STRATEGIC LEADERSHIP, DIGITAL TRANSFORMATION, GOVERNMENT REGULATIONS AND INSURANCE PENETRATION BY LICENSED INSURANCE COMPANIES IN KENYA

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A RESEARCH THESIS SUBMITTED TO THE SCHOOL OF MANAGEMENT AND LEADERSHIP IN FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN MANAGEMENT AND LEADERSHIP OF THE MANAGEMENT UNIVERSITY OF AFRICA

OCTOBER 2025

DECLARATION

This thesis is my original work and has not previously in its entirety or in part been presented for a degree or other academic work.

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DEDICATION

This research is dedicated to my dear parents, Sheikh Mohamed Dayib & Siyadho Sheikh Omar who instilled in me the culture of excelling, hard work as well as encouraging me and my siblings to pursue education to the best of our ability.

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TABLE OF CONTENTS

DECLARATION ..... **i**

DEDICATION ..... **ii**

ACKNOWLEDGEMENT ..... **iii**

LIST OF TABLES ..... **vii**

LIST OF FIGURES ..... **ix**

LIST OF ABREVIATIONS AND ACRONONYMS ..... **x**

OPERATIONAL DEFINITION OF TERMS ..... **xi**

ABSTRACT ..... **xii**

CHAPTER ONE **1**

INTRODUCTION **1**

1.0 Introduction 1

1.1 Background of the Study 1

1.2 Statement of the Problem 12

1.3 General Objective of the study 14

1.4 Justification of the Study 14

1.5 Scope of the Study 15

1.6 Limitations of the Study 16

1.7 Delimitations of the study 16

1.8 Chapter Summary 16

CHAPTER TWO **18**

LITERATURE REVIEW **18**

2.0 Introduction 18

2.1Theoretical Literature Review 18

2.2 Empirical literature review 25

2.3 Research Null Hypotheses 48
2.4 Conceptual Framework 48
2.5 Measurement and Operationalization of Study Variables 49
2.6 Chapter Summary 51
CHAPTER THREE 52
RESEARCH METHODOLOGY 52
3.0 Introduction 52
3.1 Research Philosophy 52
3.2 Research Design 53
3.3 Target Population 53
3.4 Sample Frame and Sampling Technique 54
3.5 Data Collection Instruments and procedures 55
3.6 Pilot 56
3.7 Diagnostics Tests 58
3.8 Data processing and Analysis 62
3.9 Ethical Considerations 67
3.10 Chapter Summary 69
CHAPTER FOUR 70
DATA ANALYSIS, RESULTS AND DISCUSSIONS 70
4.1 Introduction 70
4.2 Response Rate 70
4.3 Demographic Characteristics of Respondents 71
4.4 Results of the Pilot Survey 76
4.5 Descriptive Analysis 95

4.6 Correlation Analysis 112
4.7 Regression Analysis and Test of Hypotheses 115
4.8 Results Discussion 144
4.9 Summary of Research Findings 158
4.10 Optimal Model 160
4.11 Chapter Summary 161
CHAPTER FIVE 163
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 163
5.1 Introduction 163
5.2 Summary of Study 163
5.3 Study conclusions 173
5.4 Recommendation 182
5.5 Further Research 189
REFERENCE 191
APPENDICES
Appendix I: Letter of Introduction
Appendix II: Study Questionnaire
Appendix III: List of Licensed General Insurance Companies 2024
Appendix IV: Factor Loading
Appendix V: ANALYSIS
Appendix VI: NACOSTI LICENSE

LIST OF TABLES

Table 1: Summary of Research Gaps 39
Table 2: Operationalization of Study Variables 48
Table 3: Target population 52
Table 4: Sampling Frame 54
Table 5: Research Objectives, Hypothesis Testing, Analysis and Model Estimation 64
Table 6: Response Rate 69
Table 7: Gender of Respondents 70
Table 8: Years of Experience 71
Table 9: Level of Education 72
Table 10: Position in this organization 73
Table 11: KMO and Bartlett's Test for Strategic leadership 75
Table 12: KMO and Bartlett's Test for Digital transformation 76
Table 13: KMO and Bartlett's Test for Government regulations 76
Table 14: KMO and Bartlett's Test for insurance penetration 77
Table 15: Reliability Test 78
Table 16: Test for Normality 79
Table 17: Multicollinearity Test (Tolerance and VIF) 81
Table 18: Linearity Results 83
Table 19: Homoscedasticity Results 84
Table 20: Strategic leadership descriptive statistics 93
Table 21: Digital transformation descriptive statistics 96
Table 22: Government regulations descriptive statistics 99
Table 23: Insurance Penetration descriptive statistics 104
Table 24: Correlation of the study Variables 107
Table 25: Model Summary for strategic leadership and insurance penetration 110
Table 26: ANOVA - strategic leadership and insurance penetration 111
Table 27: Model Coefficients -strategic leadership and insurance penetration 112
Table 28: Coefficient of Determination strategic leadership and digital transformation 115
Table 29: ANOVA strategic leadership and digital transformation 115

Table 30: Regression Coefficients on strategic leadership and digital transformation..... 115
Table 31: Model summary for digital transformation and insurance penetration..... 116
Table 32: ANOVA on digital transformation and insurance penetration 116
Table 33: Regression Coefficients on digital transformation and insurance penetration. 117
Table 34: Model Strategic leadership and digital transformation insurance penetration 117
Table 35: ANOVA strategic leadership digital transformation and insurance penetration 119
Table 36: Coefficients strategic leadership, digital transformation and insurance penetration..119
Table 37: Model strategic leadership, government regulation, and insurance penetration..... 122
Table 38:ANOVA strategic leadership, government regulations, and insurance penetration ... 124
Table 39: Coefficients strategic leadership, government regulations, insurance penetration..... 126
Table 40: Overall Model Fit..... 131
Table 41: Direct Effects on digital transformation. 132
Table 42: Overall Model Fit for insurance penetration..... 134
Table 43: Direct Effects on insurance penetration. 134
Table 44: Conditional Indirect Effects..... 136
Table 45: Index of Moderated Mediation 137
Table 46: Summary of Hypotheses Results. 151

LIST OF FIGURES

Figure 1: Conceptual Model 48
Figure 2: Insurance penetration normal Q-Q Plot 80
Figure 3: Strategic leadership scree plot 86
Figure 4: Digital transformation scree plot 88
Figure 5: Government regulations scree plot 90
Figure 6: insurance penetration scree plot 92
Figure 7: Interaction Effect Analysis. 133
Figure 8: Optimal Model 153

LIST OF ABREVIATIONS AND ACRONONYMS

CSR:	Corporate social responsibility
DOI:	Diffusion of Innovations
FSD:	Financial Sector Deepening Africa
FY:	Financial Year
GDP:	Gross domestic product
IFC:	International Finance Corporation
IRA:	Insurance Regulatory Authority
IT:	Information Technology
NPM:	New Public Management
RBV:	Resource-Based View
SDG:	Sustainable Development Goals
SMEs:	Small and Medium Enterprises in Kenya
SLT:	Strategic leadership theory
UNCTAD:	United Nations Trade and Development

OPERATIONAL DEFINITION OF TERMS

Digital Transformation: Refers to the comprehensive integration of digital technologies, processes, and capabilities across insurance operations, encompassing digital distribution channels, automated underwriting systems, mobile insurance platforms, data analytics capabilities, and digital customer engagement tools. It bridges the gap between visionary leadership and market outcomes by optimizing processes and expanding reach, thereby increasing the accessibility and uptake of insurance products among the Kenyan population.

Government Regulations: Any statute, law, ordinance, policy or regulation issued by any competent governing body or authority in order to control the way something is done, or the way people behave.

Insurance Penetration: The extent to which insurance products and services are utilized and reaching potential customers, providing financial protection, and contributing to economic resilience through risk transfer mechanisms.

Strategic leadership: **"**The capability of leaders to influence followers within an organization in decision making leading to overall organizations' survival and long-term growth and sustainable achievement of organizational goals."

ABSTRACT

The insurance system is essential for economic stability and growth by offering financial protection, yet Kenya's low insurance penetration rate of 2.3% as of FY 2022 poses significant challenges for individuals, businesses, and the broader economy. The main objective of this study was to, "examine the effects of strategic leadership, digital transformation, and government regulations on insurance penetration, specifically focusing on the relationships between these factors and their moderated and mediated interactions." The study will be guided by four theories: Strategic Leadership Theory, Resource-Based Theory, New Public Management (NPM), and Diffusion of Innovations (DOI), with a primary focus on Strategic Leadership Theory. Utilizing a positivist research philosophy and a cross-sectional survey design, the research will target 58 licensed insurance companies in Kenya, employing a census sampling method to survey 275 participants, and will analyse data through descriptive and inferential statistics following a pilot study to refine the questionnaire. The analysis indicates that approximately 40.8% of the variance in insurance penetration is attributed to strategic leadership, highlighting its moderate explanatory power while suggesting that other factors also influence penetration. Additionally, the combined effect of strategic leadership and digital transformation accounts for approximately 43.2% of the variance, and digital transformation significantly mediates the relationship between strategic leadership and insurance penetration in Kenya. Change statistics confirmed that, "government regulations significantly moderate the relationship between strategic leadership and insurance penetration (R^2 change = 0.531, $p<0.001$), and the significant moderated mediation index (0.020, CI [0.010, 0.090]) indicating that regulations also influence the indirect effect of strategic leadership on insurance penetration via digital transformation." Practitioners in the Kenyan insurance sector should prioritize the continuous development of their organizational missions and visions as part of their strategic leadership initiatives, while also investing in comprehensive leadership development programs to cultivate effective leadership skills. Additionally, organizations must address concerns related to data privacy and cybersecurity to enhance the use of digital tools, adopt innovative technologies for digital transformation, and policymakers should focus on creating an inclusive consultation process and improving the clarity of regulations regarding digital insurance products and services.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter elaborates extensively on the study concerning strategic leadership, digital transition within governments, compliance with regulatory frameworks, and insurer involvement across Kenya. The document provides an overview of the research setting, emphasizing its relevance and importance concerning the topics under investigation. Moreover, this section highlights precisely what issues the study intends to tackle, while clearly stating its goals and purposes for conducting such an investigation. Additionally, this paper examines the foundational beliefs supporting the investigation, provides justification for conducting such an analysis, and highlights how it contributes significantly to our understanding already established through previous studies. The boundaries of the investigation have been outlined, along with its restrictions and limits, which serve as an explicit foundation for conducting the analysis.

1.1 Background of the Study

According to KPMG (2020) the Insurance Information Institute is a financial arrangement that provides protection against potential future losses or damages. It involves a contract, known as an insurance policy, between an individual or entity (the insured) and an insurance company (the insurer). In this contract, the insured pays a premium in exchange for the insurer's promise to cover certain risks, such as health issues, property damage, or liability claims. The primary purpose of insurance is to mitigate financial risks by pooling resources from many policyholders. When a loss occurs, the insurer compensates the insured according to the terms of the policy. This system helps individuals and businesses manage uncertainties and provide peace of mind (KPMG, 2020). Insurance penetration is a key metric used to assess the development of the insurance sector within a country. It is defined as the ratio of total insurance premiums collected to the country's Gross Domestic Product (GDP), expressed as a percentage. This measurement indicates how much of a country's economic activity is covered by insurance (Insurance Information Institute, 2023). Today, global insurance premiums account for 7.1% of the world's economic activity, and the industry's weight has increased by one percentage point in the last ten years. Translating this percentage into absolute figures reveals that premiums exceeded USD 6.8 trillion in 2021.

In North America, particularly in the United States, insurance penetration is notably high compared to global averages, indicating a mature and well-developed insurance market (Swiss Re, 2022). As of 2022, the United States reported an insurance penetration rate of approximately 11.43%, making it one of the highest in the world (Insurance Information Institute, 2023). This figure highlights the significant role that insurance plays in the American economy, where the value of insurance premiums collected is substantial relative to the overall economic output. The high penetration rate can be attributed to several factors, including a diverse range of insurance products, widespread consumer awareness, and regulatory frameworks that support the insurance industry (KPMG, 2020). This is more than the combined gross domestic product (GDP) of Spain, Italy, and France. In terms of premium volume, the United States leads the ranking in absolute figures, with a total of USD 2.7 trillion—higher than the sum of the total insurance business in China, Japan, Great Britain, France, Germany, South Korea, Italy, and Canada. The percentage of insurance in relation to the country's GDP is 11.8% in the United States; in some markets with considerably lower premium volumes, such as Great Britain (USD 399 billion), the weight of the industry in its economy is higher, reaching 12.5%. The world's top 15 insurance markets include six where insurance penetration in relation to GDP is in double digits, highlighting the importance of the industry to their economies. Hong Kong leads the ranking with a penetration rate of close to 20%; in Taiwan and South Korea, the percentage drops to 14.5% and 10.7%, respectively (Joaquin, 2022).

Insurance penetration in Asia varies significantly across different countries and regions, reflecting diverse economic conditions, regulatory environments, and cultural attitudes towards insurance (McKinsey & Company, 2023). As of 2022, the overall insurance penetration rate in the Asia-Pacific region increased from 3.0% in 2012 to 3.6% in 2022 (Asian Development Bank, 2023). This growth indicates a gradual but steady rise in the adoption of insurance products across the region. Per capita spending on insurance, known as insurance density, also saw an increase, rising from USD 112 to USD 229 during the same period (Mordor Intelligence, 2023). This upward trend suggests growing awareness and acceptance of insurance as a financial tool for risk management among consumers in Asia. However, the penetration rates vary widely among countries. For

instance, while countries like Japan and South Korea exhibit relatively high penetration rates, others, such as India, lag behind (World Bank, 2023). In India, the insurance penetration rate was reported at 4%, which is lower than the global average of 6.8% (Economic Survey of India, 2023).The non-life insurance sector in India is particularly underdeveloped, with penetration standing at only 1% of GDP as of the latest reports (NITI Aayog, 2023).

The insurance sector in Africa is considered to be in its early stages of development, despite its growth (Mapfumo, 2016). "The insurance sector is growing due to increased demand for insurance as a result of the growth of African economies. Insurance penetration rates are rather low compared to other regions." South Africa had the greatest insurance penetration in Africa in 2020 at 16.99%, whereas other African nations had significantly lower rates, such as Nigeria at 0.23%, Ethiopia at 0.55%, and Egypt at 0.72% (Adeleke, Okoth, Mbeke, & Onyango, 2021). Factors such as economic growth, urbanization, and expanding middle classes have contributed to this positive trend (UNCTAD, 2021). However, the continent still lags behind other regions in terms of insurance coverage, with significant variations among countries (Swiss Re Institute, 2022). Challenges such as limited financial literacy, low income levels, and inadequate infrastructure continue to hinder widespread insurance adoption in many African nations (World Bank, 2020).

In East Africa, Kenya stands out as a major player in the insurance sector, boasting a relatively developed market compared to its neighbors (FSD Africa, 2023). The Kenyan insurance industry has experienced notable growth in recent years, fueled by increasing awareness of insurance benefits, a growing middle class, and supportive government policies (IRA, 2021). However, despite this progress, the insurance penetration rate in Kenya remains significantly below the global average, as indicated by the Kenya National Bureau of Statistics (KNBS, 2023). This low penetration rate suggests that a large portion of the population remains uninsured, exposing them to various risks and hindering their financial well-being.

Several factors contribute to the low insurance penetration rate in Kenya. One key factor is the lack of awareness and understanding of insurance products among the population, particularly in the informal sector (IRA, 2021). Many individuals lack knowledge about the different types of insurance available, their benefits, and how to access them (FSD Kenya, 2022). This lack of

awareness is often compounded by low financial literacy levels, making it difficult for individuals to understand the value proposition of insurance (World Bank, 2022).

Another significant challenge is the dominance of the informal sector, which accounts for over 80% of the workforce (World Bank, 2022). Individuals in this sector often face irregular income streams, limited access to formal financial services, and a lack of trust in traditional insurance products (FSD Kenya, 2022). This makes it difficult for them to afford regular premiums and hinders their willingness to participate in formal insurance schemes. Moreover, trust in insurance providers remains a concern for many Kenyans. Past experiences with claims processing delays, disputes, and perceived unfair practices have eroded consumer confidence in the industry (IRA, 2021). Additionally, the limited use of digital channels for insurance distribution has further restricted access, particularly for those in rural areas or with limited internet connectivity (FSD Kenya, 2022).

To address these challenges, various stakeholders have undertaken initiatives to promote insurance penetration in Kenya. The government has implemented regulatory reforms to enhance market competitiveness and protect consumer interests (IRA, 2023). Insurance companies have introduced innovative products and services tailored to the needs of different segments of the population, including microinsurance products targeting low-income individuals (FSD Kenya, 2021). Additionally, efforts have been made to leverage technology to improve accessibility and reach underserved populations (KNBS, 2023).

However, despite these efforts, the insurance penetration rate in Kenya remains low, highlighting the need for further research to understand the underlying factors hindering insurance uptake. This study seeks to contribute to this understanding by examining the role of strategic leadership, digital transformation, and government regulations in influencing insurance penetration in Kenya. By investigating the interplay between these factors, the study aims to identify potential strategies for enhancing insurance coverage and promoting financial inclusion in the country.

1.1.1 Strategic Leadership

Strategic leadership is a management skill of a company to anticipate, forecast, maintain adaptability, and empower others to create strategic transformation and a viable future for the company (Teece, 2018). It encompasses the capacity to influence and motivate team members, aligning their efforts with the organization's long-term goals. This type of leadership is essential in navigating complex and dynamic business environments, where adaptability and foresight are crucial for success. “It is therefore the capability of the leadership to keep on reinventing motives for the organization’s sustained presence.” “The leader must have the ability to focus on the organization’s operational activities and at the same time monitor the changes that affect the organization, both internally and externally.” “Such changes are bound to determine the existence of the organization in the future and they are prospects to grow the firm” (Thendu, 2023). According to Hitt et al. (2020), strategic leadership includes CEOs, business unit heads, TMTs, boards of directors, and dominating coalitions. Strategic leadership, according to Carpenter et al., (2019), encompasses the complete range of actions and strategic decisions of top executives. Relations are emphasized in strategic and symbolic operations.

Insurance companies could benefit from the adoption of strategic leadership. Strategic leadership involves making short-term choices that ensure long-term organizational survival (Wang et al., 2021). Leadership planning with strategic awareness improves organizational success (Asif et al., 2020). Thus, insurance companies’ leadership may effectively connect human resources to service delivery. Strategic leadership is management's capacity to forecast and set a strategy direction and construct strategic thinking to drive strategic change and ensure the organization's future. Strategic leadership requires the capacity to command, lead change, think strategically, and improve staff skills and competences, according to Stringham (2020). According to Ireland et al. (2020), strategic leadership involves strategic direction, thinking, transformation, human capital development, and core competency exploitation.

When strategic leadership is effectively implemented in public institutions, it ensures that rules and procedures are successfully embedded in the organization. Strategic direction is a shared understanding of the organization's goals and objectives, and it is essential for the successful

implementation of any strategic plan. Hambrick and Pettigrew (2019) distinguish between leadership and strategic leadership, arguing that the former is concerned with all levels of management in an organization, while the latter is focused on the top leadership team.

1.1.2 Digital Transformation

Digital transformation "is a holistic effort to revise core processes and services beyond the traditional digitization efforts." It evolves along a transition continuum from analog to digital to a full stack review of policies, current processes, and user needs and results in a complete revision of the existing and the creation of new digital services, Daniel, Schallmo & Tidd, 2021)." The outcome of digital transformation efforts focuses, among others, on the satisfaction of user needs, new forms of service delivery, and expanding the user base (Fichman, Dos Santos & Zheng, 2014). Digital transformation is the adoption of digital technology by an organization to digitize non-digital products, services or operations. The goal for its implementation is to increase value through innovation, invention, customer experience or efficiency (Kharlamov & Parry, 2021). Digital transformation in the insurance sector refers to the comprehensive integration of digital technologies, processes, and capabilities across insurance operations, encompassing digital distribution channels, automated underwriting systems, mobile insurance platforms, data analytics capabilities, and digital customer engagement tools (Smith & Jones, 2022).

To our knowledge, "academic work in the area of digital transformation and insurance penetration has not yet been extensively explored in Kenya, a context that shows high growth and digital transformation rates in relation to other developing countries, particularly in the service sector." In addition, previous research has called for investigating how digital transformation influences insurance penetration in different contexts and sectors (Zhai, Yang, & Chan, 2022). Moreover, "understanding which channels can explain how digital transformation mediates relationship between strategic leadership and insurance penetration is worth understanding." Several avenues for how digital transformations might affect insurance adoption include technological advancements in information technology and enhancing consumer satisfaction levels. These elements hold significant importance specifically in operational industries, as they heavily influence how services are provided and interacted with by customers, thereby impacting an

entity's overall effectiveness. In this study digital transformation indicators will encompass; business processes built on technologies, integrated digital technologies, Big Data analytics and Cyber security Investment.

