of up-to-date teaching resources relates strongly with student satisfaction and academic performance. Similarly, a study by Materu (2014) on African universities noted that outdated or insufficient teaching materials encumber both teaching and research effectiveness, especially in science and engineering subjects. This challenge is often attributed to underfunding, leading institutions to depend heavily on donor support or outdated infrastructure.

In Kenya, a study by Oanda, Chege, and Wesonga (2008) evaluated the effects of university expansion on quality, revealing that rapid enrollment growth without proportional investment in staffing and teaching resources compromises academic standards. Additionally, Nganga (2013) found that reliance on module II (self-sponsored) programs to supplement institutional income results in overworked faculty and reduced attention to regular programs.

These findings underscore the need for balanced and sustainable funding strategies that prioritize both access and quality.

2.3.3 Stakeholders Perceptions and Funding Model of Tertiary Education

Stakeholders' perceptions of the New Funding Model of tertiary education in Kenya have been varied, reflecting diverse interests, expectations, and concerns amongst important actors with students, parents, university administrators, policymakers, and civil society organizations. The NFM, introduced by the Kenyan government in May 2023, intends to make higher education more accessible, equitable, and sustainable by substituting the flat-rate capitation with a needs-based and performance-driven funding style. This model classifies students into four groups vulnerable, extremely needy, needy, and less needy to determine government support through scholarships and loans (Ministry of Education, 2023).

Proponents of the NFM argue that it promotes social justice by guaranteeing that government funding prioritizes students from disadvantaged backgrounds. According to Cabinet Secretary for Education, the model is expected to support 29% of students (classified as vulnerable and extremely needy) with full government scholarships and loans, thereby reducing the burden on low-income households (Nation Africa, 2023). University administrators such as those from the University of Nairobi and Moi University have welcomed the approach as a mechanism to address underfunding, which has crippled operations and service delivery in public universities for years. For instance, the Vice Chancellor of Kenyatta University noted that aligning funding to student needs can help stabilize finances and reduce institutional liability (Standard Media, 2023).

Despite its noble intentions, the NFM has drawn skepticism regarding its implementation. One of the main concerns raised by stakeholders is the lack of transparency in the categorization process. Student leaders, including the Kenya University Students Organization (KUSO), have pointed out that the Means-Testing Instrument (MTI) utilized by

the Higher Education Loans Board (HELB) may not accurately reflect real economic conditions of households because of data gaps and inconsistencies. In rural and informal urban hamlets, where many people operate in the informal sector, family incomes are hard to verify, potentially leading to misclassification of deserving students (KUSO, 2023).

University managers have also raised issues about the adequacy and predictability of funds under the new model. Some vice chancellors argue that shifting from tax grants to performance-based funding could create disparities among institutions, particularly newer or less established universities that lack infrastructure to attract top-performing students. This might undermine efforts to decentralize tertiary education and promote regional fairness. Additionally, delayed disbursement of funds a problem that has historically plagued HELB been dreaded to persist under the NFM, compromising timely operations and learning activities (Obuor, 2023).

Parents and guardians have also aired mixed reactions. While the model relieves the poorest households from full financial responsibility, the categorization process has sometimes placed average-income families in the ‘less needy’ bracket, requiring them to pay up to 70% of fees. This has strained household budgets, especially in the face of rising living costs. The Kenya Parents Association (KPA) has urged the government to review the income assessment levels and consider regional economic disparities to ensure fairness (KPA, 2023).

Civil society organizations such as Elimu Bora Working Group and policy think tanks like the Institute of Economic Affairs (IEA Kenya) have called for more inclusive stakeholder talks in the implementation of the NFM. They recommend regular audits and publication of funding data to ensure transparency and accountability. Moreover, experts have warned that the success of the model is tied to broader reforms in tertiary education financing, including the creation of an education endowment fund and support the solvency of HELB (IEA, 2023).

While the model promises to allocate funds based on the financial need of students with the most vulnerable receiving up to 82% of their tuition in government scholarships and loans there is anxiety over the verification process and the potential for exclusion errors. According to the Kenya Universities and Colleges Central Placement Service (KUCCPS), over 140,000 students who qualified for university placement in 2023 were to benefit from the new model, but many lamented about the opaque nature of the means-testing mechanism. Parents from low-income backgrounds have voiced concerns that if the model is not implemented with transparency, it might disadvantage the very populations it seeks to uplift (Ngoki & Karimi, 2023).

In South Africa, Singh and Tustin (2023) conducted a study examining stakeholders' grasp of private higher education. The findings revealed limited awareness, particularly among parents, and perceptions that private institutions are expensive with low returns on investment. Despite acknowledging the advantages of private higher education and graduate achievement, the study emphasized the need for better communication and addressing cost perceptions to enhance the sector's role in meeting national educational targets.

A study by Otieno (2017) explored the perception of higher education stakeholders in Kenya concerning the introduction of differentiated unit cost (DUC) as a funding system. The research found that university administrators generally viewed DUC optimistically, seeing it as a step toward equitable resource distribution. However, students and parents expressed fears about affordability and access, revealing a disconnect in insights across stakeholder groups. Otieno decided that the success of such funding models depends on extensive stakeholder engagement and transparency in resource allocation.

Furthermore, a more recent study by Munene (2019) examined the implementation of Higher Education Loans Board (HELB) scheme in Kenya. The findings revealed that while the HELB model was appreciated by many students as a means of accessing higher education,

perceptions varied generally depending on the ease of application, disbursement reliability, and repayment expectations. Many stakeholders recommended increased government subsidies and improved loan recovery strategies to enhance sustainability.

2.3.4 Research and Innovation and Funding Model of Tertiary Education

Research and innovation are central pillars in the New Funding Model of tertiary education in Kenya, which was introduced to enhance equity, accountability, and sustainability in financing higher education. The NFM represents a departure from traditional blanket funding approach, moving toward a needs-based and performance-linked funding structure. In this framework, research and innovation are not only beneficiaries of funding but also key drivers in shaping, evaluating, and improving the model's application and outcomes (Mwakio, 2021).

Research plays a foundational role in informing the policies underpinning the New Funding Model. Extensive empirical studies on the challenges of the previous Differentiated Unit Cost (DUC) model revealed issues such as unsustainable government expenditure, underfunding, and inefficiencies in resource allocation (Ngolovoi, 2023). These results influenced the shift to a more focused funding approach that uses an inclusive means-testing tool to classify children into four need categories: vulnerable, extremely deprived, needy, and less needy. To verify the socio-economic profiles of students and suggest impartial resource distribution, organizations for instance the Commission for University Education (CUE) and the Kenya Institute for Public Policy studies and Analysis (KIPPRA) have carried out policy studies (KIPPRA, 2022).

The NFM integrates technological innovations in its funding assessment and disbursement processes. For instance, the Higher Education Financing (HEF) portal developed by the Higher Education Loans Board (HELB) utilizes automated systems to assess student applications for scholarships and loans. This system applies algorithmic analysis based on household income, vulnerability index, and other socio-demographic factors to distribute funds

fairly. Such digital innovations not only improve transparency and efficiency but also ensure inclusivity, mostly for marginalized and disadvantaged students in arid and semi-arid regions (HELB, 2023).

The New Funding Model also stresses institutional liability, thereby incentivizing universities and technical and vocational education and training institutions to strengthen their research capacities. Funding is now partially tied to performance indicators for instance research output, novelty commercialization, and community impact. For example, Jomo Kenyatta University of Agriculture and Technology (JKUAT) and the University of Nairobi have increased their focus on applied research and industry collaboration to affiliate with the government's Bottom-Up Economic Transformation Agenda (BETA), thus securing more funding under the NFM framework (Ministry of Education, 2023).

Moreover, the NFM encourages student and faculty participation in innovation-driven projects through grant schemes and innovation hubs. The Kenya National Innovation Agency (KENIA) and National Research Fund (NRF) are working closely with universities to support projects in areas for instance climate resilience, digital agriculture, and green energy. For instance, Dedan Kimathi University of Technology's solar irrigation innovation, funded by NRF, exemplifies how targeted support for innovation can address both academic and community development goals (NRF, 2023).

Research has been instrumental in diagnosing the problems that necessitated the New Funding Model. Studies conducted by the Commission for University Education (CUE), the Ministry of Education, and independent scholars showed the unsustainable nature of the Differentiated Unit Cost (DUC) model that had guided public funding since 2016. According to Oanda and Jowi (2022), the DUC system unsuccessfully to account for students' socio-economic diversity and institutional disparities, leading to underfunding in key disciplines like engineering and medicine, while extending inefficiencies. In response, the New Funding Model

adopted a more equitable style by categorizing students into four levels of need: vulnerable, extremely needy, needy, and less needy. Funding is now allocated through a blend of government scholarships, student loans (via the Higher Education Loans Board), and household contributions. Research has shown that such means-tested approaches, used in countries like South Africa and the UK, are more equitable and sustainable (World Bank, 2023).

Several universities have also begun to pilot programs and conduct empirical research on the effects of NFM. For instance, Kenyatta University and Moi University have launched studies analyzing student satisfaction, retention rates, and financial stress under the new model. Pilot findings indicate that while students from lower-income households benefit from increased scholarships and loans, those classified as less needy report higher out-of-pocket costs, raising questions about the accuracy of socio-economic assessments and the need for dynamic review mechanisms (Kitii, 2023).

Abramo and D'Angelo (2021) analyze the effects of introducing performance-based research funding systems (PBFRS) in Italian universities. Their bibliometric study discloses that such systems can lead to improved research productivity, mostly among lower-performing institutes. The findings suggest that PBFRS can be an effective tool for enhancing research outcomes and fostering a competitive academic environment. Abdullahi and Surajo (2024) explore innovative financing plans for tertiary education in Nigeria, stressing the need for divergence to achieve Sustainable Development Goal 4 quality education. They advocate for public-private alliances, social impact bonds, income-share agreements, and technology-enabled fund-raise as viable alternatives to traditional government funding. These methods aim to enhance equitable access and sustainability in Nigeria's higher education landscape.

Mutiso, Onyango, and Nyagol (2015) did a case study at Jaramogi Oginga Odinga University of Science and Technology, revealing that while diverse funding sources positively influence educational quality, significant challenges persist. Their research highlighted that

government capitation, tuition fees, and alternative funding streams are essential for enhancing access to quality education. They advocated for the adoption of performance-based funding to reinforce educational standards.

In the dominion of research and innovation, Bolo (2015) observed that Kenyan universities and public research institutes have embraced the ‘third mission’ of implementing novelty and free enterprise. Notwithstanding this, the private sector has outpaced these institutions in securing intellectual property rights. The study recommends matching policies to encourage open access and commercialization of research outputs, introducing performance-based funding to inspire innovation, and augmenting partnerships between universities and local businesses. Besides, Kaberia, Muithya, and Muathe (2024) stressed the importance of developing entrepreneurial university ecosystems in Kenya. They argue that universities should not only focus on teaching and research but also play a pivotal role in regional development by fostering innovation and entrepreneurship. Such ecosystems can bridge the gap between academia and industry, helping knowledge transfer and economic growth.

2.3.5 Quality of Tertiary Education in Kenya

Kenya's tertiary education quality has been a topic of national discussion because of its effects on the nation's socioeconomic growth and ability to compete internationally. The development of state universities and the licensing of private schools, in addition to the growing demand for higher education, are primarily responsible for Kenya's exponential increase in university and college admissions during the last 20 years. However, this expansion has sparked worries about maintaining educational standards throughout the tertiary sector and safeguarding their quality (Onsongo, 2017).

Inadequate finance is one of the main issues affecting Kenyan higher education. Government capitation, which has not kept up with the growing student population, is a major source of funding for public institutions in particular. Although the government's 2016 adoption

of the Differentiated Unit Cost (DUC) model was a step in the right track, many institutes continue to face financial limits that impact employment, research funding, and infrastructure expansion. In recent years, for example, the University of Nairobi and Kenyatta University have reported financial shortages that resulted in delayed staff wages and reduced operating capability, both of which negatively impact the educational experience for students (World Bank, 2021).

The caliber and applicability of educational programs is another important concern. The skills needed in the labor market and what is taught in universities are becoming increasingly out of sync. The high unemployment rates among Kenyan university graduates are exacerbated by the fact that many graduates lack adaptability, critical thinking skills, and practical knowledge. Some colleges provide programs that are underfunded or do not adhere to accrediting needs, according to the Commission for University Education (CUE). As a result, there are now calls for curriculum revision, more industry cooperation, and a stronger emphasis on Technical and Vocational Education and Training (TVET) as a substitute route to innovation and employment (CUE, 2020).