1.1.3 Government Regulations

Government regulations play a crucial role in shaping the insurance landscape in Kenya. Government regulations in the insurance sector are essential for protecting consumers, ensuring market stability, promoting fair competition, enhancing transparency, and adapting to changes in the industry. These regulations create a framework that supports the sustainable growth of the insurance market while safeguarding the interests of policyholders and the economy at large. The Insurance Regulatory Authority (IRA) serves as the primary regulatory body, responsible for overseeing the licensing, operations, and financial soundness of insurance companies (Insurance Regulatory Authority, 2023). It enforces various laws and regulations, including the Insurance Act and its accompanying schedules, aimed at safeguarding the interests of policyholders and ensuring the stability of the insurance sector. These regulations cover a wide range of aspects, including capital requirements, solvency margins, investment guidelines, product approval processes, and consumer protection measures (Insurance Regulatory Authority, 2023). For instance, insurance companies are required to maintain adequate capital reserves to cover potential claims and ensure their financial stability, as stipulated in the Insurance (Amendment) Act, 2019. They must also adhere to strict investment guidelines to protect policyholder funds and ensure the availability of resources to meet future obligations.

Government regulations also play a critical role in promoting fair competition within the insurance industry. The Competition Act of Kenya (2010) ensures that insurance companies adhere to ethical marketing practices, avoid unfair discrimination, and provide transparent information to consumers. Additionally, regulations aim to protect consumers by ensuring that insurance products are designed to meet their needs, that claims are processed fairly and promptly, as mandated by the Insurance (Policyholder Compensation Fund) Regulations, 2017, and that disputes are resolved efficiently.

However, government regulations can also pose challenges for insurance companies. Compliance with numerous regulations can be complex and costly, particularly for smaller players with limited resources (Deloitte, 2023). Moreover, some regulations may be perceived as overly restrictive, hindering innovation and market development. Striking the right balance between protecting consumers and fostering a competitive and innovative insurance market remains a key challenge for regulators in Kenya.

1.1.4 Insurance Penetration

The insurance sector plays a pivotal role in the global economy, offering financial protection against various risks and fostering economic resilience (Outreville, 2021). It enables individuals and businesses to recover from unforeseen events, promotes financial inclusion by extending services to underserved populations, and contributes to overall economic growth (Outreville, 2021). Globally, the insurance industry has witnessed significant expansion, driven by increasing awareness of insurance benefits, rising disposable incomes, and supportive regulatory frameworks (Swiss Re, 2023).

The primary purpose of insurance is to mitigate financial risks by pooling resources from many policyholders. When a loss occurs, the insurer compensates the insured according to the terms of the policy. This system helps individuals and businesses manage uncertainties and provides peace of mind (Swiss Re, 2022). The insurance penetration rate is the most widely used metric to assess the health of a nation's insurance market (Isedomi & Chijuka, 2024). The total amount of insurance premiums collected in a country expressed as a percentage of GDP is known as the penetration rate, and it is used to determine the economic impact of the insurance business on the country (Ibrahim & Adeniyi, 2018). Bolarinwa and Bolarinwa (2019) define insurance penetration as a measure of the level of insurance development in an economy, showing the extent to which, the insurance industry contributes to the overall economic growth. Insurance penetration, a key indicator of the extent to which insurance services are utilized within a population, is crucial for economic resilience and financial inclusion (Outreville, 2021). It is measured as the ratio of total insurance premiums to GDP. Despite its importance, Kenya's insurance penetration rate remains

low, at 2.3% as of 2022 (KNBS, 2023), significantly below the global average of 7.0% (Swiss Re Institute, 2023). Several factors contribute to this low penetration.

Many Kenyans, particularly in the informal sector, view insurance as a luxury rather than a necessity (Insurance Regulatory Authority, 2023). This perception, coupled with low financial literacy, hinders the uptake of insurance products. The dominance of the informal sector, comprising over 80% of the workforce (World Bank, 2022), further exacerbates the issue, as individuals in this sector often lack awareness of insurance benefits and face irregular incomes (FSD Kenya, 2022). Despite this, there has been growth in gross premiums within the Kenyan insurance sector, indicating a potential for expansion if more customers can be attracted (Cytonn Investments, 2023). However, challenges persist, including low trust in insurance providers due to past negative experiences (Financial Sector Deepening Kenya, 2022) and limited access to digital distribution channels, especially for those in rural areas (Kenya National Bureau of Statistics, 2022).

According to Isedomi and Chijuka, (2024), ” Insurance penetration can be seen as a measure of financial inclusion, indicating the extent to which individuals and businesses are accessing and benefiting from insurance products.” The extent to which insurance products and services are utilized and reaching potential customers, providing financial protection, and contributing to economic resilience through risk transfer mechanisms, “because of this, the penetration rate offers a reliable numerical foundation for cross-border comparisons among different countries and areas.” Insurance penetration indicators are metrics used to assess the level and effectiveness of insurance participation within a specific market. This study adopted insurance penetration indicators based on the insurance penetration rate, insurance coverage rates, insurance density, claims settlement ratio, distribution channels and insurance awareness levels. The Insurance Penetration Rate shows the total insurance premiums collected in a given year, divided by the Gross Domestic Product (GDP). A higher rate indicates a larger share of the economy participating in insurance. Insurance Coverage Rates; This measures the percentage of the population covered by at least one type of insurance policy, indicating the reach of insurance products. Insurance Density; this measures the average amount of insurance premium paid per person in a year. It's

calculated by dividing total premiums by the total population. This provides a more granular picture of individual participation. Claims Settlement Ratio; This measures the percentage of premiums paid out in claims compared to the total premiums collected. A lower ratio might indicate efficient claim processing, while a high ratio could suggest potential issues with claim settlement practices. Insurance distribution channels are the various pathways or methods that insurance companies use to sell their products and services to the end consumer. Insurance Awareness Levels; This measures the population understands of insurance products and their benefits, reflecting the effectiveness of awareness campaigns and information dissemination efforts.

1.1.5 Insurance Companies Operating in Kenya

The main players in the Kenyan insurance industry are insurance companies, reinsurance companies, intermediaries such as insurance brokers and insurance agents, risk managers or loss adjusters and other service providers (Insurance Regulatory Authority, 2023). The statute regulating the industry is the insurance Act; Laws of Kenya, Chapter 487. "The office of the commissioner of insurance was established under its provisions to strengthen the government regulation under the Ministry of Finance, (Insurance Regulatory Authority, 2023)."

In Kenya, the insurance sector comprises both private and public insurance companies, each playing a vital role in the overall insurance landscape (Insurance Regulatory Authority, 2023). Most insurance companies in Kenya are privately owned and operated. These companies are typically established as limited liability entities and are driven by profit motives. They offer a wide range of insurance products, including life, health, and general insurance, catering to the diverse needs of individuals and businesses (KPMG, 2023). Examples of prominent private insurance companies include Jubilee Insurance, Britam, and Sanlam Kenya. On the other hand, public insurance companies in Kenya are owned and operated by the government or state agencies. These entities often focus on providing specific types of insurance, such as social insurance or coverage for government employees (Ministry of Health, 2022). An example of a public insurance company in Kenya is the Social Health Insurance Fund (SHIF), which provides health insurance coverage to citizens.

According to Insurance Regulatory Authority (2023), Insurance companies in Kenya can be categorized based on their Gross Written Premium (GWP), which is a key indicator of their size and market presence. This classification helps in understanding the landscape of the insurance industry and the varying capabilities and market strategies of different companies based on their size.

1. Large Insurance Companies; Defined as Companies with a GWP greater than KES 10 billion. The characteristic of these firms is that they typically have a significant market share, extensive resources, and a wide range of insurance products. They often operate on a national or international scale and have the capacity to absorb large risks.
2. Medium Insurance Companies; Defined as Companies with a GWP ranging from KES 1 billion to KES 10 billion. The characteristics of these Medium-sized insurers are, they usually serve specific markets or regions. They may offer a variety of insurance products but do not have the same level of market penetration or resources as large companies.
3. Small Insurance Companies; Defined as Companies with a GWP of less than KES 1 billion. The characteristics of these firms often focus on niche markets or specialized insurance products. They may have limited resources and market reach compared to larger competitors, but they can provide personalized services and cater to specific customer needs.

Kenya's insurance landscape is a dynamic mix of local and international players, with over 55 registered insurance companies offering diverse products across life, non-life, and composite segments (Insurance Regulatory Authority, 2023). The market is led by a few dominant players with substantial market share, extensive distribution networks, and diverse product portfolios (Cytonn Investments, 2023). Alongside these giants, a growing number of niche insurers are carving out specialized offerings and targeting underserved markets, stimulating competition and innovation.

A significant trend in recent years has been mergers and acquisitions, driven by consolidation, expansion ambitions, and the pursuit of economies of scale (Deloitte, 2022). This consolidation has given rise to larger, more diversified insurance groups better equipped to navigate the changing market dynamics. Digital transformation is another transformative force. Insurers are investing

heavily in technology to enhance operational efficiency, elevate customer experience, and expand their reach, particularly among younger demographics comfortable with digital platforms (PWC, 2022). This encompasses online platforms for policy purchases and claims processing and leveraging data analytics and artificial intelligence for personalized offerings and risk assessment. Government regulations, overseen by the Insurance Regulatory Authority (IRA), are pivotal in shaping the industry's operations (Insurance Regulatory Authority, 2023). Compliance with prudential management, solvency, and consumer protection standards is mandatory for maintaining operating licenses and upholding the sector's stability and credibility.

Despite these developments, the Kenyan insurance industry grapples with challenges like low insurance penetration, limited financial literacy, and a degree of consumer distrust (Financial Sector Deepening Kenya, 2022). These hurdles present opportunities for innovation, urging companies to develop products and services that resonate with the unique needs of the Kenyan population, especially those currently underserved. The path forward involves embracing technology, building trust, and tailoring solutions to bridge the gap between the insurance sector and the Kenyan people.

1.2 Statement of the Problem

The insurance system plays a crucial role in helping an economy maintain stability and grow by providing individuals or entities with financial protection or compensation for losses through insurance firms (AIsedomi & Chijuka, 2024). “The insurance industry in Kenya is growing in importance and it has been identified in the Vision 2030 as critical in the country’s transformation under the economic pillar” (Owuor, 2016). The low insurance penetration rate in Kenya, stagnating at a mere 2.3% as of FY 2022 (KNBS, 2023), presents a complex and multifaceted issue with significant ramifications for individuals, businesses, and the nation's overall economy. The relatively lower level of insurance penetration in Kenya has been attributed to a number of factors including lack of awareness on available insurance products, low income levels among the key consuming public, perceived low rate of returns for life policies, cumbersome claim settlement procedures, lack of trust of insurance players, and expensive premiums among others (Mutanda, 2021).

Despite the insurance sector experiencing growth in gross premiums (Cytonn Investments, 2023), the stagnant penetration rate underscores a critical failure to extend the protective umbrella of insurance to a broader segment of the population. This leaves a significant portion of Kenyans, particularly those in the informal sector, vulnerable to the financial shocks of unforeseen events like accidents, illnesses, or natural disasters. For individual citizens, the lack of adequate insurance coverage can lead to devastating financial consequences due to unexpected medical bills, property damage, or loss of income, uninsured individuals and families are often forced into debt, poverty, or both (IRA, 2021). The most significant risk for small and medium firms in Kenya, resulting from lack of insurance coverage, would have a substantial influence on the business's performance. The potential business risk arises from factors such as theft, competition, operational expenses, and the possibility of asset loss from fire incidents, loan availability, political influences, drought conditions, and occupational health risks (IRA, 2021).

According to Mamadou and Nelson (2021) on their study, titled "Institutional determinants of insurance penetration in Africa," found that institutional quality has a positive and significant impact on insurance demand in Africa. Conceptually the study “identified regulatory quality, rule of law, control of corruption, political stability and absence of violence, and government effectiveness as key factors influencing insurance penetration” (Isedomi & Chijuka, 2024). The study conducted by Odusola et al. (2021) exploring the conceptual aspects of effectiveness of mobile-based micro-insurance initiatives in Kenya offers valuable insights into the potential impact of such programs in underserved communities using a methodological approach of mixed-methods, including both quantitative and qualitative data collection methods. Empirical study conducted by Msomi, Olarewaju, & Msomi, (2021), Determinants of Insurance Penetration in West African Countries. Methodically “the authors used a panel autoregressive distributed lag (P-ARDL) approach to examine the determinants of insurance penetration in West Africa” (Isedomi & Chijuka, 2024). Contextually, empirical studies by Olayungbo and Akinlo (2016) Determinants of insurance penetration in Sub-Saharan Africa, examined the factors affecting insurance penetration in Sub-Saharan Africa. Indeed, the study conducted by Chibisa et al. (2018) examining the impact of cultural values, as measured by Hofstede's dimensions, on insurance penetration in 45 African countries provides valuable insights into this area. The empirical review among all

these studies conducted shows lack of studies on the influence of strategic leadership, digital transformation, and government regulations on insurance penetration in Kenya. Therefore there is need to address strategic leadership, digital transformation, government regulations and their role in on insurance penetration in Kenya as the knowledge gap necessitating this research study.

1.3 General Objective of the study

The general objective of this study is to examine the influence of strategic leadership, digital transformation, and government regulations on insurance penetration in Kenya.

1.3.1 Specific objectives of the study

The specific objectives of the study include;

(i) To assess the relationship between strategic leadership and insurance penetration in Kenya.

(ii) To establish the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya.

(iii) To assess the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya.

(iv) To examine the moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya.

1.4 Justification of the Study

This study underscores the pivotal role of strategic leadership in boosting insurance penetration, the study equips policymakers to craft leadership-development initiatives that are specifically tailored to the insurance sector, thereby enhancing decision-making and strategic direction within firms and ultimately driving market growth; simultaneously, the research's insights into the transformative power of digital technologies can steer both government and industry policies toward accelerating digital adoption in insurance, a move that expands access, improves service delivery, and cuts operational costs factors that collectively raise uptake among underserved populations; finally, the findings on how regulatory frameworks influence penetration rates provide regulators with a nuanced understanding that enables them to strike a balance between

consumer protection and innovation-friendly policies, fostering a competitive, trustworthy, and innovation-driven insurance market that further elevates penetration.

By equipping insurance sector leaders with evidence-based insights into how strategic leadership drives market growth, the study strengthens leadership capabilities—enabling executives to adopt best practices in vision setting, innovation, and change management that directly boost insurance penetration; simultaneously, it empowers practitioners to optimize digital transformation efforts by integrating mobile platforms, data analytics, and automated services into their operations, thereby enhancing customer experience, cutting costs, and expanding product access; and, by illuminating the impact of government regulations on insurance growth, it helps firms navigate regulatory compliance effectively, allowing them to adapt strategies that maintain compliance while fostering innovation and competitive advantage in the Kenyan insurance market.

The study extends strategic-leadership theory by integrating digital transformation and regulatory context in an emerging-market setting, thereby offering a nuanced model of how leadership shapes technology adoption and market penetration; it contributes to the literature on digital transformation in the insurance sector by empirically testing the mediating role of digital capabilities between leadership and penetration, filling a notable gap in African contexts; and it advances regulatory theory by exploring the interaction between government policies and firm-level digital strategies, providing a framework for understanding how regulation can either enable or constrain innovation in financial services.

1.5 Scope of the Study

This study focused on the influence of strategic leadership, digital transformation, and government regulations on insurance penetration in Kenya. The study target population will be the 58 insurance companies licensed in Kenya by Insurance Regulatory Authority (IRA) as of March 2024. Primary data will be collected through surveys, interviews, and analysis of company reports, examining these factors' impact on insurance penetration, measured as the ratio of total insurance premiums to GDP. While offering a comprehensive analysis of the Kenyan insurance landscape from the perspective of decision-making centers, the study's scope is delimited to head offices and does not extend to individual branch operations or markets beyond Kenya. External factors, such as

economic conditions and political events, are acknowledged but excluded from the research focus. The study will be conducted from October 2024 to September 2025.

1.6 Limitations of the Study

This study could encounter potential challenges, such as hesitation from insurance company administrators to grant research access, particularly due to concerns about accessing sensitive data on insurance market penetration. To address these concerns, the researcher plans to secure institutional approval through an endorsement letter from The Management University of Africa and a formal research authorization from the National Commission for Science and Technology (NACOSTI), which will validate the academic intent of the study. Furthermore, assurances will be provided to participating companies that all shared information will be managed with strict confidentiality, ensuring data privacy compliance.

1.7 Delimitations of the study

The delimitations are important to state in the research because they help to clarify the scope of the study and the limitations of the findings. By stating the delimitations, the researcher is being transparent about the research and allowing the reader to understand what the study is about and what it does not cover (Theofanidis & Fountouki, 2018). The current study will only consider the effects of strategic leadership, digital transformation and government regulations on insurance penetration. Other factors that may affect insurance penetration, such as the economic environment or the availability of resources, will not be considered.

1.8 Chapter Summary

This first chapter provided the background of the study by outlining the reasons for the study research objectives, the scope, the significance of the study, key variables, research objectives and their linkages. The study variables; the strategic leadership, digital transformation, government regulations and insurance penetration were discussed. The study problem statement and study gaps were explained and the gaps the study wished to fill. The chapter established the relationship between strategic leadership, digital transformation, government regulations and insurance

penetration in Kenya. The scope and significance of the study were also covered in this chapter. The limitations and delimitations of the study were also highlighted.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter brings to the fore the theoretical and the empirical frameworks anchoring the study, research gaps, research hypotheses, the conceptual framework and model, and operationalization of research variables and finally, chapter summary.

2.1Theoretical Literature Review

This study is guided by four theories: Strategic Leadership Theory, Resource-Based Theory, New Public Management (NPM), and Diffusion of Innovations (DOI) theory. The study is anchored on Strategic Leadership Theory, which emphasizes the crucial role of strategic leaders in shaping organizational purpose, intent, and the effective implementation of strategies for competitiveness. The Strategic Leadership Theory aligns with the study's aim to determine the effect of strategic leadership on insurance penetration. The three theories supporting the study are Diffusion of Innovations (DOI) theory which is supporting digital transformation variable, while New Public Management (NPM) theory is supporting the government regulations variable. Finally the Resource-Based Theory is supporting the insurance penetration variable of the study. This section therefore, reviews identified theories underpinning this study.

2.1.1 Strategic Leadership Theory

Strategic leadership theory (SLT) emphasizes the role of effective leaders in shaping organizational outcomes through vision, strategic thinking, and transformative change (House & Baetz, 1979). Leaders anticipate changes, align resources, and promote innovation to achieve competitive advantage. While SLT offers valuable insights, it has been criticized for its individualistic focus and challenges in isolating leaders' specific contributions (Zia-ud-Din et al., 2017).

In the Kenyan insurance industry, strategic leadership is crucial to addressing low penetration. Leaders must navigate challenges like low financial literacy, limited trust, and the informal sector's dominance (IRA, 2021; World Bank, 2022). They need innovative strategies such as tailoring

products to the informal sector, leveraging digital technologies, and building trust through transparent services.

Strategic Leadership Theory is particularly relevant in this context for several reasons. The first one is that strategic leadership is essential for guiding organizations through digital transformation, which is increasingly critical in the insurance industry. Leaders who adopt a strategic approach can effectively leverage technology to enhance operational efficiency, improve customer experiences, and innovate product offerings (Bharadwaj et al., 2013). As the insurance sector in Kenya faces pressures to modernize and adapt to digital trends, strategic leaders are tasked with creating a vision that aligns digital initiatives with the overall business strategy. This alignment is crucial for ensuring that digital transformation efforts contribute to increased insurance penetration and market competitiveness.

The second one is that strategic leadership is essential for guiding organizations through digital transformation, which is increasingly critical in the insurance industry. Leaders who adopt a strategic approach can effectively leverage technology to enhance operational efficiency, improve customer experiences, and innovate product offerings (Westerman et al., 2014). As the insurance sector in Kenya faces pressures to modernize and adapt to digital trends, strategic leaders are tasked with creating a vision that aligns digital initiatives with the overall business strategy. This alignment is crucial for ensuring that digital transformation efforts contribute to increased insurance penetration and market competitiveness

Thirdly, “strategic leaders play a pivotal role in driving organizational change, which is essential in a rapidly evolving industry like insurance” (Iddrisu, et al., 2025). The ability to lead change initiatives effectively is a core component of strategic leadership (Burnes, 2017). In the context of the study, leaders in licensed insurance companies must foster a culture that embraces change, encourages innovation, and supports the adoption of new technologies and practices. This capability is vital for improving insurance penetration, as organizations that can adapt quickly to market demands are more likely to succeed.

Fourthly, strategic leadership involves engaging with various stakeholders, including employees, customers, regulators, and investors. Effective leaders understand the importance of building relationships and fostering collaboration among these groups (Bryson, 2018). In the Kenyan insurance sector, where trust and transparency are critical, strategic leaders can enhance stakeholder engagement by communicating a clear vision and demonstrating commitment to ethical practices. This engagement can lead to increased customer loyalty and higher insurance penetration rates

Finally, Strategic Leadership Theory underscores the importance of creating and sustaining a competitive advantage. Leaders who can identify unique market opportunities and align their organizations' resources and capabilities accordingly are better positioned to thrive in competitive environments (Muriuki et al., 2020). In Kenya's insurance market, where penetration rates are still developing, strategic leaders can capitalize on emerging trends and consumer needs to differentiate their offerings and attract more customers

Strategic leadership theory is highly relevant to this study as it provides a framework for understanding how strategic leaders' actions influence insurance penetration in Kenya. By examining their vision, strategic choices, and resource allocation, the study can gain insights into how leadership behaviors drive or hinder insurance uptake, particularly in a context with low financial literacy, limited trust, and the dominance of the informal sector. SLT's emphasis on fostering innovation and change is also relevant to the study's focus on digital transformation and its potential to enhance access and improve customer experience. Finally, the theory's focus on the external environment, including government regulations, aligns with the study's examination of how strategic leaders navigate regulatory changes, influencing their companies' adaptability and success. By applying SLT, this study aims to provide a comprehensive understanding of the factors influencing insurance penetration in Kenya and to identify leadership behaviors and strategies that can drive insurance uptake.

2.1.2 The Resource-Based Theory

Barney (1991) defines the Resource-Based Theory as "a framework that suggests that the resources and capabilities possessed by firms are the primary determinants of competitive advantage and superior performance, particularly when these resources are valuable, rare, inimitable, and non-substitutable (VRIN)." This seminal definition establishes the core criteria for strategic resources and emphasizes the internal focus of competitive advantage generation (Barney, 1991). Wernerfelt (1984), who coined the term "resource-based view," describes it as "an approach to strategic management that analyzes and interprets resources of the organizations to understand how organizations achieve sustainable competitive advantage by focusing on resources rather than products." This definition highlights the shift from external market positioning to internal resource configuration as the primary source of competitive differentiation (Wernerfelt, 1984). Peteraf (1993) offers a more comprehensive definition, stating that "the resource-based theory is a framework for understanding the conditions under which firms achieve and sustain competitive advantages, based on four conditions: resource heterogeneity, ex-post limits to competition, imperfect resource mobility, and ex-ante limits to competition." This definition expands the theoretical boundaries by incorporating market imperfections and competitive dynamics into the resource-based perspective (Peteraf, 1993).

The Resource-Based Theory is particularly appropriate for examining the influence of strategic leadership, digital transformation, and government regulations on insurance penetration in Kenya for several compelling reasons. First, strategic leadership represents a critical intangible resource that shapes organizational vision, decision-making, and resource allocation strategies, directly influencing how insurance companies navigate the Kenyan market. Leaders with superior strategic capabilities can better identify market opportunities, mobilize resources effectively, and create innovative approaches to increase insurance penetration (Barney, 1991; Wernerfelt, 1984). Second, digital transformation capabilities constitute valuable technological resources that can provide competitive advantages in reaching underserved populations, reducing operational costs, and improving service delivery. In the Kenyan context, where mobile technology adoption is high but insurance penetration remains low, firms with superior digital resources and capabilities are

better positioned to bridge this gap through innovative distribution channels and customer engagement strategies (Grant, 1991; Tanriverdi, 2005).

Third, the ability to navigate and leverage government regulations represents a crucial organizational capability that can differentiate successful insurers from their competitors. Firms with superior regulatory competencies can better adapt to policy changes, influence regulatory frameworks, and capitalize on government initiatives designed to promote insurance penetration. The RBT framework helps explain how these regulatory capabilities, when rare and difficult to imitate, become sources of competitive advantage (King & Tucci, 2002; Barney et al., 2011). Furthermore, the heterogeneous nature of resources among Kenyan insurance firms—ranging from multinational corporations with extensive technological resources to local firms with deep market knowledge—makes RBT particularly suitable for understanding differential performance in market penetration. The theory's emphasis on path dependency and resource accumulation over time also aligns with the evolutionary nature of digital transformation and leadership development in the insurance sector (Peteraf, 1993; Eisenhardt & Martin, 2000).

The Resource-Based Theory operates on several fundamental principles that guide its application to strategic management. Resource heterogeneity asserts that firms possess different bundles of resources and capabilities, even within the same industry. In the Kenyan insurance context, companies vary significantly in their leadership quality, technological infrastructure, brand reputation, distribution networks, and regulatory relationships, creating diverse competitive positions (Barney, 1991; Wernerfelt, 1984). Resource immobility recognizes that resources are not perfectly mobile across firms, meaning that valuable resources cannot be easily transferred or acquired in factor markets. Strategic leadership capabilities, organizational culture, and accumulated market knowledge in Kenya represent resources that are deeply embedded in firms and difficult to replicate or transfer (Barney et al., 2011; Eisenhardt & Martin, 2000).

The VRIN framework establishes that resources must meet four criteria to generate sustained competitive advantage: they must be valuable, enabling firms to exploit opportunities or neutralize threats (such as digital platforms that reach rural customers); rare, meaning they are uncommon among competing firms (such as exceptional strategic leadership); inimitable, making them

difficult for competitors to duplicate (such as unique regulatory relationships); and non-substitutable, ensuring there are no strategically equivalent resources (such as proprietary technology systems) (Barney, 1991; Grant, 1991). Finally, path dependency recognizes that a firm's current resource position is shaped by its historical trajectory, past decisions, and accumulated experiences. Insurance companies' current digital capabilities and market positions in Kenya reflect years of investment decisions and strategic choices, emphasizing how resource accumulation over time creates lasting competitive advantages (King & Tucci, 2002; Peteraf, 1993).

2.1.3 The New Public Management (NPM)

The New Public Management (NPM) theory, introduced by Hood (1991), advocates for reorganizing the public sector to improve efficiency and effectiveness by incorporating private sector practices. “The concept of New Public Management (NPM) originated toward the end of the 20th century as a reaction to what many saw as shortcomings in the way government agencies were run. Its hallmark is the transfer of management techniques and practices typical of the private sector into the realm of public administration” (Kapesa & Dorasamy, 2025). This theory assumes that applying business-like principles to public service delivery can enhance the quality and value of services for citizens (Mongkol, 2011).

NPM principles can be applied to public management, impacting service delivery and organizational performance. These principles emphasize ethics, transparency, equality, justice, responsibility, accountability, prudence, participation, responsiveness to public needs, and efficient management of public organizations. According to Mongkol (2011), NPM reforms aim to enhance public service quality, reduce spending, improve government efficiency, and enhance policy implementation. The emergence of NPM was influenced by the perceived inefficiencies of large, monopolistic public bureaucracies (Andrews, 2012). NPM focuses on using market practices to improve the public sector's effectiveness (Zungura, 2014). Key components of NPM include performance management, e-governance, contracting out and outsourcing, decentralization, and accountability.

The New Public Management (NPM) framework serves as a theoretical foundation that reinforces and justifies the role of government regulations as a key driver of insurance market development. NPM, which emerged in the late 1980s as a paradigm shift in public administration, emphasizes efficiency, market orientation, performance measurement, customer focus, and results-based governance in public sector operations (Hood, 1991). By applying NPM principles, government regulations in Kenya's insurance sector are transformed from mere bureaucratic controls into strategic enablers that promote competition, innovation, and accessibility, ultimately enhancing insurance penetration rates. This theory supports the study's examination of the effect of government regulations on insurance penetration in Kenya. Privately owned organizations have a distinct managerial structure that allows them to innovate and adapt more effectively than state-owned corporations. NPM advocates for state-owned firms to adopt private sector management practices and business-like principles to improve efficiency, effectiveness, quality, and value for citizens. Thus, the New Public Management theory is instrumental in examining the relationship between strategic leadership, digital transformation, government regulations, and insurance penetration in Kenya.

2.1.4 Diffusion of Innovations (DOI) theory

The Diffusion of Innovations (DOI) theory, developed by Rogers (1995), is crucial for understanding technology adoption and the flow of innovation in social systems. It encompasses three key concepts: diffusion (the systematic transfer of information through channels), adoption (the decision-making process for action), and innovation (new ideas that enhance competencies).

The Rogers' (2003) theory posits that technological innovations diffuse more quickly when they are perceived as advantageous and congruent with societal values. "The Diffusion of Innovations (DOI) framework aids in analyzing the adoption of digital transformation by examining five key factors that shape the process. These include Relative Advantage, which refers to the extent to which an innovation is viewed as superior to existing solutions; Compatibility, or its alignment with established values, prior experiences, and user requirements; Complexity, the perceived ease or difficulty in understanding and utilizing the innovation; Trialability, the opportunity to experiment with the innovation prior to full-scale implementation; and Observability, the degree to which the innovation's outcomes are noticeable and measurable" (Schenk, 2025).

The Diffusion of Innovations (DOI) Theory provides a critical theoretical lens for understanding how innovative insurance products, services, and technologies spread within the Kenyan market, thereby explaining variations in insurance penetration rates. DOI is highly relevant to this study as it bridges the independent variables (strategic leadership, digital transformation, and government regulations) with the dependent variable (insurance penetration), which remains stubbornly low at approximately 2.8% in Kenya despite high mobile penetration (Insurance Regulatory Authority, 2022). The theory elucidates why digital insurance innovations (e.g., micro-insurance via mobile wallets) have diffused unevenly, particularly in rural and low-income segments, and how the study's focal factors can accelerate this process to achieve the National Insurance Penetration Strategy's target of 5% by 2030.

In this study, the Diffusion of Innovations (DOI) framework plays a crucial role in explaining how insurance companies adopt digital transformation strategies. It enables the evaluation of the underlying motivations behind technological decisions and their influence on organizational capabilities. Furthermore, the framework facilitates examination of the digital transformation process and the role of key stakeholders in achieving seamless integration of automated systems into organizational structures. By applying DOI principles, this research can uncover how the Kenyan insurance sector incorporates digital innovations to boost market penetration. Examining the elements that drive the adoption and spread of digital technologies can help identify obstacles and opportunities for insurers aiming to utilize technology to expand their customer reach and enhance service quality.

2.2 Empirical literature review

This study aims to provide a comprehensive analysis of the factors of strategic leadership, digital transformation, government regulations and insurance penetration in Kenya. The subsections have been generated based on the research goals of this study. The section finishes by presenting the conceptual framework that has been developed based on the study's hypotheses, identified knowledge gaps, and a table illustrating an operationalization of research variables.

2.2.1 Strategic Leadership and Insurance Penetration

A 2020 study by Wang and Chen meticulously detailed how CEO personality shapes organizational performance, making significant contributions to theory, methodology, and practice. By empirically validating the Upper Echelons Theory using social media text mining, they demonstrated how a leader's digital footprint can be used to predict firm outcomes. The results revealed specific performance trade-offs associated with different personality traits. For example, Extraversion and Agreeableness were found to enhance financial performance, while Conscientiousness surprisingly hindered it. A similar pattern emerged with employee productivity, which benefited from all traits except Conscientiousness. The primary contributions of this work are threefold: methodologically, it introduces a powerful computational tool for personality analysis; theoretically, it provides new evidence for how top management characteristics translate into firm results; and practically, it equips companies with a new lens for CEO selection. While Wang and Chen's work relied on digital trace data, the current study will investigate the leadership-performance nexus using a more traditional empirical method, collecting quantitative questionnaire data to assess the relationship between strategic leadership and insurance penetration in Kenya.

Nyakundi (2022) carried out an empirical study to determine how five fundamental dimensions of a chief executive's personality—emotionality, extraversion, agreeableness, conscientiousness, and openness to experience—affect the financial results of Kenya's insurance industry. Using a descriptive-correlational design, the author gathered primary data through standardized questionnaires administered to 34 CEOs and 88 senior managers. The dataset was examined with a suite of statistical techniques, including descriptive measures, factor analysis, correlation tests, and ordinal regression modeling. Findings revealed a marked divergence between the two respondent groups. CEOs indicated that openness and agreeableness positively and significantly influenced financial performance, while extraversion exerted a significant negative effect. In contrast, senior-management responses showed that only openness and agreeableness remained significant positive predictors; the remaining traits did not reach statistical significance. Based on these outcomes, the study recommended that insurance firms develop robust training programs for top-level managers to cultivate advantageous personality traits and implement sophisticated CEO

evaluation systems to pinpoint and capitalize on traits that drive financial success. Although Nyakundi's research centered on internal financial indicators, the present investigation will extend the analysis to explore how strategic leadership relates to the external market metric of insurance penetration in Kenya.

A 2019 study by Langat, Linge, and Sikalieh examined the effect of the idealized influence dimension of leadership on employee job performance in the Kenyan insurance industry. The research was guided by a positivist philosophy and employed a correlational methodology. From a target population of 676 lower-level managers, a sample of 211 was successfully surveyed, representing an 86% response rate. Using analysis of variance to test their hypothesis, the researchers concluded that idealized influence significantly and positively predicts employee job performance. Consequently, the study advised leaders to align their actions with organizational values and actively foster this congruence within their teams to boost leadership effectiveness. While this research focused on internal performance metrics, the present study will expand the scope to evaluate the relationship between strategic leadership and the market-level outcome of insurance penetration in Kenya.

A 2019 study by Mutembei and Njuguna systematically examination of how competitive approaches affect insurance penetration in Kenya. Their investigation was grounded in sales-maximisation theory, Porter's generic-strategy framework, and the BCG matrix, and it aimed specifically to gauge the effects of cost-leadership, differentiation, and focus tactics. Employing a descriptive, explanatory, cross-sectional design, the authors gathered primary information from senior marketing and business-development officers through a validated, closed-question questionnaire. Reliability testing yielded Cronbach's α values above the 0.70 benchmark, and content validity was confirmed by subject-matter experts. Analyses comprising descriptive statistics, correlation, and regression showed that competitive strategies correlate positively with market share. In particular, regression results indicated that firms adopting a cost-leadership stance experience higher insurance penetration, and that larger organisational size also predicts greater market reach. The anticipated moderating role of critical success factors, however, was not substantiated. The authors concluded that emphasizing cost efficiency and expanding firm size are effective routes to boost penetration, and they advised insurers to pursue cost-saving measures and

growth initiatives. Unlike this earlier work, which centred on competitive tactics, the present study will explore how strategic leadership influences insurance penetration among Kenya's licensed insurers.

A 2018 study by Mutegi's 2018, " examined how various innovation-oriented strategies affect the level of insurance uptake in Kenya". Anchored on an expansive theoretical blend Marketing Theory, the Resource-Based View, Diffusion of Innovation, Evolutionary Theory, and Scenario Thinking the study concentrated on the country's entire cohort of 51 licensed insurers. Adopting a descriptive design, the researcher gathered primary information from 146 managers representing 34 of those firms. Linear and multiple regression techniques showed that all four innovation lenses new product development, market-focused initiatives, technology adoption, and scenario planning significantly advanced insurance penetration. Respondents overwhelmingly agreed that product innovation helps uncover customer requirements, whereas market and technological innovations propel expansion into new segments. Mutegi therefore argued that insurers need a broad, coordinated innovation agenda and urged firms to institutionalize these practices to widen their reach. Building on, yet distinct from, that work, the present study shifts emphasis from strategic tools to the people who wield them, probing how facets of strategic leadership such as setting direction, thinking strategically, managing change, nurturing talent, and leveraging core strengths shape insurance penetration.

The study by Mose Stellah (2022) examined how micro-insurance is being used a strategy to enhance insurance penetration in Kenya. The research adopted cross sectional descriptive survey as a research design. Data was collected by use of semi-structured questionnaires that were emailed to operation managers of 14 insurance companies that deal with micrinsurance in Kenya. The collected information was analysed via descriptive statistics and content analysis, where use of percentages, mean and standard deviation was applied. The data was tabulated and classified in order to achieve deductions and inferences. Some of the micro-insurance strategies that were used to enhance its penetration by the insurance companies in this study included financial literacy education, use of technology, improved customer service, innovation and product differentiation and availing affordable and flexible premium payment modes. The study established that with proper implementation of micro-insurance strategies, this class of insurance played an important

role in enhancing the penetration of insurance. The study's recommendation is that insurance companies should form more partnerships in order to onboard affordable channels of micro-insurance distribution that will lead to enhanced micro-insurance consumption. The policy makers should also be more supportive of micro-insurance by putting in place policies that encourage the invention of innovative micro-insurance products.

The study by Kenduiywa Chebet (2022) set out to examine Heritage Insurance's competitive strategies and its perceived influence on the performance of the company. The research was anchored on two key theories, Industrial Organization Economics theory and the Dynamic Capabilities theory. Information was gathered through conducting interviews based on the interview guide that had been developed. Primary data was collected, and which was supplemented by secondary data which included the strategic plan, company minutes and relevant published magazines and newsletters published by the company. Content analysis was used to analyse the qualitative data that had been gathered. According to the findings, the company employs a number of different competitive strategies in order to maintain an edge over its rivals. Product differentiation, cost leadership, product development, market penetration, and technology are all used as competitive tactics. The study findings suggest that Heritage Insurance Company has enormous opportunities they can seize with its present capabilities and plans. Hence, in order to expand the business and be the pioneer of the market, it has to devote more resources and capital funds. According to the results, leading businesses understand the need of adopting competitive tactics to maintain their position in the market. Companies that successfully develop and execute competitive strategies have an edge in the market and are better equipped to hold on to their current clientele. The study recommends that the company to adopt innovative technologies that will enable it to exploit new markets in the fiercely competitive insurance sector environment.

While these studies offer valuable insights, they have not comprehensively explored the relationship between strategic leadership and insurance penetration in the Kenyan context. This study aims to fill this gap by examining the specific impact of strategic leadership components, such as strategic direction, strategic thinking, leading change, developing human capital, and exploiting core competencies, on insurance penetration in Kenya.

2.2.2 Strategic Leadership, Digital Transformation and Insurance Penetration

According to Joan, Àngels, and Joaquín (2024), "the study investigated the consequences of Digital transformation (DT) and firm performance in innovative Small and Medium-sized Enterprises (SMEs): The mediating role of business model innovation". "SMEs represent a heterogeneous kind of company in terms of capabilities. By focusing on their innovative character as a boundary condition, we increase our understanding of this relationship". "We further researched on the mediating role of business model innovation (BMI) in the relationship between DT and performance" (Joan, Àngels, & Joaquín, 2024). A sample of 434 innovative Spanish SMEs is used to test the research model through Partial Least Squares Structural Equation Modelling (PLS-SEM). We find that business model innovation (BMI) partially mediates the positive relationship between DT and performance. This finding extends our understanding of BMI as an alignment tool and a blueprint for innovative SMEs channeling their investments in DT towards the improvement of performance. Finally, we put forward managerial implications and propose future avenues of research. This study will assess the effect of strategic leadership with digital transformation as the mediator on insurance penetration in Kenya.

The study by Khin and Ho (2018) explored how digital orientation and competence affect digital innovation and how digital innovation mediates the relationship between insurance penetration and digital orientation and capability. The research investigated a "conceptual framework utilizing survey data from 105 Malaysian small to medium-sized IT enterprises using structural equation model (SEM) analysis from partial least square (PLS)" (Khin & Ho, 2018). Results demonstrated that digital orientation and capacity positively affect digital innovation and mediate their influence on financial and non-financial success. While Khin and Ho (2018) laid groundwork for understanding digital drivers in tech firms, their model is ill-suited for explaining insurance penetration in a developing economy like Kenya. The current study addresses these discrepancies by recontextualizing the framework, refining constructs, elevating the outcome to a macro level, and integrating institutional and diffusion theories. This not only enhances scholarly rigor but also ensures practical relevance for accelerating financial inclusion through digitally enabled leadership

in Kenya's insurance sector. The present research will examine how digital transformation mediates strategic leadership and insurance penetration in Kenya.

A study by Niraula, and Kautish in (2019) explored the digitization status of insurance industry of Nepal along with the obstacles faced by them to go digital. This research was carried out in the form of questionnaires. Two set of questionnaires were administrated; one prepared for the customers of insurance companies to obtain the current digital adoption status of the Nepalese insurance industry and next for employees of insurance companies of Nepal to obtain the obstacles for insurance companies on going digital. The analysis of the responses from insurance customers shows that the implementation of ICT on the insurance sphere of Nepal is below the average, the facilities like SMS notification for premium transactions, policy and claim information, online premium payment and claim intimation were found to be implemented just above the average but the implementation of facilities like online policy buying, viewing policy/claim information, claim payments directly to the bank account of the claimant which are basic insurance activities were found below the average. While, about 82% of the respondents from group of insurance customer had shown willingness on using digital platform to buy policies. This shows that insurance companies of Nepal still had to do lot on digitization to stand at the level of customer's expectation. Further, the responses of insurance employee shows the obstacles for insurance companies of Nepal to go digital is high. Marking for all the examined obstacles were found above the average marking. The employees had marked inappropriate regulation as the highest obstacle followed by rigid organization chart, security reservation and product complexity to offer online whereas customer intention to use online platform as lowest degree, though above the average. This suggest that the role of regulatory body has a greatest impact on Nepalese insurance companies to go digital. From the analysis of the result we could suggest that the insurance regulatory body of Nepal should facilitates the digital transformation in insurance companies and also Nepalese insurance companies should adopt appropriate digital medium to interact with its customers, to streamline the large customer base willing to get insurance services online. This could result on extended penetration of insurance industry and could have progressive impact on national economy in long run. The current study will examine the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya.