The precipitous expansion of universities has also affected academic staff quality. Most public universities face a shortage of qualified tutors, especially those with PhDs, and a heavy reliance on part-time lecturers. This undermines both teaching quality and research output. According to Munene (2016), the student-to-lecturer ratio in public universities often exceeds advocated thresholds, restraining the lecturer-student interactions, mentorship prospects, and academic supervision, particularly in postgraduate programs.

Despite these trials, there are notable efforts aimed at improving quality in Kenya's tertiary education. Universities such as Strathmore University and University of Nairobi have invested in modern learning facilities, international collaborations, and meticulous quality assurance mechanisms. Moreover, the adoption of digital learning, especially post-Covid-19,

has opened new opportunities for improving access and innovation in teaching and learning. The mixing of ICT in education, supported by government initiatives like the Kenya Education Cloud and Ajira Digital Program, seeks to bridge digital divides and enhance employability skills among graduates (Ministry of ICT, Innovation and Youth Affairs, 2021).

According to Odhiambo (2016), the massification of university education in Kenya has led to overcrowding, overstretched resources, and deteriorating teaching and learning standards. His study noted that while increased access to higher education was commendable, it came at the expense of quality, mostly in public universities that struggled with insufficient funding and infrastructure. Equally, Oanda, Chege, and Wesonga (2008) examined governance and quality assurance in Kenyan public colleges. They found that poor formal governance structures and inconsistent quality assurance mechanisms significantly undermined academic standards. The authors recommended the strengthening of internal quality control systems and the active role of the Commission for University Education (CUE) in monitoring compliance.

Gudo, Oanda, and Olel (2015) also investigated quality indicators in Kenyan universities and found that student-teacher ratios, academic staff credentials, and learning facilities were among the major determinants of quality. Their research revealed that many universities were enrolling more students than they could tolerably serve, resulting in compromised learning experiences. Besides, Munene (2016) explored the role of academic staff motivation in enhancing education quality in Kenyan universities. The study concluded that low staff confidence due to delayed promotions, limited research funding, and heavy teaching workloads hindered the delivery of high-quality education. Munene recommended comprehensive human resource reforms and increased investment in faculty development.

2.4 Conceptual Framework

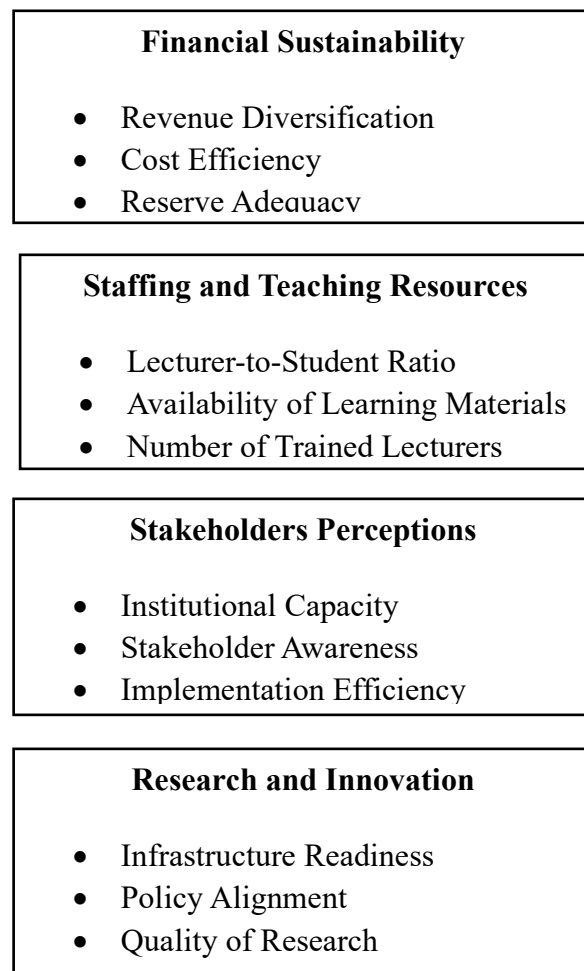
According to Varpio *et al.*, (2020), a conceptual framework is encompassed with a set of general ideas and hypotheses that assist a researcher in precisely finding the problem, phrasing

their enquiries, and selecting articles that are pertinent to the topic at hand. The topic under study is to investigate the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. The independent and dependent variables in this study are as follows;

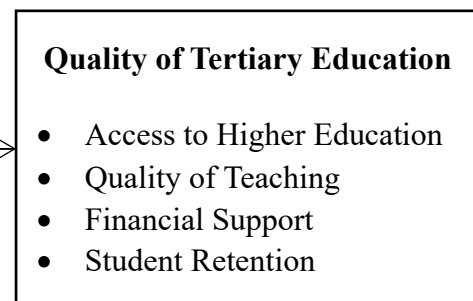
FIGURE 1:

Conceptual Framework

Independent Variables



Dependent Variable



Source: (Researcher, 2025)

Based on the literature reviewed, a conceptual framework shows how financial sustainability, staffing & teaching resources, stakeholders' perception and research & innovation which are the independent variables relates to quality of tertiary education which is the dependent variable are shown in the figure 2.1 above.

2.5 Operationalization of Variables

The foremost area of focus in this research is the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. Table 2.1 below shows the dimensions of the variables;

TABLE 1:

Operationalization of Variables

Variable	Category	Measurement	Type of Analysis
Financial Sustainability	Independent	• Revenue Diversification • Cost Efficiency • Reserve Adequacy	Descriptive Inferential
Staffing and Teaching Resources	Independent	• Lecturer-to-Student Ratio • Availability of Learning Materials • Number of Trained Lecturers	Descriptive Inferential
Stakeholders Perceptions	Independent	• Institutional Capacity • Stakeholders Awareness • Implementation Efficiency	Descriptive Inferential
Research & Innovation	Independent	• Infrastructure Readiness • Policy Alignment • Quality of Research	Descriptive Inferential
Quality of Tertiary Education	Dependent	• Access to Higher Education • Quality of Teaching • Financial Support • Student Retention	Descriptive Inferential

Source: (Researcher, 2025)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The many research methodologies utilized in the study are covered in this chapter. The basic design of the study, a narrative of the study population, sample size, and the sampling methods that will be used in addition to the research instruments were covered in this part. Multiple regression analysis, ethical considerations, and data collection methods are also covered in this section.

3.2 Research Design

A research study is accomplished according to a blueprint known as the research design. It is a combination of factors that affect both the economy of the process and the goal of the research when gathering and evaluating data (Greener, 2016). The research design for the study was explanatory. In order to identify the underlying source of an issue and explain why it occurs in the first place, explanatory research is conducted. Additionally, it provides flexibility for further research on the same topic. Explanatory research design goes beyond mere description to explore why and how a certain event or condition occurs, often focusing on identifying the root causes of issues (Sekaran & Bougie, 2016). This type of design allowed researcher to investigate underlying patterns and processes, providing insights that can lead to practical solutions or deeper theoretical insights. Explanatory research is especially valuable when researchers seek to explain phenomena that are complex or not well-understood, enabling them to develop hypotheses that can later be tested through further research (Babbie, 2013).

3.3 Target Population

Bresler & Stake (2017) define a population as the entire set of elements from which we want to draw conclusions. For the purpose of this research, the target population was 39 chartered public universities and 1335 TVET institutes in the country. The new higher education funding model in Kenya, introduced in May 2023, is relevant to public universities and Technical and

Vocational Education and Training (TVET) institutions (Ministry of Education, 2023). The reason why the researcher will focus on public universities and TVET institutions is because they are included on the adoption of new funding model in Kenya.

The new funding model directly affects public universities and TVET institutions, as they are included in its scope. By selecting these two categories, the research examined the adoption, impact, and challenges faced by these institutions in adapting to the new funding framework. This ensured the study was focused on those that will experience the changes firsthand. Including all 39 chartered public universities and 1335 TVET institutes provides a broad representation of the higher education landscape in Kenya. This ensured that the research covers a diverse range of institutions, varying in size, location, and resources, thus providing a comprehensive perception of the effects of the new funding model across the entire sector. This information is further tabulated in table 3.1 below;

TABLE 2:

Target Population

Category	Population	Percentage
Public Universities	39	2.8
TVET Institutions		
National Polytechnics (NPs)	24	1.7
Public Technical and Vocational Colleges (TVCs)	296	21.5
Public Vocational Training Centers (VTCs)	1015	73.8
Total	1374	100

Source: (MOE, 2025)

3.4 Sample Size and Sampling Procedure

3.4.1 Sample Size

A sample is a subset of the target population that has been precisely chosen to be representative of the entire population. Sample size, according to Kothari & Gaurav (2014), is the number of components that must be present in the research sample. According to Wiersma & Jurs (2012), the ideal sample size should be sufficient to ensure the data's validity and reliability. According to the Ministry of Education, 93 TVET and chartered public universities in the country would be chosen for the study. The respondents responded to the questionnaires and thereafter the sample size was analysed based on Yamane (1967) formula at 90% confidence level (0.10 level of significance) as shown below;

$$n = \frac{N}{1 + N(e)^2}$$

Where n = Sample Size

N = Population (1374)

e = Level of Precision (0.10)

$$\frac{1374}{1 + 1374 (0.10)^2} = 93$$

3.4.2 Sampling Procedures

The study participants were chosen through the use of stratified random sampling techniques. This sampling strategy, which is impartial, consisted of selecting a representative sample from each individual after dividing the people's diverse groups into regular subsets. According to Wiek and Lang (2016), this method of sampling ensures that the remaining subgroups are either more or less represented in the chosen sample. Simple random sampling was utilized for every stratum. Table 3.2 below shows the sampling size;

TABLE 3:**Sample Size**

Category	Population	Sample Size
Public Universities	39	7
TVET Institutions		
National Polytechnics (NPs)	24	5
Public Technical and Vocational Colleges (TVCs)	296	25
Public Vocational Training Centers (VTCs)	1015	56
Total	1374	93

Source: (MOE, 2025)

3.5 Data Collection Instruments and Procedures

This study generated primary data to achieve its objectives.

3.5.1 Data Collection Instruments

The respondents in the area were assessed by using structured questionnaires in order to get primary data. The goals of the study guided the progress of the questionnaires' questions. There were two sections to the structured questionnaires. While part two emphasized on the questions concerning to dependent and objective variables, part one concentrated on the respondents' general information. The questions in part two were designed using a 5-point Likert scale with items ranging from (1) strongly disagree to (5) strongly agree. Likert- type scales were utmost convenient as they rated the respondent's perception about the subject under study (Saunders, *et al.* 2015).

3.5.2 Data Collection Procedures

Prior to visiting public universities and TVET institutions for the purpose of data collecting, a letter from NACOSTI was circulated, in which it requested authority to carry out research. The primary data was obtained through the usage of questionnaires that were designed to be self-administered. With the help of two trained research assistants, the researcher distributed

questionnaires to each of the 93 respondents who attended public universities and technical and vocational education and training institutions.

3.6 Pilot Test

9 respondents, or 10% of the sample size was employed in the piloting of data collection instrument at some of the public universities outside Nairobi County. Due to the researcher's suitability, the respondents chosen for the pretesting of the research questionnaire were not included in the actual studies, so removing bias. The purpose of the pilot study was to test the research instrument validity and reliability while concurrently lowering the likelihood of making a mistake and speeding up the identification of anticipated concerns. Likewise, it was possible to determine whether the study's time and financial resources were sufficient. Finding unclear or incorrect questions was another advantage, helping to assure that overall goals are met in accordance with the research factors. The validity and reliability of the research questionnaires were evaluated using the data from the pilot study.

3.6.1 Validity Test

According to Cooper and Schindler (2014), validity refers to how well the study evaluates the intended constructs and accurately captures the factual differences between the participants. Content validity is a form of validity that measures the magnitude to which a measurement tool adequately covers the fundamental aspects and topics that are relevant to the research being conducted. The determination of content validity was based on the expert judgement of the supervisors.

3.6.2 Reliability Test

Reliability, as defined by Mugenda (2013), pertains to the scope to which information gathering processes and analysis provide consistent outcomes. The objective of this study was to determine whether the employed methodologies produce consistent outcomes across various situations, or if diverse researchers would arrive at identical conclusions when using the same

unprocessed data. The present study used Cronbach's coefficient alpha as a statistical method to assess the internal reliability of the questionnaire. According to Hair, Black, and Tatham (2016), the reliability of a test is regulated by the consistent measurement of a concept through its scale or questions. Alpha values range from zero to one, where a value of zero indicates the absence of internal consistency, and a value of one indicates perfect internal consistency.

3.7 Data Processing, Analysis and Presentation

Two unique formats, namely qualitative and quantitative, was utilized to display the data that had been acquired. Additionally, the material was provided in its raw form. In the field of descriptive statistics, charts and tables were used. On the other hand, in the field of inferential statistics, multiple regression was utilized, and charts were almost never utilized.

3.7.1 Data Processing

The act of converting data into a format that is mutually desirable and capable of producing the desired results is what is referred to as data processing. This conversion or processing was done by hand or automatically using a predetermined arrangement of operations. Either way, it followed a set of steps. Following the initial coding of the data, cleaning, synthesis of the data, and tabulation of the data, the data was entered into the SPSS software to run the analysis.

3.7.2 Data Analysis and Presentation

The process of analyzing all of the information and determining which information is relevant and useful in terms of improving decision making is what is known as data analysis according to Silvia and Skilling (2012). The Statistical Package for the Social Sciences (SPSS) version 29 was utilized in order to perform the analysis on the data that was acquired once it had been accumulated. In addition to that, a model summary was generated, correlation, regression, and analysis of variance. Tables and figures were used to present the data.

3.7.3 Correlation Analysis

The relationship between two continuous variables, such as between two independent variables or among an independent and a dependent variable, can be measured using correlation analysis. Accurate associations are suggested by the correlation coefficient standards, which range from +1.00 to -1.00. It is insolent to determine how each independent variable affects the dependent variable when there is a significant degree of correlation between them (Hair et al, 2013). The Pearson Product Moment correlation was applied in this study to examine the relationship between; financial sustainability, staffing & teaching resources, stakeholder's perceptions and research & innovation as the (independent variables) while quality of tertiary education as (dependent variable). Pearson's moment correlation was tested at 5% level of significance.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

α : is the intercept.

Y: is Quality of Tertiary Education

X1: is Financial Sustainability

X2: is Staffing and Teaching Resources

X3: is Stakeholder's Perceptions

X4: is Research and Innovation

ε : error term.

β_1 - β_4 : are the coefficients of the independent variable in which measures the responsiveness of Y to changes in i.

3.8 Testing the Assumptions of Multiple Regression Model

3.8.1 Testing the Assumptions of Hierarchical Regression Model

As part of the normality test, the Kolmogorov-Smirnov test was carried out. When the results of the test are found to be statistically considerable, with a p-value less than 0.05, the null

hypothesis is rejected, which means that the assumption of normality for the distribution is also rejected (Field, 2009). The findings will indicate that the data has a normal distribution.

3.8.2 Linearity

A scatter plot was created using SPSS statistics to test this hypothesis. The researcher first plotted the dependent variable against the independent variable, and then visually evaluated the scatter plot to clarify whether or not it was linear. Through the use of the scatter diagram, the residuals were distributed in a consistent manner around the zero line, which was the regression line. This led to the conclusion that the data ought to be dispersed in a linear fashion.

3.8.3 Multicollinearity

To test this, we first determined the inter-correlations that existed between the variables that are considered independent. According to Hair et al. (2013), a multi-collinearity problem arises when the independent variables have a strong correlation with one another. Through the use of the Variance Inflation Factor (VIF), a statistical test of multi-collinearity was conducted. In order to determine whether or not multi-collinearity exists, an analysis of tolerance and the Variance Inflation Factor (VIF) was performed, using bases of greater than 0.1 and a VIF of 10 (Hair et al., 2013). A VIF factor that is larger than 0.1 and less than 10 was considered for each and every construct. Therefore, there should be no issues with multi-collinearity going forward.

3.8.4 Heteroscedasticity Test

Experiments with heteroscedasticity were carried out in order to determine whether or not the regression model encompassed a heteroscedasticity problem. P-values that were produced by heteroscedasticity were stereotypically lower than they ought to be. The researcher got to the conclusion that a model term was statistically significant when, in reality, it was not significant due to this problem. An issue of heteroscedasticity existed if the value of significance was less

than 0.05, but if the value of significance was larger than 0.05, there was no glitch of heteroscedasticity. This was the rule that govern the decision made.

TABLE 4:

Variable Description and Measurement

Variable	Items	Source
Financial Sustainability	• Revenue Diversification • Cost Efficiency • Reserve Adequacy	Five-Likert Scale
Staffing and Teaching Resources	• Lecturer-to-Student Ratio • Availability of Learning Materials • Number of Trained Lecturers	Five-Likert Scale
Stakeholders Perceptions	• Institutional Capacity • Stakeholders Awareness • Implementation Efficiency	Five-Likert Scale
Research & Innovation	• Infrastructure Readiness • Policy Alignment • Quality of Research	Five-Likert Scale
Quality of Tertiary Education	• Access to Higher Education • Quality of Teaching • Financial Support • Student Retention	Five-Likert Scale

3.9 Ethical Considerations

The respondents were given complete information describing the nature and purpose of this research, the procedures that were utilized, as well as the anticipated benefits that accrued to both the respondents from public universities and TVET institutions. This information was presented to the respondents. All of the information that was gathered from the people who participated in the survey was held in the strictest confidence and was utilized solely for the purpose of this investigation. The researcher also attached a research approval from NACOSTI as well as an introduction letter from KCA to the questionnaires. This was because of the fact

that the staffs from public universities and TVET institutions was involved in the process of data collection. A letter of introduction from KCA was also attached.

3.9.1 Informed Consent

One of the most important ethical guidelines in research was informed consent. It guaranteed that before consenting to participate in a study, participants completely comprehended it. This needed a deep grasp of the goals, methods, possible hazards, and advantages of the study. Before the study started, each participant had to sign a consent form. This form addressed the objectives of the study, its expected duration, and the participants' rights. The fact that participation was completely voluntary and that individuals might halt at any time without incurring penalties or consequences was made very clear (Fouka & Mantzorou, 2011).

3.9.2 Voluntary Participation

It is entirely voluntary to participate in this study. Respondents were made aware that they were not required to participate and that they would not suffer any consequences if they chose not to or withdraw at any time. The study did not use any kind of force, fraud, or undue influence to force participants to partake in order to achieve genuine consent (Bryman, 2016).

3.9.3 Confidentiality

A basic ethical guideline is confidentiality, which involves protecting participant information from unofficial access or disclosure. All information gathered for this study was handled with the highest confidentiality and used only for scholarly study. All completed questionnaires were safely saved, with only the research team having access; the researcher made sure. No names or other identifying data was connected to the responses during the data analysis or presentation of the results (Saunders, Lewis, & Thornhill, 2019).

3.9.4 Anonymity

Participants' identities were kept secret, even from the researcher, thanks to anonymity. Personal identifiers like names, employment numbers, or contact information was not included

in the surveys used for this study. This technique improved participant protection by ensuring that individual responses cannot be linked to any particular individual (Israel & Hay, 2006).

CHAPTER FOUR: FINDINGS AND DISCUSSION

4.1 Introduction

This chapter entails a detailed analysis and presentation of study findings that include; the response rate, demographic analysis, descriptive analysis results, correlation, regression assumption test, model summary, ANOVA and regression co-efficient.

4.2 Response Rates

The study administered 93 questionnaires to targeted participants in institutions of higher learning. The responses are as presented in table 4.1 below;

TABLE 5:

Response Rates

Response	Frequency	Percentage
Complete questionnaires	74	79.1%
Uncompleted questionnaires	19	20.9%
Total	93	100%

Source: Research data (2025)

The study recorded a high response rate, with 74 out of 93 questionnaires completed, representing 79.1 percent, while only 20.9 percent remained uncompleted. According to Mugenda and Mugenda (2022), a response rate above 70 percent is considered excellent in survey-based research as it enhances the validity and reliability of findings. This strong response rate suggests that the respondents were highly engaged and willing to provide information on the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. Non-response was handled through follow-up strategies to ensure data completeness and representativeness. The researcher conducted follow-up phone calls and reminder emails to respondents who had not returned the questionnaires within the initial data collection period. In cases where respondents were unreachable or declined participation, replacement was not pursued to maintain the integrity of the sampling procedure.

4.3 Pilot Test Results

9 respondents, or 10% of the sample size was employed in the piloting of data collection instrument at some of the public universities outside Nairobi County. The validity and reliability of the research questionnaires were evaluated using the data from the pilot study.

4.3.1 Validity Results

Validity offered the basis for verifying and assuring correctness and meaningfulness of inferences based on the research results. Objective questions in the questionnaires ensured validity of the instruments. Expert opinion was sought on the representativeness and suitability of questions, to get suggestions on corrections to be made on the structure of the research tools. This assisted in improving the content validity of the data collected.

4.3.2 Reliability Test Results

Reliability was tested using Cronbach's Alpha. The alpha coefficient in magnitude varied from 0 to 1. The higher the alpha coefficient of Cronbach, the greater the internal accuracy of the constructs on the scale. The Cronbach Alpha Coefficient value of 0.7 was used as a cut-off point and all objects with a value $\leq$ than 0.7 was considered.

TABLE 6:

Reliability Test Results

Construct	Items	Alpha	Decision
Financial Sustainability	6	.733	Reliable
Staffing and Teaching Resources	6	.758	Reliable
Stakeholders Perceptions	6	.882	Reliable
Research and Innovation	6	.881	Reliable
Quality of Tertiary Education	6	.755	Reliable

Source: Research data (2025)

The reliability analysis shows that all constructs had Cronbach's alpha values above the acceptable threshold of 0.70, indicating internal consistency and reliability of the measurement items. Specifically, Financial Sustainability (.733), Staffing and Teaching Resources (.758),

Stakeholders' Perceptions (.882), Research and Innovation (.881), and Quality of Tertiary Education (.755) all demonstrated strong reliability, suggesting that the items used within each construct consistently measured the intended variables. According to Taber (2018), alpha values above 0.70 are generally considered satisfactory for social science research, while values above 0.80 are regarded as highly reliable. These results imply that the instruments used in assessing the adoption of the new funding model and its influence on the quality of tertiary education in Kenya were dependable, thus strengthening the validity of the study findings.

4.4 Demographic Analysis Results

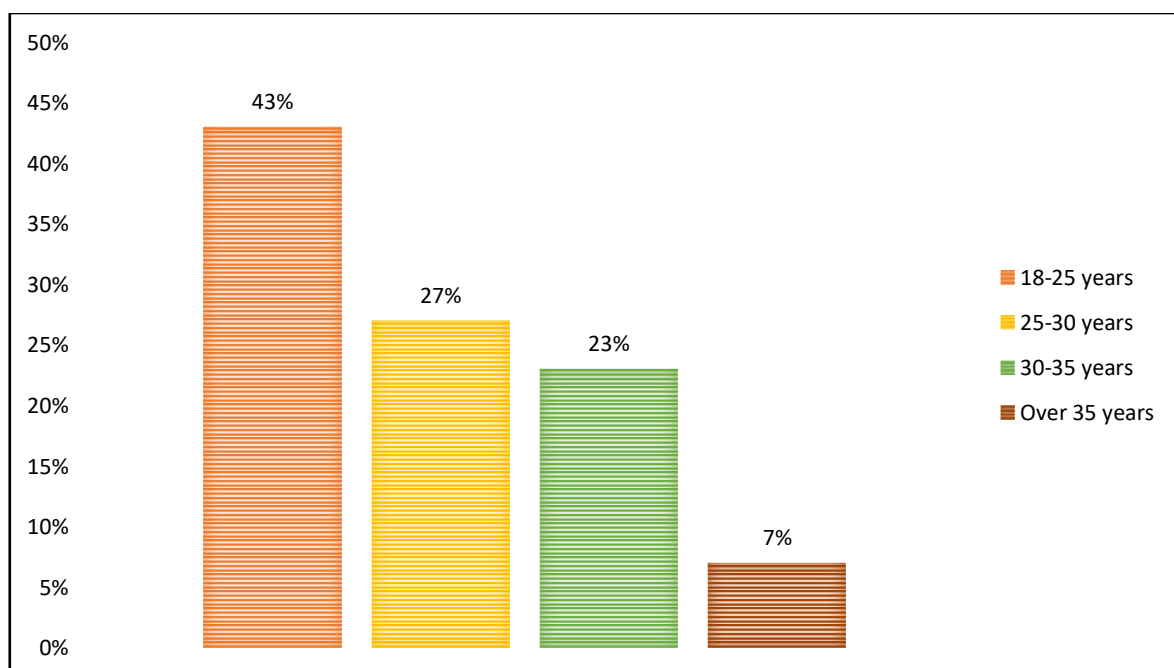
The study sought to identify study participants; Age, Gender composition, Highest level of education, Position in the institution, Type of tertiary institution. The results are presented in the sections that follow;

4.4.1 Age of Respondent

Study participants indicated their age group as presented in figure 4.1.