A study conducted by Mahmoud, Mohamed and Aiman (2024), investigated the effect of digital transformation on employees' performance with Mediation Role of technological infrastructure in the Egyptian oil and gas sector. The objectives of this research are: to investigate the relationship between digital transformation and employees' performance, to test the relationship between digital transformation and technological infrastructure, to investigate the relationship between technological infrastructure and employees' performance, and to examine the mediation role of technological infrastructure between digital transformation and employees' performance. The methodology used is focused on quantitative analysis utilizing 401 online survey tools to collect the necessary data and AMOS software for structural equation model analyses (SEM). The study's findings revealed that: all the hypotheses are supported. Finally, the study found that there is a partial mediation effect of the technological infrastructure between digital transformation and employees' performance in Egyptian oil and gas sector. Contextually the current study will be based in Kenya Insurance sector. The conceptually variables are the digital transformation as the mediator while strategic leadership and insurance penetration as independent and dependent variable respectively

The study by Iqbal et al., (2018) examined the mediating role of intellectual capital (IC) and innovation in the relationship between knowledge management (KM) processes and performance of universities. "Using a sample of 217 academic and administrative personnel from research universities of Pakistan, the hypothesized relationships were tested through partial least squares structural equation modeling technique" (Iqbal et al., 2018). "The results also indicate that knowledge management processes influence organizational performance (OP) directly and indirectly through innovation and IC". "Findings of this study reinforce the corporate experience of knowledge management and suggest how administrators of research universities and higher educational institutions can promote innovation and IC, which in turn enhance OP". Despite the augmented importance of knowledge management in higher education institutions or research universities, there is a dearth of studies that investigate the interplay of KM, innovation, intellectual capital and organizational performance. This research will evaluate how digital transformation mediates strategic leadership and insurance penetration in Kenya.

The research by Musaigwa and Mutula (2022) offered a deep dive into the practical realities of digital transformation through a qualitative case study of a major insurance firm in South Africa. Their goal was to explore how the company was strategically navigating the shift to digital and what this meant for its business model. By interviewing key managers and department heads selected for their relevant expertise, the researchers uncovered a significant strategic gap. The findings indicated a clear awareness at the executive level about the necessity of digital transformation, and some initial steps had been taken. However, these actions were deemed inadequate to address the core issue of sluggish adoption within the organization. The study's central conclusion was a call for more decisive action: a recommendation that the firm must move beyond tentative steps and fully embrace digital transformation, potentially requiring a radical overhaul of its business strategy. This insight into the challenges of implementation provides a crucial context for the current study, which will investigate whether digital transformation can act as an effective bridge, or mediator, between strategic leadership and the goal of increased insurance penetration in Kenya.

The research by Mwangi, Musembi, Kamau, and Obunga (2024) examined the effect of digital transformation strategy on the performance of e-claims systems at the National Health Insurance Fund in Kenya. This research aimed to investigate how digital technology adoption, adherence to data protection standards, user interface quality, and compatibility with external platforms influence e-claims system effectiveness. The theoretical foundation drew from Innovation Diffusion Theory, Resource-Based Theory, and the Digital Business Transformation Framework. Using a case study approach, researchers surveyed 166 staff members at the National Health Insurance Fund's main office. Sample calculations through Yamane's method yielded 95 participants, selected via stratified random techniques. Statistical analysis employed SPSS 27.0, incorporating initial screening, descriptive statistics, and hypothesis testing. Central tendency indicators (averages, middle values, and most frequent responses) characterized the dataset, while spread measurements (range and standard deviation) captured variation. Relationships were tested through Pearson correlations and multiple regression techniques, with findings displayed in tabular and graphical formats. The empirical findings demonstrated that digital technology incorporation exhibited a statistically significant relationship with E-Claims System effectiveness ($\beta = .646$, $p < .001$). Similarly, adherence to information security protocols showed a significant positive

association with system performance ($\beta = .528$, $p < .001$). The analysis revealed that interface design quality yielded significant positive outcomes for system functionality ($\beta = .618$, $p < .001$), while cross-platform compatibility demonstrated the strongest positive correlation with performance metrics ($\beta = .703$, $p < .001$). These findings underscore the critical importance of technological integration, security protocol adherence, interface optimization, and system interoperability in optimizing E-Claims platform functionality within NHIF operations. Consequently, organizational priorities should encompass comprehensive digital adoption, rigorous security compliance, enhanced user interface design, and seamless external system connectivity for E-Claims infrastructure at NHIF. The present investigation will explore how digital transformation mediates the strategic leadership-insurance penetration nexus in the Kenyan context, employing technology-enabled business processes, integrated digital infrastructure, advanced data analytics capabilities, and cybersecurity investments as key transformation indicators.

The stud by Joseph and Francis (2015) examined how organizational culture and market orientation affect Kenyan microfinance institutions. The research included Kenyan AMFI members. The methodological approach employed a cross-sectional descriptive design. Data collection utilized a standardized survey instrument to gather first-hand information from respondents. Regression analysis served as the statistical technique for hypothesis testing. The empirical findings demonstrated a positive relationship between cultural dimensions and organizational outcomes. Furthermore, the analysis confirmed that market orientation functions as a partial mediator in the relationship linking organizational culture with performance metrics. The current research targets Kenya's comprehensive insurance ecosystem, sampling 45 licensed insurers (life, general, and reinsurance) via stratified random selection. This broader institutional canvas captures heterogeneity and sector-specific penetration barriers, enabling generalizable insights beyond MFIs. By focusing on insurance as the outcome, the study aligns with national priorities like the National Insurance Penetration Strategy (2020-2030), addressing the MFI-insurance disconnect. The present research will examine how digital transformation mediates strategic leadership and insurance penetration in Kenya.

2.2.3 Strategic Leadership, Government Regulations and Insurance Penetration

A 2024 study by Wasim, Ahmad, Mohamad, and Akmalia provides critical insights into the conditional role of regulatory quality in the finance-growth nexus. Their analysis, which applied Panel Corrected Standard Error estimation and robustness checks via the Generalized Method of Moments, demonstrates that the strength of a country's institutions significantly shapes how financial development impacts both economic growth and stability. For developed nations, high-quality regulation acts as a positive moderator, amplifying the growth benefits derived from banking-sector development. This finding implies that policymakers should prioritize maintaining and refining robust regulatory environments. However, in developing economies, the study found no statistically significant moderating effect of regulation on growth, indicating that their institutional frameworks may not yet be mature enough to channel financial development productively. Consequently, these nations are advised to pursue a gradual, strategic enhancement of regulatory quality to avoid stifling financial progress. Notably, regulatory quality was shown to be effective in mitigating economic volatility linked to banking development across all country types. Inspired by this research, the present study will explore a similar moderating dynamic, specifically investigating how government regulations influence the relationship between strategic leadership and insurance penetration in Kenya.

A study by Rupilu and Tanan (2023) evaluated the determinants of corporate social responsibility (CSR) disclosure in state-owned enterprises using government regulation and organizational slack as moderators. Hypotheses and statistical analysis were used in quantitative research. The study only included manufacturing enterprises in the mining, energy, and oil & gas sectors of Indonesia Stock Exchange-listed State-Owned Enterprises. 40 firms were observed from 2018 to 2022. The investigation started with descriptive statistics, classical assumption tests, and hypothesis testing. This research tested hypotheses using multiple regression analysis with moderating factors. The study found that Green Accounting, Good Corporate Governance, Financial Performance, and leverage variables affected Corporate Social Responsibility, while government regulation and organizational slack did not moderate the relationship. The present research will examine how government regulations moderate strategic leadership and insurance penetration in Kenya.

A 2021 study by Mbole, Arasa and Mang'unyi (2021) investigated how public regulations shape the link between corporate social responsibility (CSR) initiatives and financial outcomes within Kenya's cement industry. Working from a positivist stance, the authors implemented a survey strategy that blended both primary and archival sources. Following an extensive conceptual and empirical synthesis of CSR scholarship, they drew a stratified sample of 255 respondents from a frame of 624 employees, securing an exceptionally robust return rate. The dataset was examined by means of descriptive statistics, inferential testing and structural-equation modelling (SEM). Findings revealed that government directives impose a pronounced, unfavourable moderating effect on the CSR–financial-performance relationship ($\beta = -0.891$). The study therefore concluded that stringent policy environments can erode the economic pay-offs of CSR activities and urged firms to develop a nuanced understanding of, and adaptive responses to, relevant regulations. Building on this line of inquiry, the present project will assess whether government rules similarly moderate the association between strategic leadership and the diffusion of insurance products in Kenya.

A 2024 study by Joyce and Rael investigated "the impact of government regulations on the performance of insurance companies in Uasin Gishu County, Kenya". Anchored in the Public Interest Theory, the research utilized a mixed-methods approach, combining descriptive and correlational designs. Data was collected from 98 top managers of 49 registered firms using questionnaires, interviews, and observations. The analysis revealed a significant and strong positive correlation (.946) between government regulations and firm performance. The researchers concluded that specific regulatory factors, including compliance requirements, tax relief, and government policies, were key influencers. Consequently, the study recommends that the government introduce further tax incentives to encourage wider insurance adoption. Conceptually, the current study extends this inquiry by assessing the moderating role of government regulations on the strategic leadership-insurance penetration link, while contextually expanding the scope to all insurance companies in Kenya.

A 2019 study by Langat and colleagues explored the conditional role of employee work value congruence "in the relationship between transformational leadership styles and employee job

performance in the Kenyan insurance industry". The research, operating from a positivist paradigm and using a correlation design, collected data from 211 lower-level managers. Hypothesis testing via analysis of variance led to two key conclusions: firstly, that the transformational leadership factor of idealized influence significantly predicted employee job performance, and secondly, that a alignment between employee and organizational values significantly strengthened this relationship. The study therefore recommends that leaders align their actions with corporate values and foster this congruence among their teams to maximize transformational leadership outcomes. Conceptually aligned with this approach, the present study will examine government regulations as a moderating variable between strategic leadership and insurance penetration at a national level in Kenya.

Research by Gichuhi (2023) explored the moderating influence of organizational environment on the relationship between shared leadership and organizational resilience in Kenya's telecommunications industry. Methodologically grounded in Managerial Grid, Transformational Leadership, and Socio-Exchange theories, the study utilized a quantitative cross-sectional design. Stratified sampling identified 384 senior and support professionals from 19 leading telecommunication providers (target population: 9,847). Data were collected through validated surveys and analyzed using SPSS 27, incorporating descriptive statistics, correlation analysis, and multiple/simple linear regression. Results demonstrated that shared leadership substantially predicted organizational resilience, and this effect was significantly moderated by organizational environment. Conceptually extending this framework, the present study will assess how government regulations condition the strategic leadership-insurance penetration nexus in Kenya.

A 2023 study by Kayago, Ondari, Omari, and Akuku examined the contingent role of innovation in shaping the impact of transformational leadership on organizational performance within SEKEB county. The study's theoretical foundation combined Transformational Leadership Theory with principles from stakeholder, strategic leadership, and resource-based perspectives. Methodologically, the research adopted a pragmatic, descriptive approach, gathering data from 289 employees via stratified random sampling. Through analysis using descriptive statistics, Pearson correlations, and hierarchical regression, the study concluded that innovation significantly

moderates the relationship between the 'individualized consideration' dimension of transformational leadership and organizational effectiveness. Extending this line of inquiry into moderation, the present research will assess how government regulations and digital transformation function as moderating variables on the relationship between strategic leadership and insurance penetration in Kenya.

2.2.4 Strategic Leadership, Digital Transformation, Government Regulations and Insurance Penetration

The 2016 research conducted by Van Esch, Wei, and Chiang empirically investigated “the complex interplay between high-performance human resource systems and organizational performance”. “Utilizing a dataset of 189 firms located in mainland China, the study first confirmed a significant positive direct association between the implementation of advanced HR practices and overall firm performance”. A more nuanced contribution was the identification of employee competencies as a partial mediator, indicating that the benefits of HR practices are transmitted through an enhanced workforce skill base. Furthermore, the analysis established that the organizational climate for creativity acts as a significant moderator, meaning the strength of the HR-performance relationship is contingent upon the degree to which a firm fosters creativity. This application of a moderated mediation model provides a robust methodological and conceptual foundation for the present research, which seeks to examine a similar conditional pathway by assessing how government regulations and digital transformation jointly moderate the relationship between strategic leadership and insurance penetration in Kenya.

A 2022 study by Zhou, Zhou, Zhang, and Miao conducted an empirical investigation into the intricate dynamics between executive overconfidence, digital transformation, and environmental innovation by proposing a moderated mediation model. Their analysis was based on a comprehensive panel dataset from Chinese publicly listed enterprises covering the period from 2007 to 2019. The primary findings revealed a nuanced direct effect: executive overconfidence was significantly associated with increased environmental technology innovation but showed no significant relationship with environmental management innovation. More critically, the study established a significant mediating pathway, demonstrating that executive overconfidence fosters

digital transformation, which in turn acts as a catalyst for both forms of environmental innovation. Furthermore, several conditional effects were identified. The link between overconfidence and digital transformation was amplified by both industry competition and economic policy uncertainty. The impact of digital transformation on environmental technology innovation was strengthened by larger firm asset size and robust internal control, while its impact on environmental management innovation was weakened by strong internal control. The authors conclude that their work repositions executive overconfidence as a potential driver of positive organizational outcomes, offering valuable insights for firms leveraging digitalization for environmental objectives. This sophisticated application of a moderated mediation framework provides a robust methodological and conceptual precedent for the current research, which seeks to examine the moderated mediation effect of government regulations and digital transformation on the strategic leadership-insurance penetration relationship in Kenya.

In their 2021 research, Owuori, Ngala, and Obwatho explored a complex question relevant to public utilities: Does good governance make technology more effective at translating management strategies into sustainable outcomes? Their study of Kenyan water companies proposed a model where technological capability acts as the bridge (mediator) between management practices and service sustainability. They further hypothesized that the strength of this bridge is contingent upon the application of sound governance principles (the moderator). Grounded in a positivist framework and using a cross-sectional survey, their analysis provided compelling evidence for this intricate chain of effects. The findings revealed that the positive impact of management practices on sustainability is indeed carried through technological capability, but this pathway is significantly amplified when strong governance is in place. The statistical analysis confirmed that the combined effect of governance and technology was powerful enough to reject the notion that governance had no influence. The study concluded that governance acts as a critical buffer, enhancing the ability of technological investments to foster long-term service viability. This insightful application of a moderated mediation model, which untangles direct, indirect, and conditional effects, offers a powerful analytical blueprint for the current research, which will similarly investigate a complex conditional pathway involving strategic leadership, government regulations, digital transformation, and insurance penetration in Kenya.

In their 2022 research, Joseph, Timothy, Washington, and James explored a complex question relevant to state-owned corporations: In what manner does the broader contextual milieu influence the efficacy of executive guidance, realized via the execution of strategic initiatives, in enhancing institutional outcomes? The investigation centered on state-owned entities within Kenya's agriculture, animal husbandry, and marine sectors (ALF parastatals), advancing a conceptual framework in which the operationalization of strategies serves as an intermediary mechanism linking executive direction to institutional efficacy, while extraneous contextual elements function as a modulating variable that alters the robustness of this linkage. Using a census survey of senior leaders from all 45 parastatals, their analysis provided compelling evidence for this intricate chain of effects. They found that while strategic leadership directly impacts performance, this relationship is significantly shaped by the external context. Furthermore, the indirect pathway—where leadership enables better strategy implementation, which in turn boosts performance—is also contingent on the external environment. The statistical significance of this moderated mediation was confirmed through bootstrapping, and the model was able to explain nearly 60% of the variation in performance. The authors concluded that for parastatals to significantly improve, leaders must adopt a balanced approach that integrates strategic leadership, effective strategy implementation, and a keen awareness of the external environment. This insightful application of a moderated mediation model, which untangles direct, indirect, and conditional effects, offers a powerful analytical blueprint for the current research, which will similarly investigate a complex conditional pathway involving strategic leadership, government regulations, digital transformation, and insurance penetration in Kenya.

Table 1: Summary of Research Gaps

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
Musaigwa & Mutula (2022)	Investigating the practical implementation and strategic response to digital transformation within a	Employed a qualitative case study methodology, utilizing purposive sampling to select key informants.	Discovered a disconnect between strategic awareness and practical execution; while the firm recognized the	Limited to a single-case context in South Africa, reducing generalizability. Conceptually focused on the	Addresses the contextual gap by shifting to the Kenyan insurance industry and the conceptual gap by testing digital

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
	single South African insurance company.	Data was gathered through semi-structured, in-depth interviews.	importance of digital transformation, its implementation efforts were insufficient to overcome slow adoption rates.	*presence* of digital strategy, not its role as a mediating mechanism in a performance model.	transformation as a *mediator* between strategic leadership and the specific outcome of insurance penetration.
Mwangi et al. (2024)	Assessing the impact of a digital transformation strategy on the operational effectiveness of e-claims systems at Kenya's National Health Insurance Fund (NHIF).	Utilized a case study design targeting 166 NHIF headquarters employees. Stratified random sampling was employed to select the final sample.	Concluded that the integration of digital technologies, robust data security, positive user experience, and system interoperability are integral to enhancing e-claims system performance.	Contextually confined to a single public entity (NHIF). Conceptually, the indicators of digital transformation were specific to system performance (e.g., user experience), not broader organizational capabilities like business process redesign or analytics.	This study broadens the scope to the entire Kenyan insurance sector and uses a more comprehensive set of digital transformation indicators (e.g., business processes, big data analytics) to assess its mediating role in achieving market penetration.
Wang & Chen (2020)	Investigating the influence of CEO personality traits on both operational and financial firm performance.	Applied an innovative social media text mining approach to empirically test and extend the Upper Echelons Theory.	Found that CEO agreeableness and emotional stability enhanced cost efficiency, while conscientiousness was linked to a decrease. Extroversion positively impacted	A knowledge void existed in assessing specific, actionable dimensions of strategic leadership (e.g., strategic direction, leading change) and their direct effect on a key	Shifts the focus from innate personality traits to developable strategic leadership competencies and examines their direct relationship with insurance penetration in

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
			overall performance, but openness to experience was associated with lower profitability.	market outcome like insurance penetration.	Kenya using a quantitative survey.
Mahmoud et al. (2024)	Analyzing the effect of digital transformation on employee performance, with technological infrastructure as a mediator, within Egypt's oil and gas sector.	Employed quantitative analysis, collecting data from 401 employees via an online survey and using AMOS software for Structural Equation Modeling (SEM).	Found a partial mediation effect, where technological infrastructure strengthens the positive relationship between digital transformation and employee performance.	Contextually based on the Egyptian oil and gas industry. Conceptually focused on employee performance as the outcome, not a market-level metric like insurance penetration.	Addresses the contextual gap by focusing on Kenya's insurance sector and the conceptual gap by examining insurance penetration (a market outcome) as the dependent variable, with strategic leadership as the antecedent.
Langat, Linge, & Sikalieh (2019)	Investigating the impact of the "idealized influence" aspect of leadership on workforce productivity within the Kenyan insurance sector.	Employed a positivist paradigm alongside a correlational analytical approach, involving questionnaires administered to 211 junior executives across 52 insurance firms.	Determined that alignment between organizational values and employee priorities substantially moderates the association between transformational leadership practices and workforce productivity.	Narrowly emphasized one facet of leadership (idealized influence) and individual employee outcomes, overlooking the wider ramifications of executive leadership on market expansion.	The present research evaluates the moderating influence of an alternative factor (regulatory policies from the government) on the linkage between holistic executive leadership and sector-wide insurance

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
					market expansion.
Mui et al. (2018)	Investigating how strategic leadership affects the performance of Malaysian SMEs.	Used structured questionnaires (5-point Likert scale) with convenience sampling of 100 directors. Data was examined using AMOS software.	Found that leadership vision, strategic direction, and core competencies did not improve performance, nor did people development. However, innovation alone was found to boost company performance.	The context was public SMEs in Malaysia, and it did not explore the conceptual aspects of digital transformation or the moderating role of government regulations.	This study incorporates the effects of strategic leadership along with digital transformation and government regulations to explain insurance penetration, addressing the conceptual and contextual limitations of the prior work.
Joan, Àngels, & Joaquín (2024)	Analyzing the consequences of digital transformation on firm performance in innovative Spanish SMEs, with business model innovation as a mediator.	Tested a research model using Partial Least Squares Structural Equation Modelling (PLS-SEM) on a sample of 434 innovative Spanish SMEs.	Revealed that business model innovation partially mediates the positive relationship between digital transformation and firm performance.	Contextually based on Spanish SMEs. Conceptually, the mediator was business model innovation, and the focus was on general firm performance, not a specific outcome like insurance penetration.	This study will assess the effect of strategic leadership with digital transformation as the mediator on the specific outcome of insurance penetration within the Kenyan context.
Joyce & Rael (2024)	Assessing the influence of government regulation on the	Employed descriptive and correlational research	Findings indicated that government regulations have a	Conceptually assessed only a direct relationship between two	Conceptually assesses the moderating effect of government