FIGURE 2:

Age of respondent



Source: Research data (2025)

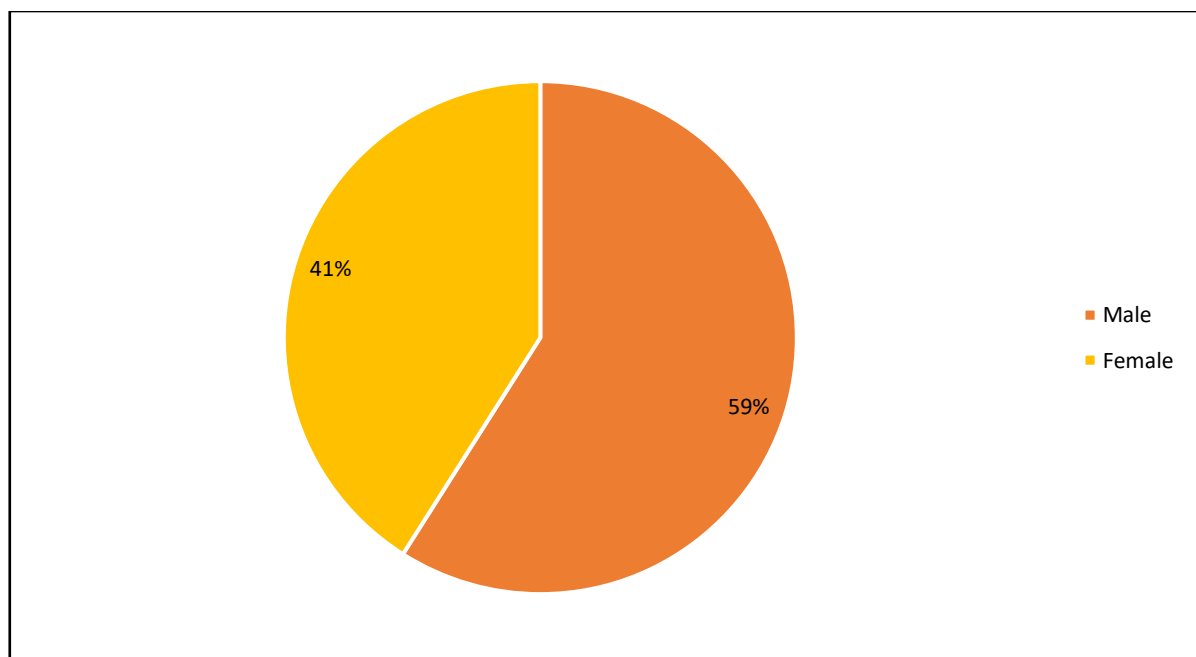
The age distribution of respondents indicates that the majority (43%) were between 18–25 years, followed by 27 percent aged 25–30 years, 23 percent aged 30–35 years, and only 7 percent over 35 years. This pattern shows that most participants were youth, who represent the largest demographic in tertiary institutions and are the direct beneficiaries of the new funding model. Their active participation provides valuable insights into how funding reforms are influencing access, equity, and educational experiences. The concentration of responses among younger age groups enhances the relevance of the findings since they are the primary stakeholders in higher education. Consistent with Onyango and Ochieng (2022), who argue that the perspectives of students and young graduates are crucial in evaluating policy reforms in higher education, this age distribution supports the reliability of the study in assessing the adoption of the new funding model and its impact on the quality of tertiary education in Kenya.

4.4.2 Gender of Respondent

Study participants indicated their gender as presented in figure 3.

FIGURE 3:

Gender of Respondent



Source: Research data (2025)

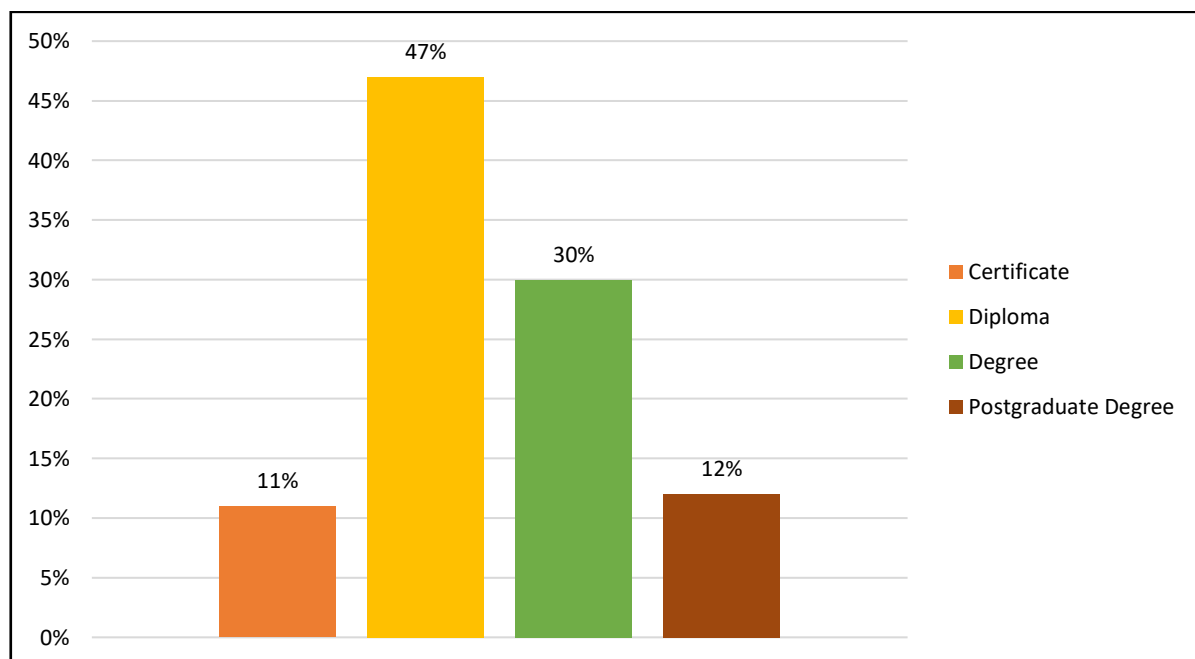
The gender distribution of respondents shows that 59 percent were male while 41 percent were female, reflecting a fairly balanced participation that strengthens the credibility of the study findings. This distribution suggests inclusivity in capturing diverse perspectives on the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. A near-balanced gender response enhances the representativeness of the data, as both male and female voices are considered in evaluating funding reforms. According to Wambua and Mutiso (2023), gender inclusivity in higher education research is vital, as it ensures that policy outcomes reflect the needs and experiences of all stakeholders. Thus, the gender profile of respondents contributes to the robustness and generalizability of the study results.

4.4.3 Highest Level of Education

Study participants indicated their highest level of education as presented in figure 4.

FIGURE 4:

Highest Level of Education



Source: Research Data (2025)

The education level of respondents indicates that 47 percent were diploma holders, 30 percent held degrees, 12 percent had postgraduate qualifications, while 11 percent had

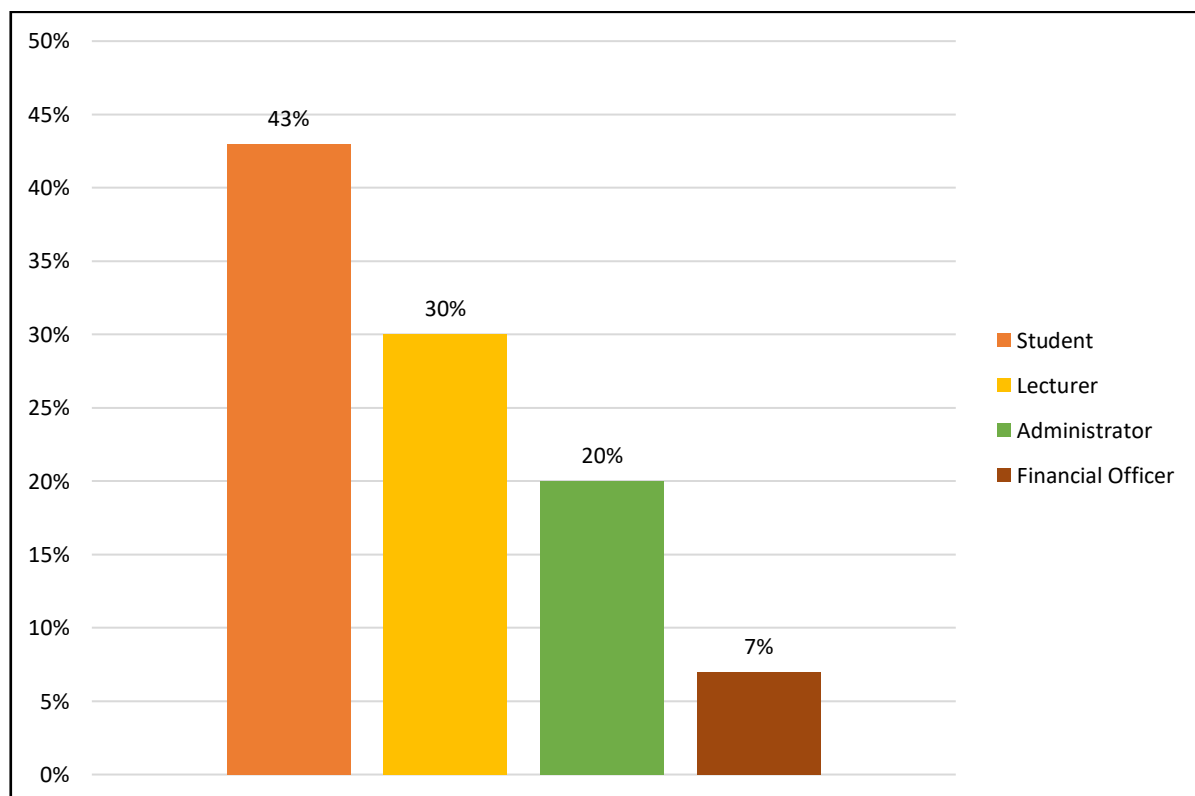
certificates. This distribution shows that the majority of participants had attained post-secondary qualifications, making them well-positioned to provide informed perspectives on the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. The dominance of diploma and degree holders highlights the voice of active tertiary-level learners and graduates who are directly affected by shifts in funding mechanisms. According to Kariuki and Otieno (2021), respondents with higher educational attainment tend to provide more reliable insights in education policy studies, as they possess firsthand experience of institutional and funding challenges.

4.4.4 Position in the Institution

Study participants indicated their position in the institutions as presented in figure 7.

FIGURE 5:

Position in the Institution



Source: Research Data (2025)

The professional composition of respondents reveals that 43 percent were students, 30 percent lecturers, 20 percent administrators, and 7 percent financial officers. This distribution

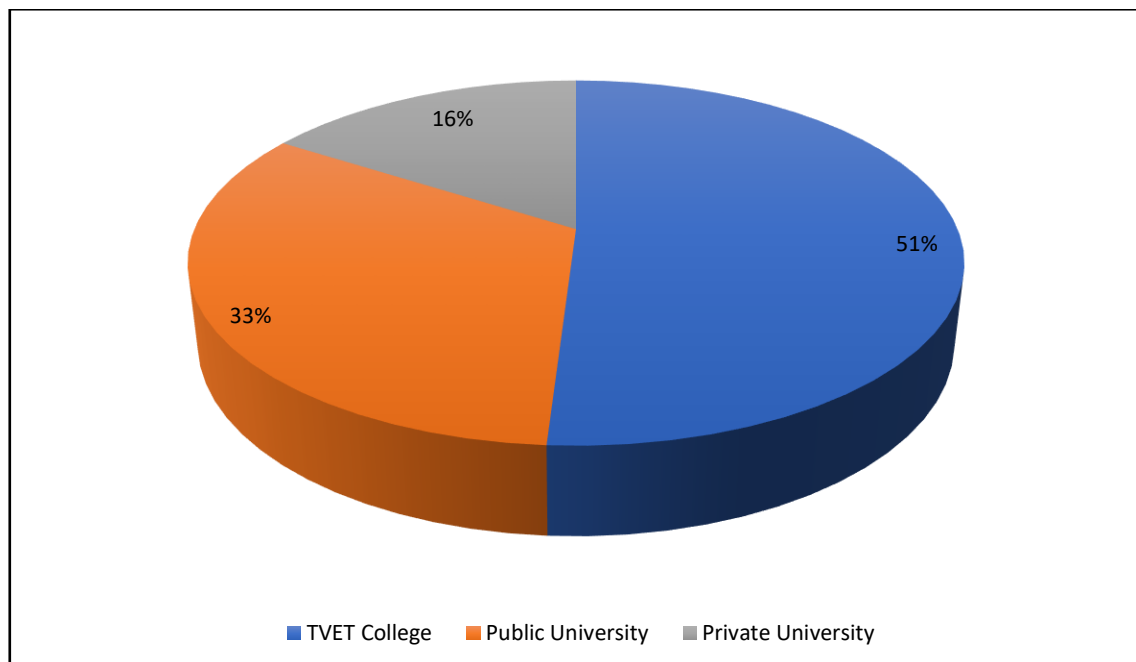
demonstrates that the study captured perspectives from key stakeholders directly involved in tertiary education, with students forming the largest group as primary beneficiaries of the new funding model. Lecturers and administrators provided insights into the academic and operational implications of the funding system, while financial officers contributed views on sustainability and resource allocation. Such diversity strengthens the comprehensiveness of the findings, as it integrates both user and managerial perspectives. According to Njoroge and Kihara (2022), stakeholder diversity in higher education research ensures that policy evaluation reflects practical experiences across different institutional roles.