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
	performance of insurance firms in Uasin Gishu County, Kenya.	designs, analyzing both quantitative and qualitative data.	significant influence on the performance of insurance firms in the specified county.	variables (regulation and performance). Contextually limited to a single county (Uasin Gishu), not the entire Kenyan market.	regulations on the relationship between strategic leadership and insurance penetration. Contextually expands the scope to all insurance companies in Kenya.
Nwankpa & Roumani (2016)	Investigating the mediating role of digital transformation in the relationship between information technology (IT) capability and firm performance.	Tested a model using a survey of 167 Chief Information Officers (CIOs) from firms across the United States, employing Sobel test and regression models.	Revealed that digital transformation plays a nuanced mediating role, channeling the influence of IT capability to enhance firm performance.	Contextually based on a broad sample of U.S. firms and data collected only from CIOs, which may not capture the full strategic leadership perspective.	This study will be focused on the insurance industry in Kenya and will examine the mediating effect of digital transformation in the relationship between strategic leadership and insurance penetration.
Wasim et al. (2024)	The moderating effect of regulatory quality on the relationship between financial development and economic growth/volatility for	Utilized Panel Corrected Standard Error estimation, supplemented by a robustness check using the Generalized	In developed countries, regulatory quality positively moderates the relationship between financial development and economic growth,	Conceptually examined financial development and economic growth. Contextually focused on a macroeconomic level across many countries, not a	This study assesses the moderating effect of government regulations at the industry level in Kenya, examining its influence on the

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
	developed and developing countries.	Method of Moments.	highlighting the need for high-quality institutional environments.	specific industry like insurance.	relationship between strategic leadership and insurance penetration.
Mbole, Arasa, & Mang'unyi (2021)	Explored the contingent influence of governmental policy frameworks on the linkage between Corporate Social Responsibility (CSR) disclosures and financial performance outcomes within Kenya's cement manufacturing sector.	Utilized a positivist research paradigm with a cross-sectional survey methodology; integrated both primary data (questionnaires) and secondary data (annual reports) for comprehensive analysis.	Found that the presence of stringent government policies weakens the positive association between CSR engagement and financial performance, revealing a *negative moderating role* of regulatory frameworks in this context.	The study is limited in *contextual generalizability*, being confined to the cement industry. Furthermore, its *theoretical scope* centers on CSR and financial metrics, offering limited insight into the interplay between strategic leadership and market-level outcomes in service-based sectors.	Shifts the contextual lens to Kenya's insurance domain. Conceptually, it investigates the moderating influence of regulatory mandates on the interplay between strategic executive direction and insurance market ingress.
Musau et al. (2018)	The effect of financial inclusion on credit risk, with the mediating effect of bank competitiveness, among commercial banks in Kenya.	Used secondary data collected from Central Bank of Kenya annual reports for all 43 commercial	Found that bank competitiveness partially mediates the relationship between financial inclusion and credit risk.	The study was based on commercial banks, and the variables were financial inclusion and credit risk, not strategic leadership and insurance penetration.	This study will focus on insurance penetration in Kenya, with strategic leadership as the antecedent and digital transformation as the

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
		banks in the country.			mediating variable.
Gichuhi (2023)	Assessing the role of collaborative leadership in fostering institutional adaptability, with internal organizational atmosphere serving as a modulating factor, within Kenya's communications industry.	Applied a quantitative, cross-sectional descriptive survey framework, encompassing a target group of 9,847 staff members across 19 prominent telecommunications organizations.	The internal organizational atmosphere demonstrated a pronounced modulating impact on the linkage between collaborative leadership and institutional adaptability.	Circumscribed to the telecommunications domain. The key constructs encompassed collaborative leadership, adaptability, and organizational atmosphere.	The ongoing investigation directs attention to Kenya's insurance sector, analyzing executive leadership and the broadening of insurance coverage, while incorporating official regulatory measures and technological advancement as modulating elements.
Joseph et al. (2022)	Investigated the conditional indirect effect of the external environment (moderator) and strategy implementation (mediator) on the relationship between strategic leadership	Employed a cross-sectional, census-based survey methodology, targeting the entire population of 45 Chief Executive Officers (CEOs) and 135 senior-level managers	Empirical analysis confirmed that the interplay between strategic leadership and organizational performance is both directly significant and indirectly facilitated through strategy implementatio	The study's findings are contextually bounded by the ALF sector, which limits their generalizability to other industries. Furthermore, the model is theoretically restricted to the external environment as	This research shifts the empirical setting to Kenya's insurance sector, focusing on insurance market penetration as the performance outcome. The conceptual model

Authors	Areas of focus	Methodology	Findings	Knowledge Gaps	Focus of the current study
	and organizational performance within Kenya's Agricultural, Livestock, and Fisheries (ALF) public sector organizations.	across all 45 ALF parastatals.	n, with the strength of this mediation being contingent upon the nature of the external environment.	the moderating force and strategy implementation as the mediating mechanism, leaving other potential moderators (e.g., regulatory frameworks) and mediators (e.g., technological integration) unexplored.	incorporates government regulations as a moderating variable and digital transformation initiatives as a mediating pathway between strategic leadership and market penetration.
Zhou et al. (2022)	The impacts of executive overconfidence on environmental innovation, with digital transformation as a mediator and internal control as a moderator.	Employed an empirical panel-data design using a longitudinal dataset of publicly traded Chinese companies spanning 2007–2019	Reported asymmetric moderation by internal control: stronger internal controls amplified the effect of digital transformation on environmental technological innovation, but dampened its effect on environmental management innovation.	Contextually based on Chinese publicly listed enterprises. Conceptually, the independent variable was executive overconfidence, not strategic leadership.	Contextually shifts to Kenya's insurance companies. Conceptually examines strategic leadership as the antecedent and tests a moderated mediation model with government regulations and digital transformation.

2.3 Research Null Hypotheses

This study posits that strategic leadership has a significant direct effect on insurance penetration. It is further hypothesized that this relationship is transmitted through the mediating mechanism of digital transformation. Moreover, the influence of strategic leadership on insurance penetration is proposed to be conditional upon the moderating role of government regulations. Consequently, the study tested for a significant moderated mediation, suggesting that the indirect effect of strategic leadership on insurance penetration, as carried out by digital transformation, is itself dependent on the regulatory environment. The null hypotheses are presented below.

HO_1: There is no significant relationship between strategic leadership and insurance penetration.

HO_2: There is no significant mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration.

HO_3: There is no significant moderating effect of government regulations on the relationship between strategic leadership and insurance penetration.

HO_4: There is no significant moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration.

2.4 Conceptual Framework

The conceptual model in Figure 2 forms a foundation for addressing the research gaps that were made apparent from the interrogation of existing literature on the core conceptual.

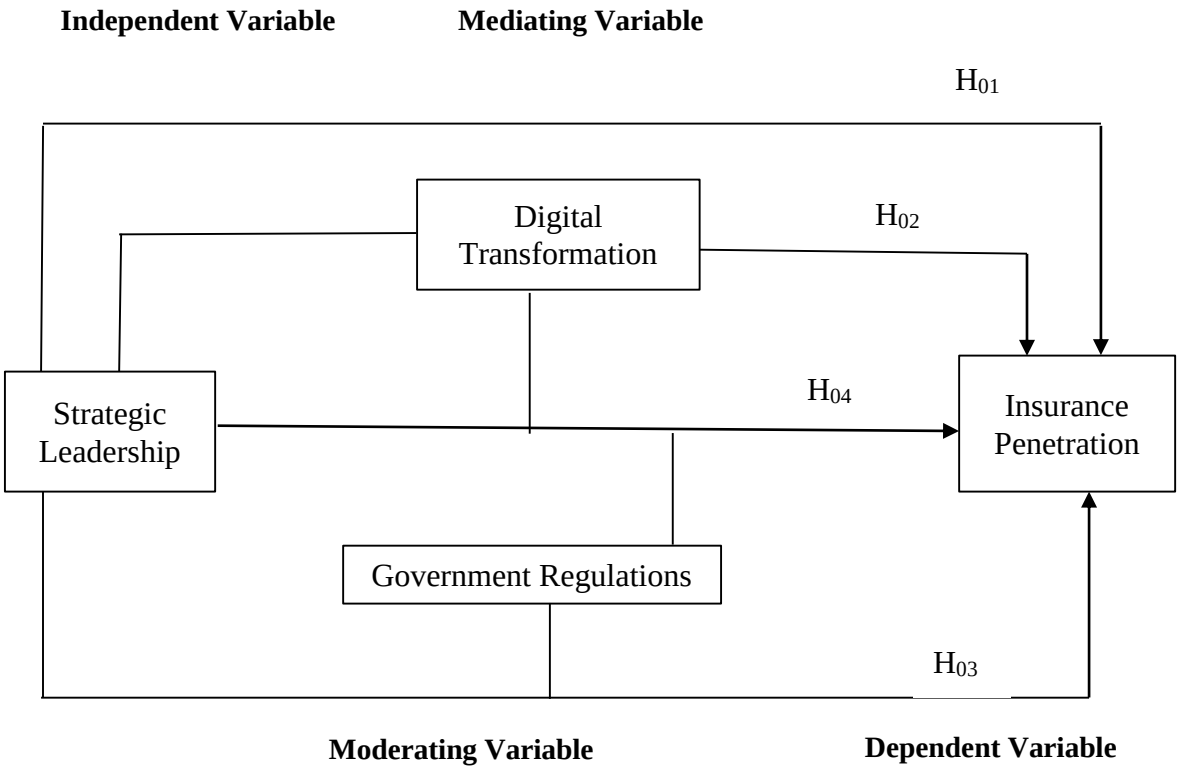

Figure 1: Conceptual Model

Arising from the above knowledge gaps, the research on strategic leadership, digital transformation, government regulations and insurance penetration will discuss several variables as presented on the conceptual model figure 1.

2.5 Measurement and Operationalization of Study Variables

Table 2: Operationalization of Study Variables

Variables	Indicators	Measurement Scale	Questionnaire (Section)	Tools of Analysis
Strategic Leadership	• Strategic direction, • Strategic thinking, • Leading change, • Developing human capital, • Exploiting of core competencies	5 Point Likert type Ordinal Scale	Section-B (Question 4)	Frequencies, percentages, Correlation and Multiple regression Analysis

Variables	Indicators	Measurement Scale	Questionnaire (Section)	Tools of Analysis
Digital Transformation	• Business processes built on technologies • Integrated digital technologies • Big Data analytics • Cyber security Investment	5 Point Likert type Ordinal Scale	Section-C (Question 5)	Frequencies, percentages, Correlation and Multiple regression Analysis
Government Regulations	• Clarity and consistency of the regulatory framework • Regulatory Effectiveness in oversight • Collaboration in policy formulation • Regulation Adequacy for innovation and risk management	5 Point Likert type Ordinal Scale	Section-D (Question 6)	Frequencies, percentages, Correlation and Multiple regression Analysis
Insurance Penetration	• Insurance penetration rate, • Insurance coverage rates, • Insurance density, • Distribution Channels • Claims settlement ratio, • Insurance awareness levels	5 Point Likert type Ordinal Scale	Section-E (Question7)	Frequencies, percentages, Correlation and Multiple regression Analysis

As detailed in Table 2, the study's variables will be operationalized using a 5-point Likert scale questionnaire. Strategic leadership, digital transformation, and government regulations will be assessed directly through this instrument. The dependent variable, insurance penetration, will also be measured via the questionnaire, focusing on perceived indicators like penetration rate, policies per capita, insurance density, and distribution channel effectiveness. The data analysis employed a dual-phase methodology, integrating descriptive and inferential statistical techniques. Initially,

descriptive statistics—including frequencies and percentages was utilized to summarize the central tendencies and distributions of the variables under investigation. Subsequently, inferential techniques, specifically correlation and multiple regression analyses, was applied to elucidate the interrelationships among the variables and to quantify their collective impact on insurance penetration within the Kenyan market. This methodological framework is designed to provide a robust quantitative foundation for understanding the complex dynamics influencing insurance market dynamics in Kenya.

2.6 Chapter Summary

This chapter elucidated the foundational concepts and theoretical underpinnings relevant to the study's independent and dependent variables. The theoretical evaluation encompassed strategic leadership theory, the resource-based view, new public management (NPM), and the diffusion of innovations (DOI), with each theory critically assessed for its applicability to the research constructs. Building on this foundation, the chapter proceeded to conceptualize the variables by analyzing their hypothesized interrelationships. Furthermore, a comprehensive empirical analysis of prior scholarly work was conducted, spanning local, regional, and international contexts. This review involved a critical evaluation of existing studies based on their titles, scopes, conceptual frameworks, contextual settings, and methodological approaches. This rigorous assessment was instrumental in identifying specific research gaps that the current study aims to address.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter delineates the methodological underpinnings of the inquiry, methodically interrogating each element of the empirical protocol. It encompasses the bedrock epistemological orientation, the overarching investigative paradigm, the demarcation of the relevant cohort, and the selection mechanism. In conclusion, it specifies the instruments for empirical data procurement and the ensuing analytical procedures.

3.1 Research Philosophy

Galliers (2016) describes research philosophy as the underlying belief concerning the methods used to collect, analyze, and apply data related to a specific phenomenon. He further distinguishes between epistemology, which pertains to what is considered true, and doxology, which relates to what is believed to be true, highlighting their roles in shaping research approaches. Galliers (2016) also asserts that the aim of science in research is to transform beliefs into established knowledge, a process referred to as moving from doxa to episteme. Within the Western scientific tradition, two primary research philosophies have emerged: positivism, often called scientific, and interpretivism, also known as antipositivism, as noted by Galliers (2016). Consequently, a research philosophy can be understood as a belief system regarding how data about a phenomenon is gathered, analyzed, and utilized for decision-making. Similarly, Saunders (2017) defines research philosophy as a framework of assumptions and beliefs that guide the creation and evolution of knowledge within a specific discipline. He indicates that the positivist perspective posits that objective facts provide the strongest scientific evidence, which typically leads to a preference for quantitative research methodologies.

Positivism research philosophy is the traditional and most common approach in insurance and risk management research, aligning perfectly with the quantitative, data-driven nature of the industry. It treats risk as a calculable concept, with actuarial science, probability theory, and statistical modeling inherently positivist in nature, viewing risk as an objective and measurable phenomenon. This philosophy is ideal for testing relationships and hypotheses such as whether digital

transformation leads to increased insurance penetration or the correlation between government regulations and firm performance. Positivism focuses on answering "what" and "how much" questions by quantifying phenomena. It is particularly appropriate when testing specific hypotheses, working with large datasets like industry-wide financial data, claims records, or extensive survey data, and when the goal is to build predictive models or generalize findings to a larger population (Mwangi & Wanjiru, 2021).

This study utilizes positivism by integrating established theories to formulate hypotheses, which are then tested and validated through empirical data analysis. Objectivity is maintained regarding the study components, and quantitative data analysis procedures are employed to ensure generalizability of results. The choice of positivism aligns with the study's objectives of identifying and measuring relationships between strategic leadership, digital transformation, government regulations, and insurance penetration in Kenya. Positivism's emphasis on empirical evidence and statistical analysis allows for objectivity, generalizability, establishing causality, and replicability of results. This approach aims to provide robust insights for informed decision-making within the insurance industry in Kenya.

3.2 Research Design

This study employs a cross-sectional survey design, a methodology well-suited for quantitative research seeking to establish causal relationships (Rubi & Babbie, 2011). As noted by Kumar (2014), this approach is ideal for capturing a snapshot of a phenomenon's prevalence at a specific point in time. The design is also highly efficient for gathering data from a large sample through a single, structured questionnaire, which enhances consistency and minimizes potential bias (Bhattacherjee, 2012). For this research, the cross-sectional survey will be used to simultaneously examine the prevalence and interrelationships between strategic leadership, digital transformation, government regulations, and insurance penetration within Kenya's insurance sector, thereby providing a robust foundation for analysis and subsequent recommendations.

3.3 Target Population

The target population refers to the entire group of individuals or elements that a researcher intends to study and about which they want to draw conclusions. It is the complete set of cases that meet

the criteria for inclusion in the research, serving as the focus for data collection and analysis (Kumar, 2022). “The target population for this study was the 58 registered insurance companies in Kenya as listed in Appendix III”. The study used a census study because it allowed researchers to collect data from every member of the population, ensuring complete and accurate information. While including all companies, a stratified approach will be used during data analysis, categorizing them by size based on annual gross written premiums (GWP) (IRA, 2023). This stratification enables a nuanced analysis of the relationship between variables, considering the diverse characteristics of different-sized companies.

Table 3: Target population

Stratum	Population	Percent
Large Insurance Companies (GWP > KES 10 Billion)	11	20.0
Medium Insurance Companies (GWP KES 1 Billion - KES 10 Billion)	19	34.5
Small Insurance Companies (GWP < KES 1 Billion)	25	45.5
Total	**55**	**100.0**

Source: *Insurance Regulatory Authority (IRA) Industry Report, 2023*

The target respondents for this study will be the four top-level executives and senior managers at the head offices of the selected insurance companies. These individuals are responsible for strategic decision-making, leading digital transformation initiatives, and ensuring compliance with government regulations. Therefore, their perspectives and insights are crucial for understanding the factors influencing insurance penetration in Kenya. The target respondents for this study are four top-level executives and senior managers located at the head offices of the selected insurance companies. These respondents hold responsibility for strategic decision-making, leadership of digital transformation initiatives, and oversight of compliance with government regulations.

3.4 Sample Frame and Sampling Technique

To achieve its research objectives, this study will employ a census sampling approach, which involves examining the entire population of 58 licensed insurance companies in Kenya. This methodology aligns with the definition of a sampling design as a structured plan for selecting a subset from a target population (Kabir, 2016), where in this case, the subset is the entire population. The unit of observation will be senior executives, as a sample is fundamentally a subset drawn

from a larger group (Saunders et al., 2015). Specifically, four key informants from each company—the Chief Executive Officer, Finance Manager, and ICT Manager will be targeted, resulting in a total of 232 respondents. These individuals will be selected using a purposive sampling technique (Afifah & Daud, 2018) to ensure the collection of rich, in-depth information from those with the most relevant expertise on strategic leadership, digital transformation, and government regulations.

Table 4: Sampling Frame

Respondents	Large Insurance Companies	Medium Insurance Companies	Small Insurance Companies	Total
Chief executive director	13	20	25	**58**
Finance manager	13	20	25	**58**
Risk and compliance manager	13	20	25	**58**
ICT manager.	13	20	25	**58**
Total Respondents	**52**	**80**	**100**	**232**

3.5 Data Collection Instruments and procedures

Data collection is a methodical procedure of collecting data with the purpose of generating information that may be used to validate or invalidate study conclusions, as stated by Kombo and Tromp (2013). The researcher used a closed-ended survey questionnaire as the data collecting instrument. The researcher implemented a pick-and-drop method, utilizing four trained research assistants to distribute and collect the questionnaires from respondents for completion. This choice was made due to the questionnaire's cost-effectiveness, convenience, and non-intrusive nature. The present study used a closed-ended questionnaire that is partitioned into five distinct parts. In the study, Section A included the collection of socio-demographic data from the participants. Section B was dedicated to the examination of strategic leadership used by the individuals. Section C delved into the digital transformation. Section D concentrated on the exploration of government regulations. Lastly, Section E centered on the evaluation of insurance penetration.

3.6 Pilot

Cooper and Schindler (2014) opined that the phase of data collection of the process of study process typically starts with pilot testing of the data collection tool. Before the actual study, the data collection tool was subjected to a pilot study so as to ensure it is relevant, effective, reliable and valid. According to Cooper and Schindler (2014), a pilot study is carried out in order to detect limitations in the design and instrumentation in a research as well as to provide some proxy data for evaluation and decision making. According to Fraser et al. (2018), a pilot study is closely related to and ordinarily precedes the larger study, and that a pilot study is often viewed synonymously with a feasibility study that is aimed at guiding the planning of the large-scale research. It is therefore imperative to point out that in effect, a pilot study is considered a risk mitigatiing process aimed at reducing chances of failure in a larger research project. In other words, a pilot test leads to a decision making process and therefore it serves as a small-scale research or a set of observations made so as to allow a decision to be determined on how or whether to launch a the full full-scale study (Fraser et al., 2018). Accordingly therefore, subjects to take part in a pilot test should be drawn from the target population and the protocol and procedures that are selected for data collection should be simulated. According to Kothari and Garg (2014), it is recommended that the pilot group be excluded from participation in the main research in order to mitigate potential biases in outcomes and replications.