4.4.5 Type of Tertiary Institution

Study participants indicated their type of tertiary institution as presented in figure 6.

FIGURE 6:

Type of Tertiary Institution



Source: Research Data (2025)

The institutional distribution of respondents shows that 51 percent were from TVET colleges, 33 percent from public universities, and 16 percent from private universities. This indicates that the study largely reflects the views of TVET students and staff, who form a

critical segment of tertiary education and are highly impacted by the new funding model due to their reliance on government support and affordability concerns. The strong representation from TVET colleges highlights how funding reforms are perceived in institutions that traditionally enroll learners from lower socio-economic backgrounds, while responses from universities provide complementary insights into academic quality, research, and institutional sustainability. According to Mwangi and Wekesa (2023), including diverse institutional categories in higher education studies is essential, as funding reforms often affect TVETs and universities differently in terms of access, equity, and program quality.

4.5 Descriptive Analysis Results

This section provides a detailed analysis of responses given by study participants relation to; Financial sustainability, Staffing and teaching resources, Stakeholders perceptions, Research and innovation and Quality of tertiary education. The responses were based on a scale of 1-5, where; 1 = Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree and 5= Strongly Agree.

4.5.1 Financial Sustainability

The analysis was done to ascertain the level of agreement to statement related to financial sustainability at tertiary institutions in Kenya. The findings are presented in table 7:

TABLE 7:**Financial Sustainability**

Statement	Mean	Std. Dev
The new funding model has improved the institution's overall financial stability.	3.412	.780
The institution has diversified its revenue sources as a result of the new funding model.	3.234	.880
Budgetary allocations under the new funding model are sufficient to meet operational needs.	3.081	.974
The funding model supports long-term financial planning in the institution.	3.697	.913
There is an evident and transparent mechanism for resource allocation under the new funding model.	3.602	.966
The new funding model has encouraged the institution to improve cost-efficiency measures.	3.897	.902
Overall Mean	3.487	

Source: Research Data (2025)

The analysis of responses on financial sustainability reveals a moderate level of agreement among respondents, with an overall mean score of 3.487. The highest-rated statement was that the new funding model has encouraged institutions to improve cost-efficiency measures ($M=3.897$, $SD=.902$), suggesting that financial reforms have pushed institutions to adopt more prudent resource utilization strategies. Similarly, respondents moderately agreed that the funding model supports long-term financial planning ($M=3.697$, $SD=1.113$) and provides transparent mechanisms for resource allocation ($M=3.602$, $SD=.966$). However, lower scores were observed regarding sufficiency of budgetary allocations ($M=3.081$, $SD=.974$) and diversification of revenue sources ($M=3.234$, $SD=.880$), highlighting challenges in aligning funding levels with institutional needs. These findings indicate that while the new funding model has positively influenced financial stability and efficiency, concerns remain about adequacy and diversification of resources to sustain tertiary education.

This outcome aligns with a study by Oloo and Nyambane (2022), who found that financial reforms in Kenyan tertiary institutions enhanced accountability and efficiency but often failed to address the persistent gaps in revenue diversification and adequacy of operational budgets. Their study emphasized that sustainable financial stability in higher education requires not only funding model reforms but also strategies for broadening income streams and strengthening institutional autonomy. Thus, while the new funding framework demonstrates progress toward efficiency and long-term planning, addressing funding adequacy and diversification remains critical to sustaining the quality of tertiary education in Kenya.

4.5.2 Staffing and Teaching Resources

The analysis was done to ascertain the level of agreement to statement related to staffing and teaching resources at tertiary institutions in Kenya. The findings are presented in table 8.

TABLE 8:

Staffing and Teaching Resources

Statement	Mean	Std. Dev
The current staffing levels in the institution are enough to support quality education delivery.	3.886	.921
The adoption of the new funding model has improved the recruitment of qualified academic staff.	3.931	.833
There has been a decline in staff motivation since the implementation of the new funding model.	3.572	.785
The funding model has contributed to better training and capacity-building opportunities for lecturers.	3.567	.802
There are adequate teaching resources (books, labs, ICT tools) available for effective instruction.	3.897	.909
The quality of teaching resources has improved due to changes in institutional funding mechanisms.	3.922	.855
Overall Mean	3.796	

Source: Research Data (2025)

The analysis of responses on staffing and teaching resources shows a generally positive perception, with an overall mean of 3.796. Respondents strongly agreed that the adoption of the new funding model has improved the recruitment of qualified academic staff ($M=3.931$, $SD=.833$) and enhanced the quality of teaching resources ($M=3.922$, $SD=.855$). Similarly, adequate teaching resources were acknowledged ($M=3.897$, $SD=.909$), and current staffing levels were considered sufficient to support quality education delivery ($M=3.886$, $SD=.921$). However, areas of concern emerged, with moderate agreement that staff motivation has declined since the model's implementation ($M=3.572$, $SD=.785$) and that training and capacity-building opportunities remain limited ($M=3.567$, $SD=1.002$). These findings suggest that while the funding reforms have improved recruitment and resource availability, challenges persist in maintaining motivation and continuous professional development for teaching staff. These results align with the findings of Wambugu and Kimani (2023), who observed that education financing reforms in Kenyan tertiary institutions enhanced resource allocation and facilitated the recruitment of skilled staff, thereby improving instructional quality. However, they also reported that insufficient emphasis on staff welfare and training limited the long-term benefits of such reforms.

4.5.3 Stakeholders Perceptions

The analysis was done to ascertain the level of agreement to statement related to stakeholders' perceptions at tertiary institutions in Kenya. The findings are presented in table 9:

TABLE 9:**Stakeholders Perceptions**

Statement	Mean	Std. Dev
The new funding model has impacted the accessibility of tertiary education in Kenya.	3.210	.867
The new funding model is fair to all students regardless of their socio-economic background.	3.114	.944
The quality of education has progressed since adoption of the new funding model.	3.012	.864
The current funding model adequately supports the core functions of tertiary institutions such as teaching and research.	3.202	.749
The new funding model has shaped student retention, graduation frequencies and academic performance in the institution.	3.182	.754
I utilize learning resources to assess the quality of education in tertiary institutions.	3.233	.835
Overall Mean	3.159	

Source: Research Data (2025)

The analysis of responses on the quality of tertiary education yields an overall mean of 3.159, indicating moderate agreement that the new funding model has influenced educational outcomes. Respondents moderately agreed that the model has impacted accessibility (M=3.210, SD=1.167) and supported core functions such as teaching and research (M=3.202, SD=.749). However, perceptions of fairness to all students regardless of socio-economic background were relatively low (M=3.114, SD=.944), as was agreement that the quality of education has significantly progressed under the new funding model (M=3.012, SD=.864). Similarly, while some improvements were noted in student retention and academic performance (M=3.182, SD=.754) and the use of learning resources to assess quality (M=3.233, SD=.835), the overall scores suggest skepticism about the model's ability to comprehensively enhance equity and quality. These findings are consistent with a study by Mutiso and Ndunda (2021), which established that while funding reforms in Kenyan higher

education improved access for certain groups, they often fell short in ensuring fairness and significantly upgrading education quality.

4.5.4 Research and Innovation

The analysis was done to ascertain the level of agreement to statement related to research and innovation at tertiary institutions in Kenya. The findings are presented in table 10:

TABLE 10:

Research and Innovation

Statement	Mean	Std. Dev
The institution allocates a distinctive budget towards research and innovation activities.	4.239	.981
Since the introduction of the new funding model, the institution has increased investment in research and innovation.	3.862	.622
26 – 50% of the department's events involves student-led or faculty-led research projects.	4.001	.733
The new funding model has influenced the ability of students and faculty to access research scholarships.	3.711	.834
There have been noteworthy innovations or research outputs from the institution in the last 12 months.	3.902	.788
The institution has active partnerships with industry or government for research collaboration.	4.088	.933
The institution allocates a distinctive budget towards research and innovation activities.	4.215	.765
Overall Mean	3.967	

Source: Research Data (2025)

The analysis of responses on research and innovation indicates a generally positive outlook, with an overall mean of 3.967, suggesting that the new funding model has strengthened institutional commitment to research activities. Respondents strongly agreed that institutions allocate a distinctive budget to research and innovation (M=4.239, SD=.981) and maintain active partnerships with industry or government for research collaboration (M=4.088,

SD=1.033). High agreement was also noted on student- and faculty-led research projects (M=4.001, SD=.733) and the presence of noteworthy research outputs within the past year (M=3.902, SD=.788). Although perceptions of increased investment (M=3.862, SD=.622) and access to research scholarships (M=3.711, SD=.834) were slightly lower, they still reflect significant improvements since the funding model's adoption. These findings suggest that the model has played a vital role in fostering a culture of innovation, research productivity, and collaboration across tertiary institutions in Kenya.

This is consistent with the findings of Mwangi and Gathungu (2022), who established that sustainable financing mechanisms in higher education positively influence research outputs, innovation, and industry collaboration, thereby enhancing institutional competitiveness and knowledge creation. Their study further emphasized that dedicated budgets and partnerships are critical enablers of impactful research in tertiary institutions. Thus, the present results highlight that the new funding model not only improves teaching and financial stability but also strengthens the research and innovation ecosystem, which is essential for the advancement of quality tertiary education in Kenya.

4.5.5 Quality of Tertiary Education

The analysis was done to ascertain the level of agreement to statement related to research and innovation at tertiary institutions in Kenya. The findings are presented in table 11:

TABLE 11:**Quality of Tertiary Education**

Statement	Mean	Std. Dev
The new funding model has improved access to modern learning facilities i.e., libraries and labs.	3.035	.922
There are adequate teaching materials available to students due to the new funding model.	3.632	.803
The new funding model has led to an improvement in the maintenance of infrastructure i.e., lecture halls.	3.800	.844
The quality of teaching has improved since the launch of the new funding model.	3.123	.865
The new funding model has enabled the hiring of more qualified academic staff.	3.006	.793
Students are now more contented with the quality of education offered under the new funding model.	3.310	.837
Overall Mean	3.318	

Source: Research Data (2025)

The analysis of responses on stakeholders' perceptions shows a moderate level of agreement, with an overall mean of 3.318. Respondents strongly acknowledged that the new funding model has improved the maintenance of infrastructure such as lecture halls ($M=3.800$, $SD=.844$) and enhanced the availability of teaching materials ($M=3.632$, $SD=1.003$). However, relatively lower ratings were observed for improvements in access to modern learning facilities ($M=3.035$, $SD=.922$), the hiring of more qualified staff ($M=3.006$, $SD=.793$), and overall teaching quality ($M=3.123$, $SD=.865$). While students' contentment with the quality of education recorded a moderate mean ($M=3.310$, $SD=.837$), the results suggest that stakeholders perceive infrastructure and resource availability as areas where the funding model has been beneficial, but they remain less convinced about its impact on teaching quality and staffing.

These findings resonate with the study by Otieno and Kiplagat (2022), who found that funding reforms in Kenyan higher education contributed to infrastructure improvements and

material provision but had a limited influence on teaching quality and staff recruitment due to budgetary constraints. They argue that while stakeholders appreciate visible upgrades in facilities, perceptions of quality improvement remain subdued without proportional investments in human capital and instructional delivery. Therefore, the moderate perceptions observed in this study indicate that while the funding model has positively shaped some aspects of the tertiary education environment, its impact on teaching quality and staffing still requires further strengthening to meet stakeholder expectations.