This study will utilize 6% of the target population for the pilot study. Specifically, three licensed insurance companies will be involved, with four respondents from each company participating. Thus, the total number of participants in the pilot study will be 16. The pilot study was strategically conducted within Nairobi, as it serves as the epicenter of Kenya's insurance industry. The city hosts the corporate headquarters for the vast majority of licensed insurers, which in turn concentrates the primary target respondents for the main study in one geographical location. This concentration offered significant logistical advantages and ensured the pilot's findings would be highly representative of the industry's leadership and operational context.

The four licensed insurance companies chosen for the pilot study were situated in Nairobi, where the majority of licensed insurance companies have their headquarters, where the primary study respondents are employed and ease of assess for the researcher.

These individuals participated in the pilot test by completing the questionnaire. However, it's important to note that these participants will be excluded from the main study to mitigate potential biases in outcomes and replications, as recommended by Kothari and Garg (2014). The selected individuals will be informed about their participation in the pilot test and the exclusion from the main study to ensure transparency and ethical conduct in research practices. Additionally, their feedback and responses during the pilot test will be used to refine and improve the questionnaire before its administration to the larger sample of respondents. The questionnaire for the pilot project will be sent to the chosen respondents by drop-off and pick-up method, followed by telephone follow-up to optimize the response rate.

3.6.1 Reliability

The reliability of a data collection instrument is defined by its capacity to yield consistent results across different settings, populations, or time periods. As articulated by Cooper and Schindler (2014), the essence of reliability lies in the degree to which measurements are free from unstable or random errors, thereby ensuring that situational or transient factors do not unduly influence the outcomes. A robust instrument, they assert, performs effectively under varying conditions and times, giving rise to key reliability concepts such as equivalence, stability, and internal consistency. For the present study, reliability will be evaluated through the lens of internal consistency, focusing specifically on the closed-ended questionnaire employed. The assessment will utilize Cronbach's alpha, a coefficient widely recognized as a standard measure for instrument reliability (Bryman & Bell, 2015). The Cronbach's alpha value ranges from 0.00 to 1.00, with a conventional acceptance threshold of 0.70 or higher. Consequently, any item, question, or statement on the research scale must achieve a minimum Cronbach's alpha of 0.70 to be retained, a criterion to which this study will strictly adhere.

3.6.2 Validity

The concept of validity is fundamentally concerned with "the degree to which a research instrument accurately measures the theoretical construct it purports to assess" (Cooper & Schindler, 2014). As explained by Cooper and Schindler (2014), the core dimensions of validity are typically categorized as internal and external. External validity addresses the generalizability of the study's findings to other contexts, populations, and time periods. In contrast, internal validity focuses on whether the instrument faithfully captures the intended phenomenon within the specific study parameters, raising the central question of whether the tool truly measures what its designer intended. Validity is therefore a critical quality indicator for any research tool (Sekaran & Bougie, 2016). While several forms of validity exist—such as face, concurrent, and predictive validity—the current study will prioritize content validity. As defined by Mugenda (2013), content validity assesses the extent to which the collected data accurately and comprehensively reflects the domain of the concept under investigation. To ensure this, the research questionnaire will be subjected to a rigorous expert evaluation process, involving colleagues and supervisors to scrutinize its coherence, relevance, and completeness.

3.7 Diagnostics Tests

Diagnostic tests will be carried out by the researcher before the multiple regression analysis. Testing statistical issues and ensuring adherence to the classical linear regression model (CLRM) was beneficial. Homoscedasticity, multi-collinearity, normality, linearity, and autocorrelation are among the diagnostic tests. These techniques were used to make sure that drawn conclusions do not violate any of the multiple regression analysis's assumptions.

3.7.1 Normality

To ensure the integrity of the statistical analysis, it was essential to verify that the data conformed to a normal distribution. Normality, in this context, means the data is evenly spread around the mean, suggesting it comes from a population that can be modeled by a normal bell curve (Hair et al., 2010). Although some statistical methods are robust to violations of normality, achieving it strengthens the validity of the research findings. The assessment was therefore conducted using a dual approach of statistical tests and visual inspection within SPSS version 25.0.

The process began with an examination of descriptive statistics, specifically skewness and kurtosis. This was followed by more formal tests, including the Kolmogorov-Smirnov and Shapiro-Wilk procedures (Field, 2013). The interpretation of these tests hinges on a p-value compared against a significance level of 0.05. If the p-value was greater than 0.05, the data was considered normal. If it was 0.05 or less, it was deemed to significantly deviate from a normal distribution. To provide a visual confirmation, Q-Q plots were generated, where data points aligning with a straight diagonal line confirm normality (Schutzenmeister, Jensen & Piepho, 2012). As noted by Field (2013), a significant result in a large sample does not always imply a practically important departure from normality. This rigorous validation is critical because non-normal distributions can lead to misleading estimates in common statistical tests like t-tests and F-tests (Razali & Wah, 2011)..

3.7.2 Multicollinearity

Multicollinearity describes a situation where predictor variables exhibit strong interdependencies, making it difficult to isolate the unique contribution of any single variable (Loo et al., 2015). This phenomenon arises from high correlations among predictors, which obscures individual effects and complicates result interpretation. When multicollinearity is severe, it inflates standard errors for regression coefficients, destabilizing the reliability of multivariate analyses. Common detection methods include examining correlation matrices for elevated pairwise relationships and calculating diagnostic metrics such as the Variance Inflation Factor (VIF) and tolerance statistics.

Hair et al. (2011) establish that severe multicollinearity is present when tolerance falls below 0.1 and the Variance Inflation Factor (VIF) exceeds 10. This condition necessitates careful verification that predictor variables are free from problematic interdependencies. Tolerance and VIF serve as the primary diagnostic tools for detecting this issue, with VIF being mathematically derived as the reciprocal of tolerance. These metrics are automatically generated during multiple regression analyses conducted in SPSS version 25, providing researchers with immediate assessment of potential multicollinearity concerns.

The research employed mean values for each variable in the analysis. Multicollinearity was assessed using Variance Inflation Factors (VIF), with all values ranging from 1 to 4—well within

acceptable limits according to Yu et al. (2015), who identify VIF ≥ 10 as indicative of problematic multicollinearity. While multicollinearity does not compromise overall model validity, it specifically distorts estimates for individual predictors. Diagnostic testing combined VIF and tolerance metrics, where VIF values between 1–5 indicate negligible correlation, 5–10 suggest moderate concern, and values exceeding 10 require intervention (Pennsylvania State University, 2017b). Tolerance values (the reciprocal of VIF) provide complementary insight: higher tolerance indicates lower inter-predictor correlation, while values below 0.2 are generally considered unacceptable (Hossain, 2012). When multicollinearity is detected, remediation techniques such as first-difference transformation can address trend-related dependencies (Gujarati, 2003).

3.7.3 Homoscedasticity

Homoscedasticity represents a foundational assumption in regression modeling that mandates constant variance of the error terms (residuals) across all observed values of the independent variables. This condition requires that the dispersion of the dependent variable around the regression line remains uniform regardless of predictor values, ensuring reliable standard error estimates and valid statistical inference. When this uniformity is violated, heteroscedasticity arises—characterized by systematically varying error variance across predictor levels—which can compromise the precision of coefficient estimates and hypothesis testing. It is critical to clarify that homoscedasticity pertains exclusively to the residuals of the model, not the raw variances of the dependent or independent variables themselves. Furthermore, the assertion that multivariate normality inherently produces homoscedastic relationships is inaccurate; these are distinct assumptions that must be evaluated independently (Hair et al., 2010). Proper diagnostic checks—such as residual plots and statistical tests like Breusch-Pagan—are essential to verify this assumption, as its violation necessitates corrective measures like robust standard errors or data transformation to maintain model integrity.

Homoscedasticity, a fundamental assumption in regression analysis, requires that the dispersion of residuals remains uniform across all levels of predictor variables. This condition is evaluated through both graphical techniques—such as residual scatter plots—and statistical procedures (Hair et al., 2010). While heteroscedasticity does not bias regression coefficient estimates, it compromises the reliability of standard errors and subsequent hypothesis tests. For independent

group comparisons (e.g., t-tests or ANOVA), Levene's test (Levene, 1961) specifically assesses whether population variances across samples are equal. This test formally examines the null hypothesis of homogeneous variances. Using a significance threshold of 0.05, a p-value below this level indicates statistically significant differences in variances, rendering t-tests or F-tests invalid. Conversely, a p-value exceeding 0.05 confirms variance homogeneity, validating the use of these parametric tests (Bryk & Raudenbush, 1988; Anderson, 2013). It is critical to distinguish that homoscedasticity pertains exclusively to residual variance patterns, not raw variable distributions, and should not be conflated with normality assumptions.

3.7.4 Linearity

Linearity The assumption of linearity in regression analysis requires that the relationship between independent and dependent variables follows a consistent proportional pattern, where changes in predictors produce predictable, straight-line changes in the outcome. Crucially, this is not merely a visual straight line but a mathematical property where the model's coefficients capture constant marginal effects. To validate this assumption, researchers employ diagnostic techniques such as residual scatter plots (plotting residuals against fitted values) or formal tests like Ramsey's RESET, rather than ANOVA procedures. ANOVA in regression contexts primarily assesses overall model significance (whether predictors collectively explain variance), not the functional form of individual relationships a common misconception.

When the linearity assumption holds, linear regression models expressed as $Y = a + bX$ for simple cases—accurately represent proportional relationships. Here, the intercept (a) represents the baseline outcome, and the slope (b) quantifies the expected change in Y per unit change in X. These models are favored for interpretability, though they require careful validation. For instance, a systematic curvature in residual plots would indicate non-linearity, necessitating transformations before proceeding.

Statistical significance testing for linear relationships differs from assumption validation. The null hypothesis (H0) for a slope coefficient states "no linear relationship exists," and a p-value < 0.05 rejects this, confirming a statistically significant linear association *given the model form*. However, as emphasized by Kothari and Garg (2014), this test *does not* verify the linearity

assumption itself it only confirms that the observed relationship fits a linear model better than no relationship. True linearity validation requires independent diagnostic checks, such as examining residual patterns or using RESET tests to detect omitted non-linear terms. Without this step, significant p-values could arise from mis-specified models, leading to erroneous conclusions.

3.8 Data processing and Analysis

According to Babbie (2015), data analysis refers to the process of numerically presenting research findings with the aim of describing the phenomena that these observations reflect. The present study will use quantitative approaches to examine the variables under investigation. The study data will be analyzed using SPSS software version 26, which is a statistical tool often used in social sciences research. The data will be subjected to descriptive statistics in order to assess and display the findings in a systematic way. Descriptive analytics will be employed, encompassing distributional metrics (frequencies and percentages), central-tendency indicators (mean, mode, median), and dispersion statistics (standard deviation).The use of tables, graphs, and charts will be beneficial in the presentation of the examined data, as it allowed for a simpler and organized representation that facilitated the comprehension of the study results. The study will employ simple and multiple regression models to examine the impact of independent, moderating, and mediating variables on the dependent variable. Specifically, the analysis will explore the individual effects of these variables, as well as the moderated mediation effect of the moderator and mediator on the relationship between the independent variable and the dependent variable. The research will use the Baron and Kenny (1986) model to examine the moderating and mediating impacts of the variables. The models will be assigned a significance level of 95% confidence. The regression models will be used for data analysis are as follows:

3.8.1 Model for the Study

The empirical model for testing the relationship between strategic leadership and organizational performance utilized a composite variable derived through a systematic aggregation process. As established by Kent State University Libraries (2021), survey items within each strategic leadership construct were first averaged to form subscale scores, ensuring uniform contribution from every item within its respective construct. This foundational step guarantees that individual

survey responses are treated equally when calculating construct-level scores. Subsequently, these four subscale scores were combined using a weighted averaging technique, where weights were assigned based on the theoretical significance of each construct to the overarching strategic leadership concept. This two-stage aggregation method first averaging items within constructs, then combining constructs with context-specific weights provides a methodologically rigorous representation of strategic leadership. The resulting composite variable served as the independent variable in regression analyses to assess its influence on organizational performance outcomes.

SL = Strategic Leadership (Composite index of Strategic thinking, Strategic direction, Leading change and Core competencies development)

P = Insurance penetration (Composite index of Insurance penetration rate, Insurance coverage rates, Insurance density, Distribution Channels, Claims settlement ratio, Insurance awareness levels).

The model for the study:

$P = \beta_0 + ß_1SL + \varepsilon$…… (1)

Where: P = Insurance Penetration; SL = Strategic Leadership; B_0 = Constant; β_1= Beta coefficients; ε = Error term

3.8.2 Mediation Model

The mediating effect will be tested using a four-step approach as suggested by Baron and Kenny (1986) where regression analysis is conducted, and the significance of coefficients is tested at each step. To form a composite variable Digital Transformation (Mediating Variable) a weighted average for the two constructs of the Mediating variable was computed using the following equation.

DT = Digital Transformation (Composite index of IT innovation and customer experience)

The investigative protocol incorporates the sequential four-phase paradigm endorsed by Baron and Kenny for evaluating mediational pathways:

Phase 1: Multivariate regression modeling wherein executive direction forecasts sector-wide insurance assimilation.

$P = \beta_0 + \beta_1$ SL + ε …..... (2)

Phase 2: Multivariate regression modeling wherein executive direction forecasts technological reconfiguration.

$DT = \beta_0 + \beta_1 SL + \varepsilon$ …..... (3)

Phase 3: Multivariate regression modeling wherein technological reconfiguration forecasts sector-wide insurance assimilation.

$P = \beta_0 + \beta_2 DT + \varepsilon$ …..... (4)

Phase 4: Multivariate regression modeling incorporating both executive direction and technological reconfiguration to forecast sector-wide insurance assimilation.

$P = \beta_0 + \beta_1 SL + \beta_2 DT + \varepsilon$ …..... (5)

Herein, P signifies sector-wide insurance assimilation; SL denotes executive direction; DT indicates technological reconfiguration; β_0 represents the intercept term; β_1 and β_2 symbolize regression parameters; and ε denotes the stochastic disturbance. Baron and Kenny's (1986) mediation framework begins with testing bivariate relationships among key variables in the initial steps. If any of these preliminary correlations fails to achieve statistical significance, mediation cannot be established. When all initial relationships are significant, the analysis advances to Step 4 where the mediator is included alongside the independent variable in the regression model. Partial mediation is confirmed when the direct effect of the independent variable remains statistically significant after accounting for the mediator, while the mediator itself significantly predicts the outcome. Full mediation is indicated when the direct effect of the independent variable becomes non-significant, though the mediator continues to significantly influence the outcome variable.

3.8.3 Moderation Model

The Moderation analysis examines how the strength of a predictor-outcome relationship varies systematically based on the level of a third variable (Baron & Kenny, 1986). This statistical interaction may amplify, diminish, or fundamentally alter the direction of the predictor's effect on the outcome variable. For this research, government regulations were operationalized as a

composite moderator through a weighted aggregation of four distinct regulatory dimensions, ensuring each component contributed proportionally to the overall moderation variable.

GR = Government Regulations (Composite index of Government Laws and Statutory, Policy and Government Standards)

Moderation depicts the interaction between variables; thus, the test involves determination of the statistical significance of the interaction term (Whisman & McClelland, 2005).

The model for the study:

$P = \beta_0 + \beta_3 SL + \varepsilon$ ……..... (6)

Ultimately, framework 6 was employed to ascertain the orientation and magnitude of the modulating influence exerted on the antecedent construct, in addition to the cumulative ramifications of the modulator upon the outcome metric, accomplished via the multiplicative amalgamation of the modulating construct and the antecedent variable.

$P = \beta_0 + \beta_1 SL + \beta_4 GR + \varepsilon$……..... (7)

$P = \beta_0 + \beta_1 SL + \beta_2 GR + \beta_3 SL * GR + \varepsilon$……..……. (8)

Where; P = Insurance Penetration; SL = Strategic Leadership; GR = Government Regulations; β_0 = Constant; $\beta_1 ... \beta_4$ = Beta coefficient; SL *GR = interaction term; ε = Error term

3.8.4 Moderated-Mediation Models

Regression analysis (process analysis method) as suggested by Hayes and Rockwood (2020) was used to establish if the moderating effect of government regulations is significantly stronger than the mediating effect of digital transformation on the relationship between strategic leadership and organizational performance. Rockwood (2020) model for moderated mediation was adopted.

$P = \beta_0 + \beta_1 SL + \beta_2 GR + \beta_3 SL * GR + \varepsilon$……..……. (8)

$I = \beta_0 + \beta_1 SL + \beta_2 GR + \beta_3 SI + \beta_4 SL * GR + \varepsilon$…… (9)

Where; I (Indirect Effect) = Insurance Penetration; P (Direct effect) =Insurance Penetration; GR = Government Regulations; SL = Strategic Leadership; DT= Digital Transformation; * =interaction term; β_0 = Constant; $\beta_1 \ldots \beta_4$ = Beta coefficient; ε = Error term

Table 5: Research Objectives, Hypothesis Testing, Analysis and Model Estimation

Objectives Hypotheses Analysis and model

Objectives	Hypotheses	Analysis and model estimation	Interpretation
To establish the relationship between strategic leadership and insurance penetration.	$H0_1$: There is no significant relationship between strategic leadership and insurance penetration.	Simple regression analysis: $P = \beta_0 + \beta_1 SL + e$ P = Insurance Penetration SL=Strategic Leadership β_0= Constants	An R^2 metric equaling 1 signifies the model's exhaustive explanatory capacity. A p-value at or below 0.05 denotes a statistically meaningful linkage among the constructs. The ANOVA F-statistic, producing a p-value ≤ 0.05, affirms the model's prognostic efficacy.
To determine the mediating effect of digital transformation in the relationship between strategic leadership and insurance penetration.	$H0_2$: There is no significant mediating effect of digital transformation in the relationship between strategic leadership and insurance penetration.	Stepwise regression $P = \beta_0 + \beta_1 SL + \varepsilon$ $DT = \beta_0 + \beta_1 SL + \varepsilon$ $P = \beta_0 + \beta_2 DT + \varepsilon$ $P = \beta_0 + \beta_1 SL + \beta_2 DT + \varepsilon$ P =Insurance Penetration SL=Strategic Leadership DT=Digital Transformation	R^2 Coefficient of 1 indicated a perfect predictability of the model p-Value $\leq$ 0.05 shows a significant correlation between the variables ANOVA-F-test with a p value ≤ 0.05 showed that the model has predictive ability
To determine the moderating effect of government regulations in the relationship between strategic leadership and insurance penetration	$H0_3$: There is no significant moderating effect of government regulations in the relationship between strategic leadership and insurance penetration.	Hierarchical regression $P = \beta_0 + \beta_3 SL + \varepsilon$ $P = \beta_0 + \beta_1 SL + \beta_4 GR + \varepsilon$ $P = \alpha + \beta_1 SL + \beta_2 GR + \beta_3 SL * GR + \varepsilon$ P =Insurance Penetration SL=Strategic Leadership GR = Government Regulations	R^2 Coefficient of 1 indicated a perfect predictability of the model p-Value $\leq$ 0.05 shows a significant correlation between the variables ANOVA-F-test with a p value ≤ 0.05 showed that the model has predictive ability
To establish the moderated mediation effect of government regulations and	$H0_4$: There is no significant moderated mediated effect of government	Model for moderated-mediation $P = \beta_0 + \beta_1 SL + \beta_2 GR + \beta_3 SL * GR + \varepsilon$; $I = \beta_0 + \beta_1 SL + \beta_2 GR +$	R^2 Coefficient of 1 indicated a perfect predictability of the model

Objectives	Hypotheses	Analysis and model estimation	Interpretation
digital transformation in the relationship between strategic leadership and insurance penetration	regulations and digital transformation in the relationship between strategic leadership and insurance penetration.	β_3 DT + β_4SL *GR + ε; I (Indirect Effect) =Insurance Penetration P (Direct effect) =Insurance Penetration GR = Governmentability Regulations SL = Strategic Leadership DT= Digital Transformation * =interaction term β_0 = Constant β_1… β_4 = Beta coefficient; ε = Error term	p-Value ≤ 0.05 shows a significant correlation between the variables ANOVA - F-test with a p value ≤ 0.05 showed that the model has predictive

3.9 Ethical Considerations

To uphold the highest standards of scholarly rigor and moral responsibility, this study was conducted in strict adherence to established principles of research ethics. Ethical integrity is not merely a procedural requirement but a foundational pillar that ensures the credibility, validity, and social value of the research findings. The researcher has taken deliberate and systematic measures to safeguard the rights, dignity, and privacy of all participants, while also ensuring intellectual honesty throughout the research process.

3.9.1 Informed Consent

In order to uphold the validity and moral integrity of the inquiry, the principal investigator procured a formal endorsement certificate from the Management University of Africa. This instrument precisely delineated the investigation's thematic focus, intended purposes, and underlying justification. Furthermore, the endeavor garnered explicit sanction from Kenya's National Council for Science, Technology, and Innovation (NACOSTI), in adherence to prevailing national oversight directives.

3.9.2 Voluntary participation

At the commencement of the study, individuals were advised that participation was voluntary and uncoerced, and withdrawal would bear no penalties. They maintained the prerogative to leave the study at any stage without offering reasons. This commitment to autonomy not only upholds ethical standards but also cultivates participant trust, which in turn fosters more genuine engagement and enhances the reliability of the data collected.

3.9.3 Confidentiality

A significant concern identified in the course of the research pertains to the principle of confidentiality. Within the prefatory document accompanying the questionnaire, it explicitly stipulated that any data furnished by participants shall be kept strictly confidential and exclusively utilized for research objectives. Furthermore, participants were apprised that the researcher bears personal accountability for maintaining confidentiality, in accordance with professional ethical standards. Such measures are designed to cultivate participant trust and offer unequivocal reassurance regarding the confidentiality of their contributions.

3.9.4 Anonymity

Questionnaire-based research cannot guarantee absolute anonymity due to potential identification through response patterns, but this study implemented rigorous safeguards to protect participant identity. Specifically, the survey instruments excluded all personally identifiable information including names, contact details, and other identifying markers. Collected data was processed using unique codes with access restricted exclusively to the research team, ensuring participant anonymity throughout the study lifecycle..

3.9.5 Privacy

Upholding the privacy rights of every participant constitutes a fundamental requirement in any research initiative. To this end, the investigator will refrain from formulating questions that intrude upon personal boundaries, thereby preserving participants' confidentiality. Furthermore, the researcher will enforce rigorous data management protocols, ensuring that only duly authorized team members process the collected information and that all safeguards against unsanctioned utilization are meticulously maintained. Contributors will not be mandated to furnish signatures, and any demographic particulars solicited through the questionnaire will be confined to broad,

non-identifiable attributes. By explicitly assuring participants of their privacy, the study cultivates a setting wherein individuals feel empowered to share information with honesty and objectivity.

3.10 Chapter Summary

This chapter presents an in-depth exposition of the methodological approach used to interrogate the research questions and achieve the study's aims. It outlined the comprehensive research design, including the chosen methodology, target population, sampling strategy, data collection instruments, and procedural protocols. Additionally, the chapter addresses ethical considerations, hypothesis testing procedures, and preliminary validation through pilot testing to ensure methodological rigor and reliability.

CHAPTER FOUR
DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

The study's core objective was to determine the effects of strategic leadership, digital transformation, and governmental regulations on insurance penetration within Kenya. In pursuit of this goal, four distinct objectives were delineated, each accompanied by testable hypotheses. These measures were indispensable for drawing well-founded conclusions that align with the predetermined objectives and the ensuing hypothesis evaluations. The research employed a systematic questionnaire as the primary instrument for data collection, with the instrument structured around the study's key variables. For each variable, respondents were presented with a series of statements rated on a five-point Likert scale, which enabled them to quantify the extent to which they perceived the statements as relevant. Additionally, the outcomes of the questionnaire's pre-testing phase, which centered on assessing its validity, were subjected to thorough examination and discourse. Validating the instrument's reliability and validity was pivotal to ensuring data fit for purpose, thereby supporting robust answers to the research questions.

4.2 Response Rate

The representativeness of the sample size was evaluated through the lens of the response rate, which serves as a critical determinant of the study's credibility. A robust response rate is indispensable for upholding the integrity of research findings, as insufficient participation can diminish the statistical robustness of the dataset and compromise the dependability of outcomes. Consequently, this may impede the researcher's capacity to extrapolate conclusions to the broader intended demographic. Moreover, an inadequate response rate can signal the presence of non-response bias within the sample cohort (Creswell & Clark, 2017). For the present investigation, a descriptive cross-sectional survey was administered to the complete population of 58 insurance providers operating in Kenya, as officially documented by the Insurance Regulatory Authority in December 2024. This entire cohort constituted the target demographic for the research. In total, 232 questionnaires were disseminated among the study's participants, with the resultant response metrics detailed in Table 6.

Table 6: Response Rate

Category	Administered Questionnaires	Response Rate
Returned	201	86.6%
Unreturned	31	13.4%
Total	**232**	**100%**

The data in Table 6 indicate that 201 respondents completed and returned their questionnaires, resulting in an 86.6% response rate. According to Mugenda and Mugenda (2013) and Kothari and Garg (2014), a descriptive study can be considered sufficient if the response rate is greater than 50%. Babbie (2004) places return rates of 60% or above as good, and return rates of 70% or higher as very good. Thus, 80.9% was considered very good for the study.

4.3 Demographic Characteristics of Respondents

According to Carol (2011), demographic information is essential for understanding the characteristics of research participants and determining whether they represent the target population adequately for generalization purposes. A comprehensive description of participants enables both readers and researchers to identify the applicability of research findings and facilitates comparisons across different studies. Furthermore, the demographic characteristics of respondents are crucial for conducting a detailed analysis of the data, as they allow for the examination of differences or similarities linked to various demographic features.

This analysis helps researchers and users of the research to gain a deeper insight into the findings, particularly regarding variations between and within groups based on factors such as gender, age, experience, and other relevant demographic correlates (Bein, 2009). Additionally, demographic attributes provide valuable information necessary for synthesizing research and conducting secondary data analyses. Understanding these background characteristics such as gender, age, race, ethnicity, income, employment status, and marital status enables researchers to better comprehend the context of their audience and the implications of their findings.

4.3.1 Gender of Respondents

To assess gender representation within Kenya's insurance sector leadership, the study systematically collected self-reported gender data from executives occupying key positions across all firms registered with the Insurance Regulatory Authority (IRA) of Kenya as of December 2024. Specifically, survey responses from Chief Executive Officers (CEOs), Finance Managers, Risk and Compliance Managers, and ICT Managers were analyzed using frequency distribution metrics for male and female participants. This quantitative approach enabled precise measurement of gender diversity across these critical executive roles, with results documented in Table 7.

Table 4: Gender of Respondents

	Frequency	**Percent**
Male	112	55.7
Female	89	44.3
Total	**201**	**100.0**

The findings indicate that male executives constituted 55.7% of leadership roles—including Chief Executive Officers, Finance Managers, Risk and Compliance Managers, and ICT Managers—across Kenyan insurance companies, with females representing 44.3%. This balanced distribution reflects minimal gender disparity in senior positions, likely attributable to the sector's inclusive recruitment practices that equally attract professionals from both genders. Further analysis confirms the insurance industry maintains a gender-neutral workforce composition. Research demonstrates that gender diversity enhances organizational outcomes by integrating diverse perspectives, enabling holistic problem-solving, and improving strategic decision-making (Wikhamn & Wikhamn, 2020). Inclusive workforces also correlate with higher employee satisfaction, which accelerates technology adoption and digital transformation initiatives, ultimately driving increased insurance penetration rates.

4.3.2 Experience of Respondents

One of the study's primary objectives was to determine the length of time respondents had been employed by officially recognized insurance providers in Kenya. This duration was considered

indicative of their depth of experience in handling managerial responsibilities and executing organizational strategies. To capture this information, the research team evaluated the frequency with which various ranges of years of service were reported in the completed questionnaires. This methodological approach facilitated the derivation of insights into how prolonged exposure to industry dynamics influences proficiency in administrative and operational contexts. The results presented in Table 8.

Table 8: Years of Experience

Years	Frequency	Percent
Less than 1 year	39	19.4
1- 5 years	43	21.4
6 – 10 years	67	33.3
Over 10 years	52	25.9
Total	**201**	**100.0**

The data presented in Table 8 show that 19.4% of respondents possessed less than a year of organizational tenure, whereas 21.4% reported a tenure spanning one to five years. Those who had worked for 6-10years were 33.3% and finally those with work experience of over 10 years were 25.9%. The results indicate a diverse range of experience levels among respondents, with a significant portion (59.2%) having between 6 years and above of experience. This group represents a critical segment of the workforce that likely possesses a solid understanding of the industry, including its challenges and opportunities. The presence of respondents with less than one year of experience (19.4%) suggests that there is also a fresh perspective being brought into the industry, which can be valuable for understanding current trends and the impact of digital transformation.

The results reveals that the varying levels of experience can influence perceptions of strategic leadership within the insurance sector. Those with more experience may have established views on effective leadership practices and may be more resistant to change, particularly in the context of digital transformation. Conversely, less experienced respondents may be more open to innovative leadership styles and digital initiatives, potentially driving a shift in organizational culture. Understanding these dynamics is essential for assessing how leadership strategies can be tailored to accommodate both seasoned professionals and newcomers. The diverse experience

levels among respondents can significantly influence their perspectives on leadership, technology adoption, and regulatory compliance.

4.3.3 Level of Education

Educational attainment encompasses the formal academic credentials an individual has acquired through structured learning pathways. To delineate the distribution of participants according to their scholastic backgrounds, the research team employed a methodological approach centered on quantifying the occurrence of specific educational categories within the questionnaire responses. Each participant was invited to disclose their highest level of educational achievement, with the aggregated data subsequently compiled and presented in Table 9 for comprehensive analysis. This analytical framework enabled the study to correlate educational proficiencies with professional competencies, thereby enriching the contextual understanding of the respondent cohort.

Table 5: Level of Education

Level	Frequency	Percent
Diploma	8	4
Bachelor's Degree	112	55.7%
Master's Degree	72	35.8%
Doctorate or PhD	9	4.5%
Total	**201**	**100**

Table 9 indicates that the largest share of staff at registered Kenyan insurance firms holds a bachelor's degree as their highest level of education (55.7%), followed by master's degrees (35.8%) and doctoral qualifications (PhD) at 4.5%.

This indicates that individuals with undergraduate and postgraduate degrees (91.5%) possessed a solid understanding of the organizational structure and leadership, making them well-qualified to respond to the study's questions. Employees with higher educational attainment tend to perform their roles more effectively, as advanced education equips them with the necessary knowledge and skills, along with the capacity and expertise to guide the organization toward success. According

to Mudany, Ngala, and Gituro (2020), a person's level of formal education reflects their unique cognitive abilities to process information and differentiate among various alternatives. Therefore, the results suggest that the respondents were capable of making informed decisions that could positively impact insurance penetration in Kenya.

4.3.4 Position Held in the Organisation

The research endeavor aimed to delineate the occupational roles occupied by participants within the insurance institution, which was postulated to signify their accumulated proficiency in administrative and strategic implementation domains. To operationalize this objective, the study employed a frequency-based analytical approach to evaluate the self-reported positional data furnished by respondents within the questionnaire instrument. The resultant findings, derived from this methodological framework, are systematically encapsulated in Table 10.

Table 10: Position in this organization

Position	Frequency	Percent
Chief Executive Director	37	18.4
Finance manager	53	26.4
Risk and compliance manager	56	27.9
ICT manager	55	27.4
Total	**201**	**100.0**

The demographic analysis reveals that Chief Executive Directors (18.4%) hold significant leadership roles, providing valuable insights into strategic leadership and its impact on organizational performance, particularly regarding insurance penetration and digital transformation initiatives. Finance Managers (26.4%) play a crucial role in understanding the financial implications of strategic decisions and regulatory compliance, which are essential for the sustainability and growth of insurance products. The largest group, Risk and Compliance Managers (27.9%), is vital for navigating the regulatory landscape, ensuring adherence to regulations while identifying barriers to insurance penetration and best practices for compliance. Lastly, ICT Managers (27.4%) are critical in driving digital transformation, enhancing operational

efficiency, and facilitating the adoption of innovative insurance products, making their perspectives essential for assessing the effectiveness of technology initiatives in the sector.

The diverse positions held by respondents provide a wide range of perspectives on the issues being studied, which is essential for understanding the complexities of how strategic leadership, digital transformation, and government regulations interact to influence insurance penetration. Each role contributes unique insights that enhance the overall comprehension of the challenges and opportunities within the sector. Analyzing these positions is vital for grasping the organizational dynamics of the insurance industry in Kenya. The varied roles represented among the respondents offer a rich source of information that can inform strategies aimed at improving insurance penetration through effective leadership, financial management, risk compliance, and technological innovation. By leveraging the expertise of individuals in these key positions, the study can deepen the understanding of the factors affecting insurance penetration and lead to actionable recommendations for industry stakeholders (Kim & Thapa, 2018).

4.4 Results of the Pilot Survey

Pilot testing constitutes a preliminary assessment of the research instrument's practicality and effectiveness prior to full-scale implementation. This phase evaluates question clarity, respondent comprehension, and alignment with research objectives. For this study, the survey instrument was administered to a pilot sample of 16 participants (6% of the target population), with subsequent validity and reliability analyses conducted to refine instrument design and ensure methodological rigor.

4.4.1 Validity

Validity refers to how accurately a research tool measures the concept it is designed to assess. Ensuring validity is crucial for confirming that the instrument effectively captures the intended idea. As Bhattacherjee (2012) explains, validity can be evaluated through theoretical or empirical approaches. The theoretical method, often termed translational validity, comprises two components: face validity and content validity. “Face validity examines whether the tool superficially appears to measure the target concept, while content validity determines whether the

tool comprehensively addresses all facets of the construct". In this study, construct validity was assessed using the Kaiser-Meyer-Olkin (KMO) measure and Sphericity tests.

4.4.1.1 Content Validity

To establish content validity, the study applied Cooper and Schindler's (2014) methodology. This involved reviewing established measurement scales from existing literature and developing a survey instrument. The instrument was then reviewed by two subject matter experts in each research area (strategic leadership, digital transformation, and government regulations in insurance). Expert feedback was integrated to improve clarity, relevance, and comprehensive coverage. The instrument underwent peer review and was presented at academic forums at the Management University of Africa, with all feedback incorporated. Final revisions were made based on supervisor input. Experts confirmed the scale comprehensively addressed the concepts, confirming face validity as defined by Zikmund et al. (2010).

4.4.1.2 Construct Validity

Construct validity assesses how well a measurement tool captures the concept it is designed to evaluate. It focuses on the relationship between theoretical ideas and their real-world applications, determining whether the operational definitions used in a study genuinely reflect the underlying constructs. This evaluation can be subjective, as it often depends on human judgment about intangible concepts. In this research, construct validity was examined using the Kaiser-Meyer-Olkin (KMO) measure and the Sphericity test, as recommended by Dikko (2016).

KMO assessment determines whether the dataset is fit for factor analysis by evaluating the overall sampling adequacy and the adequacy of each variable separately. It quantifies the proportion of variance explained by common factors; a higher proportion corresponds to greater suitability for factor analysis, whereas a lower proportion indicates reduced suitability. The computation is based on the average response for each variable. As a general rule, a KMO value greater than 0.4, combined with a Sphericity test result showing a p-value less than 0.05, suggests that the measurements are valid and effectively represent the intended concepts. The outcomes of these assessments are documented in Table 11.

Table 11: KMO and Bartlett's Test for Strategic leadership

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.908
Bartlett's Test of Sphericity	Approx. Chi-Square	2371.350
	df	105
	Sig.	.000

KMO = 0.865 for the government regulations scale reflects sufficient sampling adequacy. Bartlett's test was highly significant ($\chi 2(189) = 2223.754$, $p < .001$), indicating that the variable intercorrelations are adequate for a factor-analytic approach. Therefore, the constructs used to measure government regulations accurately and adequately represent the study's objectives.

Table 13: KMO and Bartlett's Test for Digital transformation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.864
Bartlett's Test of Sphericity	Approx. Chi-Square	4573.492
	df	120
	Sig.	.000

For the Digital Transformation construct, the Kaiser–Meyer–Olkin measure of sampling adequacy is 0.864, exceeding the standard threshold of 0.6. Bartlett's test of sphericity is highly significant ($p < 0.001$), supporting the data's suitability for factor analysis. This demonstrates that the survey items designed to assess Digital Transformation constructs are valid and effectively measure the study's intended objectives.

Table 14: KMO and Bartlett's Test for Government regulations

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of Sphericity	Approx. Chi-Square	2223.754
	Df	189
	Sig.	.000

For the Digital Transformation construct, the Kaiser–Meyer–Olkin measure of sampling adequacy is 0.864, exceeding the standard threshold of 0.6. Bartlett's test of sphericity is highly significant ($p < 0.001$), supporting the data's suitability for factor analysis. Therefore, the constructs used to measure government regulations accurately and adequately represent the study's objectives.

Table 15: KMO and Bartlett's Test for insurance penetration

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.889
Bartlett's Test of Sphericity	Approx. Chi-Square	5553.501
	Df	300
	Sig.	.000

The Kaiser–Meyer–Olkin (KMO) measure for sampling adequacy is 0.889, exceeding the recommended threshold of 0.60. Bartlett's test of sphericity is highly significant ($\chi^2(300) = 5553.501$, $p < 0.001$), indicating the data are suitable for factor analysis. These results confirm that the data is suitable for factor analysis, validating the instrument's effectiveness in measuring insurance penetration constructs.

4.4.2 Reliability Test

Reliability refers to the ability of a research instrument to consistently produce stable and dependable results when used repeatedly. It also evaluates how well the collected data represents a specific variable or concept. The primary objective of ensuring reliability is to minimize potential biases and errors in the research process. To strengthen the reliability of the study's questionnaire, a preliminary survey was carried out to improve its clarity and structure before the main data collection phase (Cooper & Schindler, 2014).

In this study, “Cronbach’s Alpha was utilized to assess the reliability of the key constructs”. This statistical method is widely used because it evaluates the internal consistency among questionnaire items meaning it checks whether different questions measuring the same concept produce similar responses. The alpha coefficient ranges from 0 to 1, where 0 indicates no consistency and 1 represents perfect consistency. Generally, an alpha value of 0.7 or higher is considered acceptable, while values above 0.9 are viewed as excellent (Tavakol & Dennick, 2011). For this research, a minimum threshold of 0.7 was set for reliability, with values exceeding 0.9 regarded as outstanding. The detailed reliability outcomes are presented in Table 16.

Table 16: Reliability Test

Variables	Items	Cronbach Alpha	Remark
Strategic leadership	25	0.958	Reliable
Digital transformation	16	0.964	Reliable
Government Regulation	18	0.933	Reliable
Insurance penetration	25	0.899	Reliable

The summary of the results in Table 15 shows that the Cronbach’s alpha values for all variables and items exceeded the threshold of 0.7, confirming that the research instrument was sufficiently reliable for the study’s purposes. This level of reliability indicates that the tool consistently measured the intended constructs, making it suitable for data collection. Since all variables met the minimum reliability standard, they were considered valid and acceptable for analysis. The high Cronbach’s alpha scores further support the stability and consistency of the responses gathered during the study.

4.4.3 Diagnostics Tests

A normality test evaluates whether the data is appropriately modeled and follows a normal distribution. According to Avioli (2012), both descriptive and verification tests can be assessed using the normal distribution. Singh and Masuku (2014) suggest that indications of non-normality

may point to issues such as outliers, multiple modes, faulty measurement tools, incorrect distributions, or insufficient sample sizes (Ghasemi & Zahediasl, 2012). For a linear model to be applicable, the dependent variable must exhibit a normal distribution.

4.4.3.1 Normality Test

A normality test determines whether data follows a normal distribution, which is important for statistical analyses like linear models (Avioli, 2012). If data is not normally distributed, it may indicate issues such as outliers, measurement errors, or other problems (Singh & Masuku, 2014; Ghasemi & Zahediasl, 2012). For linear models to be valid, the dependent variable should ideally be normally distributed. Researchers use both graphical and statistical methods to check for normality. Graphical tools include histograms, boxplots, and Q-Q plots, which visually show how data is distributed. Statistical tests provide a more objective assessment. Common non-graphical tests include the Shapiro-Wilk test, Kolmogorov-Smirnov test, and Anderson-Darling test. Among these, the Shapiro-Wilk test is often recommended as the most reliable for detecting non-normal data (Thode, 2002).

The Shapiro-Wilk normality assessment generates a coefficient spanning the interval from 0 to 1. Values approximating unity denote conformity to a Gaussian distribution. In evaluating the outcome, investigators scrutinize the p-value (abbreviated as Sig.); a threshold surpassing 0.05 affirms the assumption of normality. If Sig. is less than 0.05, the data significantly deviates from normality (Elliott & Woodward, 2007). The results of the Shapiro-Wilk test for this study are presented in Table 17.

Table 17: Test for Normality

Variable	**Shapiro-Wilk**		
	Statistic	**Df**	**Sig.**
Strategic leadership	.198	201	.236
Digital transformation	.103	201	.147
Government Regulations	.132	201	212

Variable	Shapiro-Wilk		
	Statistic	Df	Sig.
Insurance penetration	.063	201	.177

As shown in Table 17, all variables satisfied the normality assumption based on Shapiro-Wilk test results where $p > 0.05$ for each variable. This confirms the data distribution aligns with normality requirements for parametric statistical analyses.