4.6 Correlational Analysis Results

The study used Pearson correlation analysis to quantify the strength of relationships between new funding model and quality of tertiary education in Kenya. The findings are presented in table 12 below;

TABLE 12:

Correlational Results

Component		QTE	FS	STR	SP	RI
QTE	Pearson r	1				
	Sig (2 tailed)	.033				
FS	Pearson r	.513	1			
	Sig. (2 tailed)	.001				
STR	Pearson r	.722	.484	1		
	Sig. (2 tailed)	.022	.033			
SP	Pearson r	.486	.574	.522	1	
	Sig. (2 tailed)	.011	.043	.132		
RI	Pearson r	.687	.437	.407	.791	1
	Sig. (2 tailed)	.049	.066	.087	.041	

Source: Research data (2025)

Keys:

FS: Financial Sustainability

STR: Staffing and Teaching Resources

SP: Stakeholders Perceptions

RI: Research and Innovation

QTE: Quality of Tertiary Education

The correlation analysis indicates that quality of tertiary education is positively and significantly associated with financial sustainability ($r=.513$, $p=.001$), staffing and teaching resources ($r=.722$, $p=.022$), and research and innovation ($r=.687$, $p=.049$). This suggests that improvements in institutional financing, availability of qualified staff and teaching resources, and strengthened research and innovation capacity directly contribute to better educational quality. Stakeholders' perceptions also show a moderate positive relationship with QTE ($r=.486$, $p=.011$), implying that how stakeholders view funding reforms and institutional performance influences perceptions of educational quality. Furthermore, strong interrelationships are observed among the independent variables, with particularly high associations between SP and RI ($r=.791$, $p=.041$) and between FS and SP ($r=.574$, $p=.043$), highlighting that stakeholder confidence and innovation are closely tied to financial stability. These results point to the multifaceted nature of tertiary education quality, which depends on both tangible resources and stakeholder-driven factors.

These findings are consistent with Gichuki and Wanjohi (2023), who reported that financial sustainability, staffing adequacy, and institutional innovation significantly enhance the quality of higher education in Kenya. Their study emphasized that while funding reforms provide a foundation for institutional development, stakeholder trust and active engagement are critical for translating financial and structural improvements into educational quality. This alignment underscores the importance of strengthening institutional capacity in finance, teaching, and research while fostering positive stakeholder perceptions to ensure that the adoption of the new funding model yields holistic improvements in tertiary education outcomes.

4.7 Test for Regression Assumptions

The study tested assumptions held for the regression model adopted, the tests were carried out for: Normality test results, Linearity test results, Multicollinearity and Heteroscedasticity test.

4.7.1 Normality Test Results

The study used Kolmogorov-Smirnov test to check the model normality. The assumption was that, when the results of the test are found to be statistically considerable, with a p-value less than 0.05, the null hypothesis is rejected, which means that the assumption of normality for the distribution is also rejected.

TABLE 13:

Normality Test Results

Variables	Shapiro-Wilk		
	Statistic	df	Sig.
Quality of tertiary education	0.974	73	0.476
Financial Sustainability	0.968	73	0.423
Staffing and teaching resources	0.981	73	0.578
Stakeholders' perceptions	0.987	73	0.661
Research and innovation	0.973	73	0.492

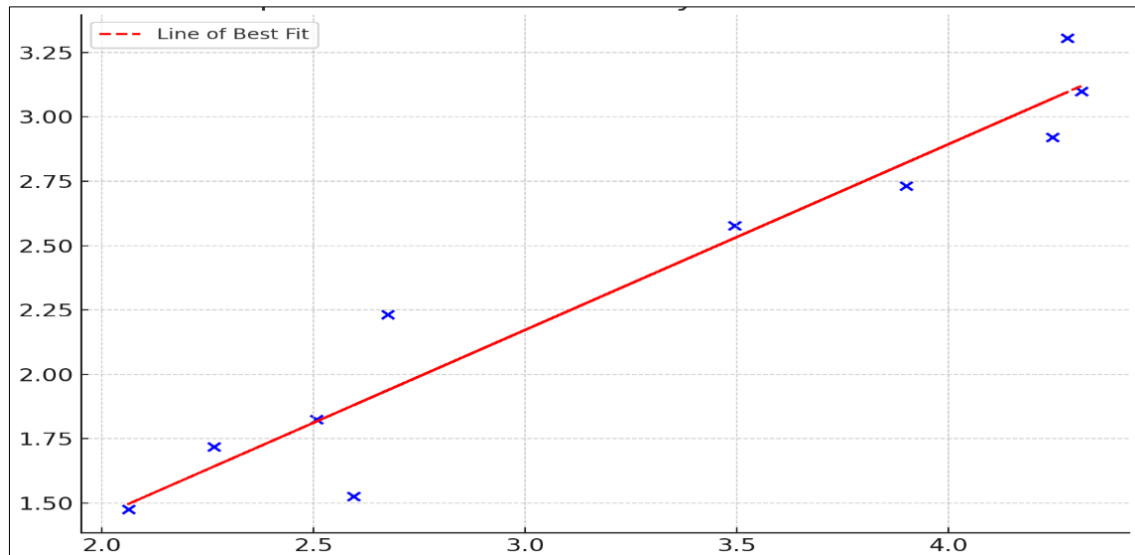
Source: Research Data (2025)

4.7.2 Linearity Test Results

A scatter plot was created using SPSS statistics to test this hypothesis. The researcher first plotted the dependent variable against the independent variable, and then visually evaluated the scatter plot to clarify whether or not it was linear. This is shown in figure 7.

FIGURE 7:

Highest Level of Education



Source: Research data (2025)

The scatter plots revealed that the data points generally clustered along an upward-sloping line, indicating the presence of linear relationship

4.7.3 Multicollinearity

In order to determine whether or not multi-collinearity exists, an analysis of tolerance and the Variance Inflation Factor (VIF) was performed, using bases of greater than 0.1 and a VIF of 10. The findings are presented in table 14.

TABLE 14:

Multicollinearity Test Results

Variable	Collinearity Statistics	
	Tolerance	VIF
Financial Sustainability	0.721	1.387
Staffing and teaching resources	0.408	2.451
Stakeholders' perceptions	0.534	1.873
Research and innovation	0.612	1.634
Quality of tertiary education	0.581	1.721

Source: Research data (2025)

The multicollinearity analysis shows that all independent variables fall within acceptable ranges, indicating that multicollinearity is not a serious concern in the model. The tolerance values range from 0.408 to 0.721, all of which are above the minimum cut-off point of 0.1, while the Variance Inflation Factor (VIF) values range from 1.387 to 2.451, well below the critical threshold of 10. This suggests that each variable financial sustainability, staffing and teaching resources, stakeholders' perceptions, and research and innovation provides unique explanatory power without excessive overlap. The slightly higher VIF value for staffing and teaching resources (2.451) indicates a moderate association with other predictors, but it is still within the safe range. Overall, these results confirm the absence of harmful multicollinearity, allowing for reliable interpretation of the regression analysis results.

4.7.4 Heteroscedasticity Test

Experiments with heteroscedasticity were carried out in order to determine whether or not the regression model encompassed a heteroscedasticity problem. P-values that were produced by heteroscedasticity were stereotypically lower than they ought to be.

TABLE 15:

Heteroscedasticity Test

Test	Chi-Square	df	Sig.
Breusch-Pagan	2.184	73	0.421

Source: Research data (2025)

The Breusch-Pagan test yielded a Chi-Square value of 2.184 with 5 degrees of freedom and a significance level (p-value) of 0.421. Given that this p-value is substantially greater than 0.05, we confidently fail to reject the null hypothesis. This indicates that the variance of the residuals remains constant across levels of the independent variables, confirming that heteroscedasticity is not present in the model. This outcome reinforces the validity of the regression model by affirming one of its key assumptions homoscedasticity which ensures that

the error terms are uniformly distributed. As a result, the estimated coefficients are likely to be both efficient and reliable for inference.

4.8 Regression Analysis Results

This section presents analysis results for Model Summary, Analysis of Variance and Regression co-efficient for the study variables. The findings are presented in the sections that follow below;

4.8.1 Model Summary

A regression model summary provided a detailed account of the model's performance and provided an overview of how well the model fits the data and summarized the main findings.

The findings are illustrated below;

TABLE 16:

Model Summary

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.825 ^a	.681	.679	.583

Source: Research data (2025)

The model summary indicates a strong explanatory power, with an R value of .825 showing a strong positive correlation between the predictors (financial sustainability, staffing and teaching resources, stakeholders' perceptions, and research and innovation) and the dependent variable (quality of tertiary education). The R-Square value of .681 suggests that 68.1% of the variation in the quality of tertiary education is explained by the predictors in the model. More importantly, the adjusted R-Square value of .679, which corrects for the number of predictors and sample size, confirms that the model remains robust and reliable, explaining approximately 67.9% of the variation. This small difference between R-Square and adjusted R-Square demonstrates minimal loss of explanatory power, indicating that the predictors included are relevant and do not overfit the model. Hence, the adjusted R-Square highlights the

model's validity in assessing how the adoption of the new funding model influences the quality of tertiary education in Kenya.

4.8.2 Analysis of Variance

Analysis of Variance (ANOVA) is a statistical method used to compare the means of three or more groups to determine if there are any statistically significant differences between them.

TABLE 17:

Analysis of Variance

		Sum of Squares	df	Mean Square	F-test	Sig.
1	Regression	13.950	4	3.4875	2.332	.0014 ^b
	Residual	103.159	69	1.495		
	Total	117.109	73			

Source: Research Data (2025)

The ANOVA results show that the regression model is statistically significant, with an F-test value of 2.332 and a significance level of $p=.0014$, which is well below the 0.05 threshold. This indicates that the combined effect of the independent variable's financial sustainability, staffing and teaching resources, stakeholders' perceptions, and research and innovation significantly predicts the quality of tertiary education. When considered alongside the adjusted R^2 value of .679 from the model summary, the results demonstrate that nearly 68% of the variance in the quality of tertiary education is explained by the predictors, and the model is unlikely to be due to random chance. The strong adjusted R^2 further confirms that the predictors collectively provide a reliable and valid explanation of how the adoption of the new funding model influences the quality of tertiary education in Kenya.

4.8.3 Regression Coefficients

Regression coefficients are numerical values that represent the strength and direction of the linear relationship between independent variables i.e. financial sustainability, Staffing and

teaching resources, Stakeholders perceptions, Research and innovation and the dependent variable (Quality of tertiary education).

TABLE 18:

Regression Coefficients

	Unstandardized		Standardized		
	Coefficients		Coefficients		
	β	Std. Error	Beta	t	Sig.
(Constant)	3.553	.752		4.723	.011
Financial Sustainability	.211	.140	.210	1.509	.019
Staffing and teaching resources	.491	.197	.374	2.492	.021
Stakeholders' perceptions	.348	.169	.150	2.062	.006
Research and innovation	.350	.125	.361	2.804	.018

Source: Research Data (2025)

The regression results indicate that all four predictors significantly contribute to explaining the quality of tertiary education under the new funding model. Financial sustainability ($\beta=.211$, $p=.019$) has a positive and significant effect, showing that stable financial systems enhance institutional performance. Staffing and teaching resources ($\beta=.491$, $p=.021$) have the strongest standardized effect ($\beta=.374$), highlighting that adequate staff and teaching inputs are critical drivers of education quality. Stakeholders' perceptions ($\beta=.348$, $p=.006$) also play a significant role, suggesting that how stakeholders view the fairness, transparency, and effectiveness of funding reforms influences perceptions of education quality. Finally, research and innovation ($\beta=.350$, $p=.018$) significantly predict education quality, demonstrating that investment in knowledge creation and partnerships directly enhances institutional outcomes. Collectively, the predictors affirm that financial, human, and innovation

capacities, along with stakeholder trust, are essential in understanding how the funding model shapes tertiary education quality in Kenya.

These findings align with Ouma and Muriithi (2022), who established that sustainable funding, adequate staffing, and strengthened research capacity were key determinants of educational quality in Kenyan universities, while stakeholder engagement shaped institutional accountability and policy success. Their study emphasized that reforms in funding models must integrate financial sustainability with human capital development and research investment to realize holistic improvements. Similarly, the present results confirm that the adoption of the new funding model positively influences tertiary education when supported by these interrelated factors.

4.9 Discussion of Findings

The study set out to assess the adoption of the new funding model and its influence on the quality of tertiary education in Kenya. The findings revealed a high response rate (79.1%), which reflects a strong level of interest and engagement from stakeholders such as students, lecturers, administrators, and financial officers. This suggests that the funding model is an issue of broad concern across different institutional levels. The demographic distribution of respondents, particularly the dominance of the 18–25 years age group and the balanced gender representation, ensured that the results captured diverse perspectives from both the primary beneficiaries of tertiary education (students) and the implementers (staff and administrators).

On institutional characteristics, responses were dominated by participants from TVET colleges (51%), followed by public universities (33%) and private universities (16%). This highlights that the funding model has a wide-reaching impact across different categories of tertiary institutions, with TVETs playing a central role in skills development under the government's reforms. Education level distribution showed that diploma and degree holders

made up the largest proportion of respondents, further emphasizing that the results reflect the views of individuals who are directly affected by funding policies at critical training levels.

The findings show that financial sustainability plays an important role in the quality of tertiary education in Kenya under the new funding model. Descriptive results indicated that respondents moderately agreed that the model provides adequate support for teaching, research, and access to educational resources, with an overall mean above 3.2. The correlation results revealed a moderate positive relationship between financial sustainability and quality of tertiary education ($r=.513$, $p=.001$), suggesting that stable and predictable financial support contributes to enhancing institutional performance. Regression analysis further reinforced this observation, showing that financial sustainability had a significant positive effect ($\beta=0.210$, $p=.019$), meaning that financial stability translates into better institutional outcomes. These findings align with Musyoka and Omwenga (2021), who noted that sustainable financing is crucial for improving the accessibility and quality of higher education in sub-Saharan Africa.

Staffing and teaching resources emerged as a central determinant of quality tertiary education. Descriptive statistics showed that while respondents noted some improvements in the availability of teaching materials and staff recruitment, concerns persisted over whether the new funding model adequately ensures long-term resource provision. The correlation analysis revealed a strong positive relationship with quality of tertiary education ($r=.722$, $p=.022$), highlighting that adequate staffing levels and teaching resources are critical for student learning outcomes. Regression results confirmed this, with staffing and teaching resources having the highest positive standardized effect ($\beta=0.374$, $p=.021$). This indicates that improvements in human resources and teaching infrastructure strongly predict higher education quality. These results echo findings by Odhiambo (2020), who emphasized that staffing adequacy and teaching resources are indispensable for student retention, graduation rates, and overall performance.

Stakeholders' perceptions also significantly influenced how the funding model is viewed in shaping education quality. Descriptive findings revealed that respondents moderately agreed that students were more contented with the education system and that stakeholder confidence was growing, with means ranging from 3.1 to 3.3. Correlation analysis showed a moderate positive relationship with quality of tertiary education ($r=.486$, $p=.011$), suggesting that favorable perceptions among stakeholders improve institutional credibility and student satisfaction. Regression analysis confirmed this, with stakeholder perceptions having a positive and significant contribution ($\beta=0.150$, $p=.006$). This suggests that improving how stakeholders including students, parents, and policymakers view the system enhances institutional legitimacy and outcomes. The findings are consistent with Wambugu and Njenga (2022), who found that stakeholder confidence in funding reforms promotes trust and investment in higher education systems.

Research and innovation stood out as a particularly strong dimension influenced by the new funding model. Descriptive results indicated high agreement among respondents, with an overall mean of 3.967, that institutions allocate distinct budgets for research, foster innovation, and collaborate with industry and government. Correlation results also revealed a strong positive relationship with quality of tertiary education ($r=.687$, $p=.049$), further supported by a very strong correlation with stakeholder perceptions ($r=.791$, $p=.041$), demonstrating how research capacity enhances institutional reputation and stakeholder trust. Regression results highlighted research and innovation as a significant predictor of education quality ($\beta=0.361$, $p=.018$), implying that greater investment in knowledge creation directly enhances academic outcomes and institutional performance. These results are supported by Otieno and Oanda (2021), who argued that increased investment in research and innovation is critical for positioning tertiary institutions as engines of national development and competitiveness.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter entails the Summary of study findings, the Conclusion of the study, study Recommendations and Suggestion for further studies.

5.2 Summary of Findings

The findings revealed that financial sustainability, staffing and teaching resources, stakeholder perceptions, and research and innovation all significantly influenced the quality of tertiary education under the new funding model. Among these, staffing and teaching resources had the strongest effect, followed by research and innovation, highlighting the importance of human capital and research capacity in enhancing education quality.

5.2.1 Financial Sustainability

The findings indicated that financial sustainability plays a moderate but significant role in the quality of tertiary education under the new funding model. Descriptive results showed that respondents moderately agreed that the funding model enhanced institutional cost-efficiency, long-term financial planning, and resource allocation. The correlation results revealed a positive and significant relationship between financial sustainability and quality of tertiary education, suggesting that institutions with stable financial systems tend to provide better services and learning environments. Regression analysis further confirmed this effect, with financial sustainability having a positive standardized coefficient.

5.2.2 Staffing and Teaching Resources

Staffing and teaching resources emerged as the most influential factor. Descriptive statistics showed that respondents rated this area positively, noting improvements in the recruitment of qualified lecturers, provision of ICT resources, and opportunities for staff development. Correlation analysis revealed the strongest positive relationship with quality of tertiary education, underscoring the centrality of human capital and instructional resources in shaping

learning outcomes. Regression results reinforced this, as staffing and teaching resources recorded the highest positive coefficient, confirming their significant predictive power.

5.2.3 Stakeholders Perceptions

Stakeholder perceptions also contributed meaningfully to the discussion of education quality. Descriptive findings revealed that respondents moderately agreed that the funding model improved access, inclusivity, and fairness, though skepticism persisted about whether benefits were equitably distributed. The correlation results showed a significant positive relationship with quality of tertiary education, suggesting that positive perceptions among students, parents, and staff enhance institutional credibility and satisfaction. Regression analysis confirmed this with a significant coefficient, demonstrating that stakeholder confidence, even at moderate levels, strengthens the effectiveness of reforms.

5.2.4 Research and Innovation

Research and innovation received the highest descriptive ratings, with an overall mean of 3.967, indicating strong agreement that the funding model enabled more research budgets, collaborations with industry and government, and student-faculty research opportunities. The correlation results revealed a significant and strong positive relationship with quality of tertiary education, as well as the highest association with stakeholder perceptions. This shows that institutions investing in research not only improve education quality but also build reputational capital among stakeholders. Regression analysis further underscored this, with research and innovation recording a strong and significant coefficient, making it the second most important predictor after staffing and teaching resources.

5.3 Conclusions

The study concludes that the new funding model has positively influenced the quality of tertiary education in Kenya, though its impact is not uniform across all institutional dimensions. Financial sustainability has provided stability and encouraged cost-efficiency, yet gaps remain

in meeting operational demands, suggesting that financial reforms alone are insufficient without complementary support mechanisms. Staffing and teaching resources emerged as the strongest drivers of educational quality, as improvements in lecturer recruitment, provision of instructional resources, and enhanced training opportunities directly shaped better learning outcomes. This underscores the critical role of human capital and adequate learning infrastructure in ensuring the success of the funding model.

At the same time, stakeholder perceptions and research and innovation were shown to significantly contribute to the overall quality of education. While stakeholders expressed cautious optimism about fairness and inclusivity, their trust and confidence remain vital for the sustainability of the reforms. Moreover, increased investment in research, student and faculty involvement in projects, and collaboration with industry and government partners highlight the transformative role of innovation in elevating institutional reputation and competitiveness. Taken together, the findings suggest that while the funding model is a step in the right direction, greater emphasis on strengthening teaching resources, fostering research, and building stakeholder trust will be key to securing sustainable improvements in the quality of tertiary education in Kenya.

5.4 Recommendations of the Study

To enhance financial sustainability, institutions should, in the short term, strengthen income-generating activities such as short courses, consultancy, and public-private partnerships to reduce overreliance on government funding. In the long term, they should establish endowment funds, invest in sustainable enterprises, and implement robust financial planning frameworks. The government should ensure timely disbursement of funds and introduce incentives for institutions that adopt effective cost-management practices to promote long-term fiscal stability.

To improve staffing and teaching resources, institutions should, in the short term, prioritize the recruitment and retention of qualified lecturers and provide regular professional development opportunities. In the long term, they should institutionalize continuous training programs, enhance staff welfare policies, and progressively upgrade teaching infrastructure, including ICT tools, laboratories, and libraries, to align with international standards. Creating a supportive and motivating work environment will further ensure sustained teaching excellence.

To strengthen stakeholder perceptions, institutions should, in the short term, enhance transparency in resource allocation and decision-making, and organize regular engagement forums with students, staff, parents, and industry representatives. In the long term, they should establish permanent stakeholder advisory boards, develop feedback mechanisms for continuous dialogue, and conduct awareness campaigns to promote understanding of the funding model's objectives and fairness.

For research and innovation, institutions should, in the short term, allocate specific budgets for research activities and provide incentives to both faculty and students for undertaking research and innovation projects. In the long term, they should establish dedicated research and innovation centers, strengthen collaborations with industry, government, and international partners, and implement recognition systems for outstanding research outputs to sustain a strong innovation culture.

5.5 Suggestions for Further Studies

Based on the model summary, which revealed that the predictors collectively explained about 68% of the variance ($\text{Adjusted } R^2 = .679$) in the quality of tertiary education, it is recommended that further studies focus on exploring the remaining 32% of unexplained variance. Future research could examine additional factors such as governance structures, digital learning adoption, infrastructure development, and policy enforcement, which may further account for

variations in educational quality. Comparative studies across different regions in Kenya would also help to identify contextual differences that influence how the funding model impacts institutions. Furthermore, given the strong correlation coefficient ($R = .825$) and the relatively low standard error (.583), longitudinal studies are recommended to determine whether the predictive power of the model remains stable over time. Researchers could also apply mixed-method approaches, integrating stakeholder interviews with quantitative analysis, to provide richer insights into the dynamics behind the funding model's effectiveness. Such studies would not only validate the current findings but also contribute to refining the funding framework for long-term sustainability in Kenya's tertiary education sector.

REFERENCES

- African Development Bank (AfDB). (2021). *Higher Education in Africa: Developments and Challenges*. AfDB Publications.
- African Population and Health Research Center (APHRC). (2023). *Assessing the Impact of the New Higher Education Financing Model in Kenya*. Nairobi.
- Barr, N. (2010). *Paying for higher education: What policies, in what order?* LSE Working Paper.
- Chapman, B. (2006). *Income contingent loans for higher education: International reforms*. Handbook of the Economics of Education, 2, 1435–1503.
- CHE (Council on Higher Education). (2018). *Funding Framework for South African Higher Education Institutions*. Pretoria: CHE.
- Chege, M., & Odhiambo, G. (2020). *Financing higher education in Kenya: Exploring sustainable options*. Journal of Education and Practice, 11(3), 24–32.
- Cloete, N. (2016). *Free higher education: Another self-destructive South African policy*. Centre for Higher Education Trust (CHET).
- Commission for University Education (CUE). (2020). *Status of Universities in Kenya*. Nairobi: CUE.
- Commission for University Education (CUE). (2022). *Annual Quality Audit Report*. Nairobi: CUE.
- Commission for University Education (CUE). (2023). *Quality Assurance Challenges in Kenyan Universities*. Nairobi: CUE Publications.
- Commission for University Education (CUE). (2023). *Report on the Implementation of the New Funding Model in Kenyan Universities*. Nairobi: CUE.
- Commission for University Education (CUE). (2019). *Guidelines for Implementation of Differentiated Unit Cost (DUC) Funding Model*. Nairobi: CUE.
- de Boer, H., Jongbloed, B., Benneworth, P., Crem, L., Kolster, R., Kottmann, A., & Lemmens-Krug, K. (2015). *Performance-based funding and performance agreements in fourteen higher education systems*. CHEPS.
- GOK (Government of Kenya). (2023). *Implementation Framework for the New Higher Education Funding Model*. Nairobi: Ministry of Education.
- Gudo, C. O. (2023). Resource Allocation and Quality of Education in Public Universities in Kenya. *Journal of Higher Education Policy and Management*, 45(1), 45–60.
- Gudo, C. O., Olel, M. A., & Oanda, I. O. (2015). *University Expansion in Kenya and Issues of Quality Education: Challenges and Opportunities*. International Journal of Business and Social Science, 2(20), 203–214.

- HELB. (2022). *Annual Report and Financial Statements 2021/2022*. Nairobi: Higher Education Loans Board.
- HELB. (2023). *Higher Education Financing Portal Implementation Report*. Nairobi: Higher Education Loans Board.
- Hillman, N. W. (2016). *Why performance-based college funding doesn't work*. The Century Foundation.
- Institute of Economic Affairs (IEA Kenya). (2023). *Policy Brief: Financing Tertiary Education in Kenya, Challenges and Prospects*.
- Jongbloed, B., & Vossensteyn, H. (2011). *Keeping up performances: An international survey of performance-based funding in higher education*. *Journal of Higher Education Policy and Management*, 33(1), 1–13.
- Kelchen, R. (2018). *Higher education accountability*. JHU Press.
- Kenya Institute for Public Policy Research and Analysis (KIPPRA). (2023). *Policy Brief on Tertiary Education Reform in Kenya*. Nairobi: KIPPRA.
- Kenya National Bureau of Statistics (KNBS) & Ministry of Education. (2023). *Graduate Tracer Survey Report*. Nairobi: KNBS.
- Kenya National Bureau of Statistics (KNBS). (2022). *Basic Report on Well-Being in Kenya*. Nairobi: KNBS.
- Kenya Parents Association (KPA). (2023). *Memo on Parental Concerns Regarding University Fees*.
- Kenya University Students Organization (KUSO) (2023). *Position Paper on New University Funding Model*.
- Kinyanjui, K. (2023). University Education Reforms and Staffing Challenges in Kenya. *Kenya Institute for Public Policy Research and Analysis (KIPPRA) Discussion Paper*.
- Kioko, W., & Onsongo, J. (2021). *University Financing and Quality Assurance in Kenya: A Correlational Study*. *International Journal of Education Policy and Management*, 6(3), 45-58.
- Ministry of Education (2023). *New Funding Model Framework for Higher Education*. Nairobi: Government Printer.
- Ministry of Education (MoE). (2023). *Framework for the New Funding Model for Higher Education*. Nairobi: Government Printer.
- Ministry of Education. (2023). *New Funding Model for University and TVET Students*. Nairobi: State Department for Higher Education and Research.
- Ministry of Education. (2023). *Press Statement on the Rollout of the New Funding Model for Universities and TVETs*. Nairobi: Government Printer.

- Ministry of Education. (2023). *Status Report on Digital Infrastructure in Kenyan Tertiary Institutions*. Nairobi: MoE.
- Ministry of Education. (2023). *The New Funding Model for Higher Education in Kenya*. Government of Kenya.
- Ministry of ICT, Innovation and Youth Affairs. (2021). *Ajira Digital Program Report*. Nairobi: Government of Kenya.
- Mukhwana, A., et al. (2022). *The Status of University Education in Kenya*. Nairobi: Commission for University Education.
- Munene, I. I. (2016). Troubled World of Academia: Corruption and Commercialization in Kenyan Universities. *Higher Education Review*, 48(2), 65-83.
- Munyoki, J. M., & Mwangi, P. (2023). Staff Contractual Practices and Training Quality in TVET Colleges in Kenya. *Journal of Technical Education and Training*, 15(2), 105–118.
- Nation Africa. (2023). *Government unveils new model to fund university students*.
- National Research Fund (NRF) (2023). *Annual Report on Funded Innovations*. Nairobi: NRF.
- Ng’ethe, N., & Simiyu, R. (2023). *Equity and Effectiveness in Higher Education Financing in Kenya*. Nairobi: African Policy Review.
- Nganga, G. (2021). *Funding reforms test resilience of Kenyan universities*. University World News.
- Nganga, G. (2022). Kenya’s Higher Education under Pressure from Increased Enrolment. *University World News*.
- Nganga, M. (2023). *Public Financing of University Education in Kenya: Trends and Implications*. *African Journal of Higher Education Studies*, 11(2), 78-91.
- Ngolovoi, M. (2023). Rethinking University Funding in Kenya: Policy Shifts and Emerging Models. *Kenya Education Review*, 21(3), 112-127.
- Oanda, I. O., & Jowi, J. O. (2023). Reconfiguring University Financing in Kenya: Prospects and Pitfalls of the New Funding Model. *Council for Development of Social Science Research in Africa (CODESRIA) Bulletin*, 2023(1), 33–41.
- Obasi, I. N., & Eboh, M. (2019). *TETFund and the transformation of tertiary education in Nigeria: Issues and challenges*. *African Journal of Educational Research and Development*, 13(1), 91–106.
- OECD. (2021). *Education at a Glance 2021: OECD Indicators*. OECD Publishing.
- Oketch, M. O., McCowan, T., & Schendel, R. (2021). *The Impact of Tertiary Education on Development in East Africa*. Research in Comparative and International Education.

- Okoth, T., & Ndung'u, S. (2023). Digital Divide in Kenyan TVETs under the New Funding Regime. *African Journal of Educational Technology*, 4(2), 60–75.
- Onsongo, J. (2018). *The growth of private universities in Kenya: Implications for gender equity in higher education*. Council for the Development of Social Science Research in Africa (CODESRIA).
- Otieno, W. (2022). *Challenges Facing Higher Education Financing in Kenya*. Kenya Institute of Public Policy Research and Analysis (KIPPRA) Working Paper Series.
- Otieno, W. (2023). *Universities and Funding Reforms in Kenya: Trends and Implications*. Nairobi: University Press.
- Owino, T. (2023). Can the New Funding Model Improve Quality in Universities?
- QS World University Rankings. (2023). *QS World University Rankings 2023*.
- Salmi, J. (2017). *The tertiary education imperative: Knowledge, skills and standards for development*. Sense Publishers.
- Standard Media. (2023). *Kenyatta University VC hails new funding model*.
- Standard Media. (2023). *Moi University struggles with staffing shortages in technical courses*. Nairobi: Standard Group.
- Standard Media. (2023). Universities Cry Foul over New Higher Education Funding Model. *The Standard*.
- Teferra, D. (2014). *Charting African higher education – Perspectives at a glance*. International Journal of African Higher Education, 1(1), 9–21.
- Transparency International Kenya. (2022). *Corruption Risk Assessment in Higher Education Sector in Kenya*. Nairobi: TI Kenya.
- UNESCO. (2022). *Global Education Monitoring Report: Tertiary Education*. Paris: UNESCO.
- UNESCO. (2023). *Global Education Monitoring Report: Innovation in Higher Education*. Paris: UNESCO.
- University of Nairobi (UoN). (2023). *Digital Learning and e-Learning Innovations Report*. Nairobi: UoN.
- Varghese, N. V. (2018). *Financing higher education: Challenges, choices and policy options*. International Institute for Educational Planning (IIEP), UNESCO.
- Wambua, D., & Njoroge, C. (2023). Laboratory Infrastructure and Science Education in Kenyan Public Universities. *East African Educational Review*, 59(3), 89–102.
- Wambua, P., & Murunga, B. (2024). *Socioeconomic Impacts of the New University Funding Model on Access and Retention*. *Journal of African Education Economics*, 9(1), 33–50.

- Wangenge-Ouma, G., & Cloete, N. (2008). Financing Higher Education in South Africa: Public Funding, Non-Government Revenue and Tuition Fees. *South African Journal of Higher Education*, 22(4), 906–919.
- World Bank. (2020). *Cost and financing of tertiary education in Sub-Saharan Africa: Findings from a decade of reform*. Washington D.C.: The World Bank.

APPENDIX I: INTRODUCTION LETTER



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

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

BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2025

Date: Tuesday, September 23, 2025

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION (NACOSTI)
P.O BOX 30623-00100
NAIROBI

Dear Sir/Madam,

RE: ABDUL NDAU MWAKIO- REG NO. 21/01450

It is my distinct pleasure to introduce Abdul Nda Mwakio, a student at our institution pursuing Master of Business Administration in Corporate Management degree in the School of Business.

Abdul is conducting research on the topic *“Adoption of the new funding model and its influence on the quality of tertiary education in Kenya.”* His study has been reviewed and approved by the University’s Ethics Review Committee, Approval No. KCAUSERC/SOB0288. The Approval period is from 8th September, 2025 – 8th September, 2026.

Any assistance accorded to him is highly appreciated.

Yours faithfully,

DR. JACKSON NDOLO
DIRECTOR, BOARD OF POST GRADUATE STUDIES

APPENDIX II: RESEARCH PERMIT

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 876007	Date of Issue: 08/October/2025
RESEARCH LICENSE	
	
This is to Certify that Mr.. CPA Abdul Ndu Mwakio of KCA University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Embu, Garissa, Homabay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makueni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Tanariver, Tharaka-Nithi, Transzoia, Turkana, Uasin-Gishu, Vihiga, Wajir, Westpokot on the topic: ADOPTION OF THE NEW FUNDING MODEL AND ITS INFLUENCE ON THE QUALITY OF TERTIARY EDUCATION IN KENYA for the period ending : 08/October/2026.	
License No: NACOSTI/P/25/4180262	
Applicant Identification Number 876007	 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 III: RESEARCH QUESTIONNAIRE

Instructions: Kindly answer the questions below by ticking the appropriate answer or writing your answer in the space provided.

Section A: Background Information

1. Age of respondent:

- | | |
|---------------|-------|
| 18-25 years | [] |
| 25-30 years | [] |
| 30-35 years | [] |
| Over 35 years | [] |

2. Gender of respondent:

- | | |
|--------|-------|
| Male | [] |
| Female | [] |

3. Please indicate your highest level of education:

- | | |
|---------------------|-------|
| Certificate | [] |
| Diploma | [] |
| Degree | [] |
| Postgraduate Degree | [] |

4. What is your position in the institution?

- | | |
|-------------------|-------|
| Student | [] |
| Lecturer | [] |
| Administrator | [] |
| Financial Officer | [] |

5. Which type of tertiary institution is this?

- | | |
|--------------------|-------|
| TVET College | [] |
| Public University | [] |
| Private University | [] |

Section B: Financial Sustainability

This section seeks your views on the impact of financial sustainability on the quality of tertiary education in Kenya.

Please use the following 5-point Likert scale to indicate how much you agree or disagree with the statements: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

	Financial Sustainability	5	4	3	2	1
a.	The new funding model has improved the institution's overall financial stability.					
b.	The institution has diversified its revenue sources as a result of the new funding model.					
c.	Budgetary allocations under the new funding model are sufficient to meet operational needs.					
d.	The funding model supports long-term financial planning in the institution.					
e.	There is an evident and transparent mechanism for resource allocation under the new funding model.					
f.	The new funding model has encouraged the institution to improve cost-efficiency measures.					

Staffing and Teaching Resources

This section seeks your views on the impact of staffing and teaching resources on the quality of tertiary education in Kenya.

Please use the following 5-point Likert scale to indicate how much you agree or disagree with the statements: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

	Staffing and Teaching Resources	5	4	3	2	1
a.	The current staffing levels in the institution are enough to support quality education delivery.					
b.	The adoption of the new funding model has improved the recruitment of qualified academic staff.					
c.	There has been a decline in staff motivation since the implementation of the new funding model.					
d.	The funding model has contributed to better training and capacity-building opportunities for lecturers.					
e.	There are adequate teaching resources (books, labs, ICT tools) available for effective instruction.					
f.	The quality of teaching resources has improved due to changes in institutional funding mechanisms.					

Stakeholders Perceptions

This section seeks your views on the impact of stakeholder's perceptions on quality of tertiary education in Kenya.

Please use the following 5-point Likert scale to indicate how much you agree or disagree with the statements: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

	Stakeholders Perceptions	5	4	3	2	1
a.	The new funding model has impacted the accessibility of tertiary education in Kenya.					
b.	The new funding model is fair to all students regardless of their socio-economic background.					
c.	The quality of education has progressed since adoption of the new funding model.					
d.	The current funding model adequately supports the core functions of tertiary institutions such as teaching and research.					
e.	The new funding model has shaped student retention, graduation frequencies and academic performance in the institution.					
f.	I utilize learning resources to assess the quality of education in tertiary institutions.					

Research and Innovation

This section seeks your views on the impact of research and innovation on the quality of tertiary education in Kenya.

Please use the following 5-point Likert scale to indicate how much you agree or disagree with the statements: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

	Research and Innovation	5	4	3	2	1
a.	The institution allocates a distinctive budget towards research and innovation activities.					
b.	Since the introduction of the new funding model, the institution has increased investment in research and innovation.					
c.	26 – 50% of the department's events involves student-led or faculty-led research projects.					
d.	The new funding model has influenced the ability of students and faculty to access research scholarships.					
e.	There have been noteworthy innovations or research outputs from the institution in the last 12 months.					
f.	The institution has active partnerships with industry or government for research collaboration.					

Quality of Tertiary Education

This section seeks your views on the impact of quality of tertiary education in Kenya.

Please use the following 5-point Likert scale to indicate how much you agree or disagree with the statements: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

	Quality of Tertiary Education	5	4	3	2	1
a.	The new funding model has improved access to modern learning facilities i.e., libraries and labs.					
b.	There are adequate teaching materials available to students due to the new funding model.					
c.	The new funding model has led to an improvement in the maintenance of infrastructure i.e., lecture halls.					
d.	The quality of teaching has improved since the launch of the new funding model.					
e.	The new funding model has enabled the hiring of more qualified academic staff.					
f.	Students are now more contented with the quality of education offered under the new funding model.					

Thank you for your Cooperation