4.4.3.2 Quantile-Quantile (Q-Q) Plot

A Q-Q plot is a graphical tool that compares the distribution of a dataset to a theoretical normal distribution by plotting data quantiles against expected quantiles. For large datasets, Q-Q plots provide a clearer visual assessment of normality. In a Q-Q plot, data points should closely align with the diagonal reference line; if they deviate systematically, the data may not be normally distributed. In this study, a Q-Q plot was generated using SPSS version 28 to evaluate the normality of the dependent variable, insurance penetration. The resulting plot (Figure 2) showed that the majority of data points were positioned near the line of best fit, indicating minimal deviation from normality. Based on this observation, the study concluded that the data for insurance penetration was drawn from a normally distributed population..

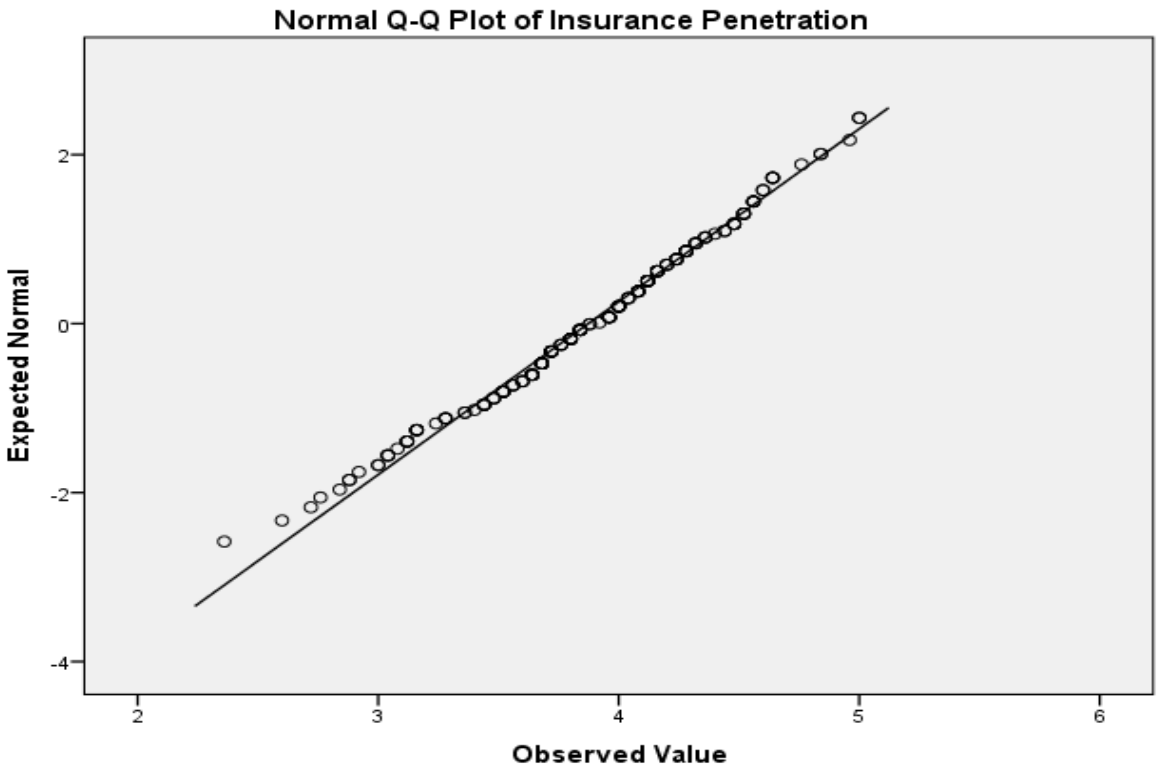

Figure 2: Insurance penetration normal Q-Q Plot

4.4.3.3 Multi-Collinearity Test

Besley, Multicollinearity occurs when independent variables in a regression model are highly correlated, meaning they may explain overlapping aspects of the dependent variable. This can lead to unreliable results, such as an inflated R-squared value, which suggests the model explains more variance than it actually does (Keraro, 2014; Opiyo, 2017, citing Besley, Kuh, & Roy, 1980). To detect multicollinearity, researchers examine two key indicators: tolerance and the variance inflation factor (VIF).

Tolerance measures how much of a variable's variance is not explained by other independent variables. A low tolerance value (typically below 0.8) indicates a higher risk of multicollinearity (Cohen et al., 2003). The VIF quantifies how much the variance of an estimated regression coefficient is inflated due to correlations among independent variables. A VIF greater than 10 suggests that multicollinearity may be present, meaning one variable is largely redundant with

others (Hair et al., 2006). In this study, the researchers tested for multicollinearity using both tolerance and VIF. The results, presented in Table 18, were evaluated against the thresholds of tolerance less than 0.8 and VIF less than 10. These criteria were used to confirm that the independent variables did not exhibit excessive correlation, ensuring the regression model's stability and validity.

Table 18: Multicollinearity Test (Tolerance and VIF)

	Collinearity Statistics	
Research Variables	**Tolerance**	**VIF**
strategic leadership	.415	3.579
digital transformation	.423	3.421
government regulations	.409	3.278

Dependent Variable: insurance penetration

The Shapiro-Wilk statistic spans from 0 to 1, with values closer to 1 indicating greater conformity to a normal distribution. Normality is inferred from the p-value (Sig.), and a value exceeding 0.05 supports the assumption of normality.

4.4.3.4 Test of Linearity

Linearity in a regression model means that the independent variables have a straight-line relationship with the dependent variable. This implies that changes in the independent variables lead to consistent, proportional changes in the dependent variable. The linearity assumption is important because it forms the foundation of regression analysis. If this assumption is violated, the results may be inaccurate or misleading.

To test for linearity, researchers often use Analysis of Variance (ANOVA). ANOVA examines differences among the means of two or more groups to identify statistically meaningful disparities. For linearity testing, it checks whether the dependent variable's mean changes consistently across distinct levels of the independent variable. If linearity is present, the average value is expected to stay relatively stable as the independent variable changes. However, if the data does not meet the

linearity assumption, the dependent variable's mean may show unpredictable or non-linear patterns when the independent variable varies.

Table 19 shows a strong linear connection between the dependent variable—insurance penetration in Kenya and the independent variables: strategic leadership, digital transformation, and government regulations. This is supported by a p-value of less than 0.05, indicating statistical significance. As shown in Table 18, the p-value for testing deviations from linearity is greater than 0.05 ($p > 0.05$). This suggests there is no strong evidence that the relationship between insurance penetration (predicted values) and the predictor variables (strategic leadership, digital transformation, and government regulations) differs from a straight-line pattern. This outcome confirms that the linear model used in this study is suitable for the data. Since the assumption of linearity is not violated, the model can reliably represent the relationships between the variables under investigation.

Table 19: Linearity Results

Variable		Sum of Squares	F	Sig.
insurance penetration * strategic leadership	Linearity	14.548	87.246	.000
	Deviation from Linearity	6.371	1.005	.470
insurance penetration * digital transformation	Linearity	19.490	141.287	.000
	Deviation from Linearity	6.480	1.146	.273
insurance penetration * government regulations	Linearity	10.785	60.895	.000
	Deviation from Linearity	6.342	1.377	.117

4.4.3.5 Test of Homoscedasticity

The Levene test is a statistical method used to check if the variances of two or more groups are similar, a condition known as homogeneity of variance. This assumption is critical for the independent samples t-test, which requires that the groups being compared have roughly equal variances. The test starts with the assumption that there is no significant difference in variances between the groups. The goal is to confirm this equality; therefore, a result that is not statistically significant is preferred. If the test does not show a significant difference, it means the assumption of equal variances holds, which is necessary for the t-test to produce reliable results. In SPSS, the Levene test is automatically included when conducting an independent samples t-test. If the p-value (often labeled as "Sig.") is greater than 0.05, the test is considered not significant, and researchers can safely assume that the variances of the groups are similar. This step is important to ensure the accuracy and validity of the statistical analysis.

Table 20: Homoscedasticity Results

Variable	Levene's Statistic	df1	df2	Sig.	Comment
strategic leadership	0.957	31	161	.538	p>0.05 hence equal variance
digital transformation	1.123	32	158	.142	p>0.05 hence equal variance
government regulation	1.172	25	170	.272	p>0.05 hence equal variance

Dependent Variable: insurance penetration

Table 20 shows Levene's test results for homogeneity of variances. The p-values were 0.538 for strategic leadership, 0.142 for digital transformation, and 0.272 for government regulations—all exceeding the 0.05 significance threshold. This confirms the assumption of equal variances across groups. Levene's test statistics (0.957, 1.123, and 1.172 respectively) were within acceptable ranges, further supporting homogeneity. Homoscedasticity occurs when the dependent variable's

variance remains consistent across all predictor values (Ghasemi & Zahediasal, 2012), while heteroscedasticity indicates variable variance across different predictor levels.

4.4.4 Factor Analysis

Factor analysis is a statistical technique used to reduce a large number of variables into a smaller set of underlying dimensions, or factors, while preserving as much information as possible. This method is particularly useful for measuring variables that cannot be directly observed and for summarizing extensive datasets. According to Mabert, Soni, and Venkataramanan (2003), factor loadings with Eigenvalues greater than 0 should be retained, while those below 0 should be excluded from the analysis, as they are deemed insignificant. The primary aim of factor analysis is to distill the data into a more manageable and meaningful set of factors, as noted by Sekaran and Bougie (2016). Eigenvalues play a crucial role in this process, as they facilitate the simplification of complex linear operations into more straightforward problems, allowing for a clearer analysis of the relationships among variables. For factor analysis to be valid, certain assumptions must be met, including the absence of outliers, no perfect multicollinearity, linearity among variables, and the data being measured on an interval scale. These assumptions were confirmed through diagnostic tests conducted in this study.

4.4.4.1 Factor analysis for strategic leadership

An exploratory factor analysis was employed to examine the interrelationships among survey items assessing strategic leadership, conceptualized across five dimensions: strategic direction, strategic thinking, leading change, developing human capital, and leveraging core competencies. The purpose was to identify variables that were strongly connected and might be measuring similar ideas, which would help simplify the data. This method reveals how different variables relate to each other by grouping them into distinct underlying factors. The analysis was conducted using "Principal Component Analysis (PCA) with varimax rotation in SPSS version 28". This technique reduces the number of variables and highlights the most important factors that explain strategic leadership. To determine how many components to keep, the study used a scree plot—a graph that plots eigenvalues (which indicate the importance of each component) against the component numbers. The point where the line on the plot begins to flatten indicates the number of components

to retain. As Field (2013) suggests, components with eigenvalues greater than zero are typically kept.

During the analysis, items with factor loadings below 0.3 were removed, as these were considered to have minimal impact on the overall construct. This process ensured that only the most relevant and influential items were retained for further analysis. As suggested by Joseph et al. (2022), retaining items with factor loadings above 0.3 helps maintain the clarity and significance of the variables. The factor extraction followed the Kaiser Criterion, which identifies meaningful factors based on eigenvalues of 1 or higher. For the strategic leadership construct, nine out of 15 initial statements were excluded because their factor loadings were below 0.3. These statements were not used in subsequent analysis. The total variance explained by the factors indicates that the remaining 15 statements can be grouped into a single factor. Figure 3, the scree plot for strategic leadership, shows the eigenvalues of all 15 principal components. All values were greater than or equal to zero, confirming their validity. These 15 components were combined to form a single composite variable representing strategic leadership. Components labeled 16 to 25 were excluded because their eigenvalues were below zero, indicating they did not contribute meaningfully to the analysis. The factor loadings for the retained components are presented in Appendix IV.

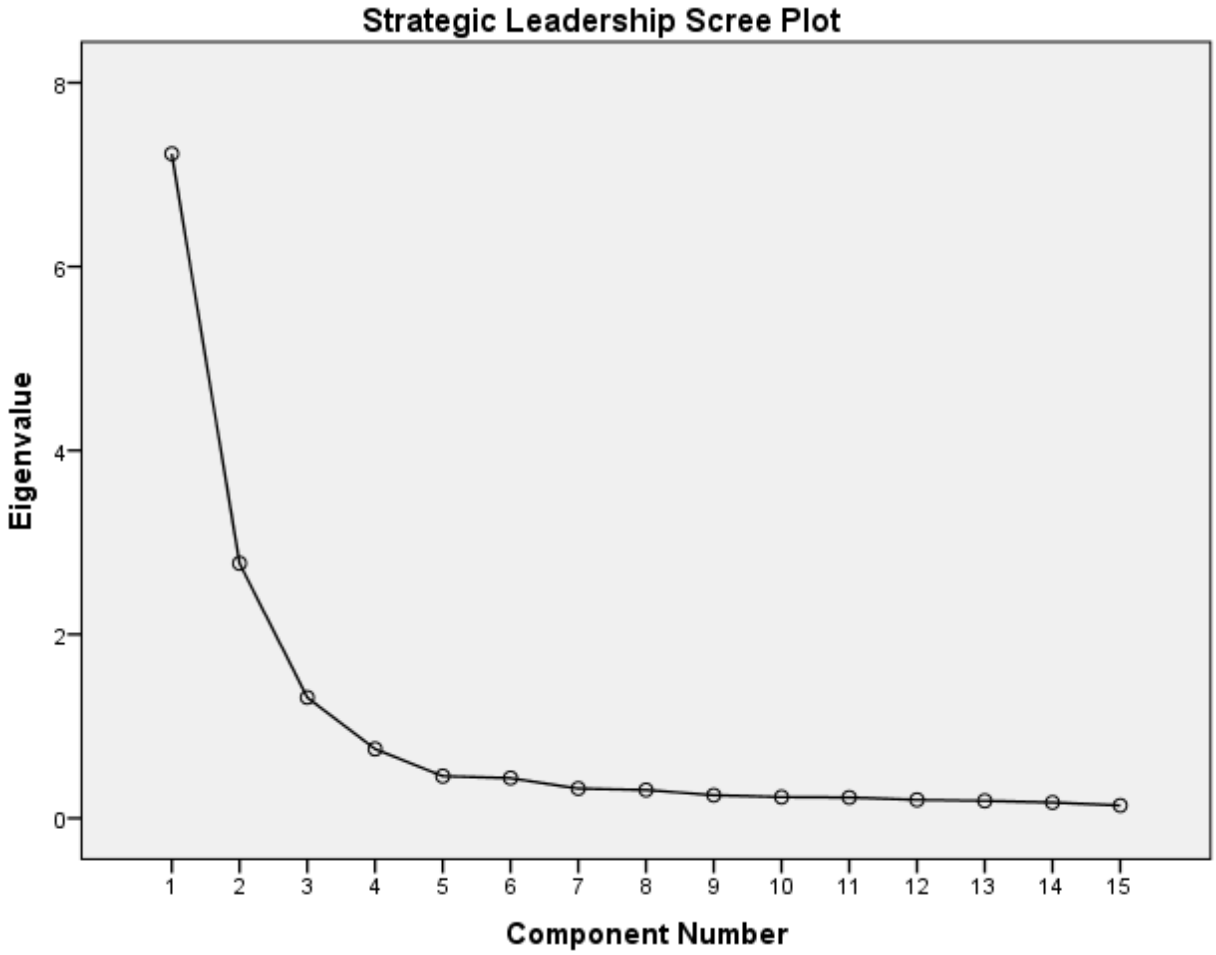

Figure 3: strategic leadership scree plot

4.4.4.2 Factor analysis for Digital Transformation

A factor analysis was performed on the statements related to digital transformation, which was made up of four key dimensions: Business processes built on technologies, integrated digital technologies, Big Data analytics and Cyber security Investment. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity. The factor analysis serves to elucidate the structure of interrelationships among the variables by defining distinct factors. To achieve this, the statements were subjected to "Principal Component Analysis (PCA) along with varimax rotation using SPSS version 28". This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept digital transformation. One widely used approach for deciding how many Principal Components to retain is through a graphical tool called

a scree plot. This plot displays the eigenvalues on the y-axis against the corresponding Principal Component numbers on the x-axis. The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain Principal Components that have eigenvalues greater than zero (Field, 2013).

During the procedure, coefficients with absolute values below 0.3 were discarded, leaving only items with substantial significance and contribution to the construct. Joseph, et al., (2022) suggested that during factor analysis coefficients with absolute value below 0.3 should be suppressed, this yield to only those items with high significance and influence in variable formation. “The extraction of the factors followed the Kaiser Criterion where an eigen value of 1 or more was deemed to indicate a unique factor”. In the case of digital transformation, all sixteen (16) statements had factor analysis coefficients with absolute value above 0.3 and therefore all statements were used in the formation of composite variable digital transformation. Total Variance analysis indicates that sixteen (16) statements on digital transformation can be factored into 1 factor as shown in figure 4. As a result, these all sixteen (16) Principal Components were utilized to create a single composite variable for digital transformation. Appendix IV shows the factor loading of the extracted components for digital transformation.

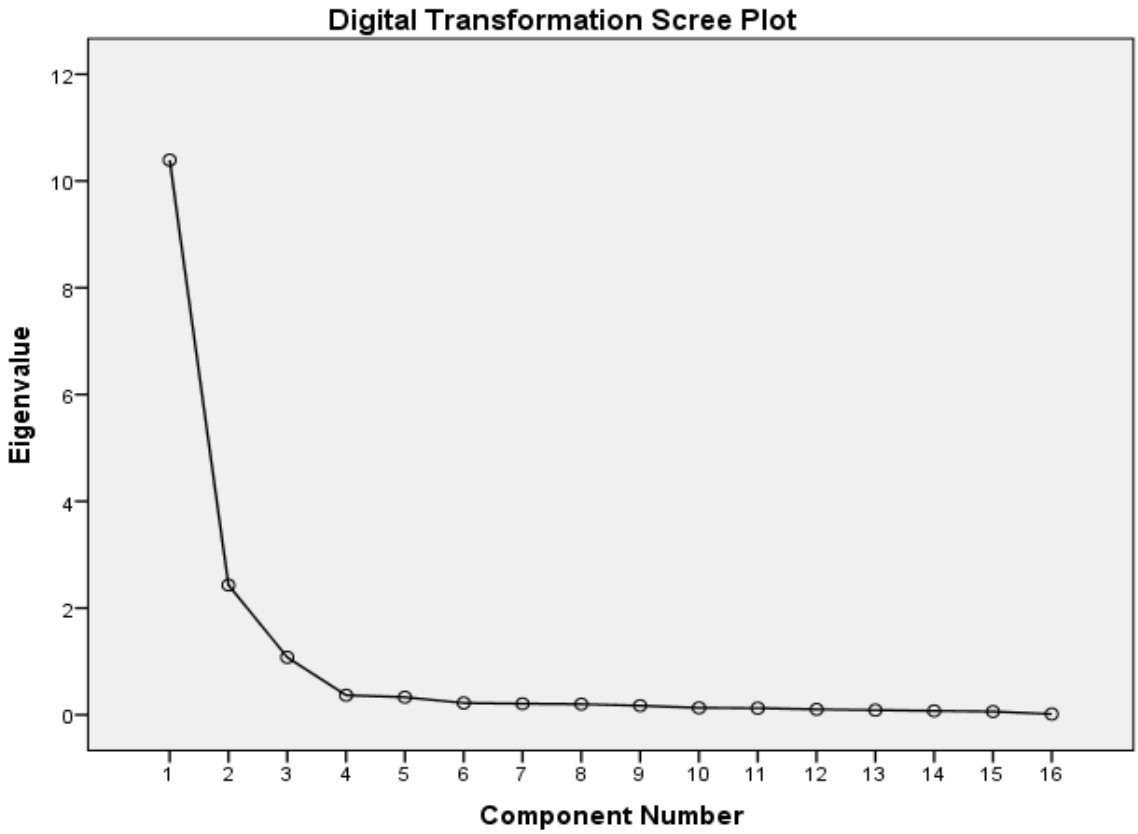

Figure 4: Digital transformation scree plot

4.4.4.3 Factor analysis for government regulations

A factor analysis was performed on the statements related to government regulations, which was made up of four key dimensions: Clarity and consistency of the regulatory framework, Regulatory Effectiveness in oversight, Collaboration in policy formulation and Regulation Adequacy for innovation and risk management. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity. A factor-analytic approach was employed to reveal the latent structure among the variables by extracting discrete factors. The items were analyzed using Principal Component Analysis with Varimax rotation, implemented in SPSS Statistics (Version 28). This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept government regulations. One widely used approach for deciding how many principal components to retain is through a graphical tool called a scree plot. This plot displays the eigenvalues on the y-axis against the corresponding principal component numbers on the x-axis.

The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain principal components that have eigenvalues greater than zero (Field, 2013).

During the analysis, items with factor loadings below 0.3 were removed, as these were considered to have minimal impact on the overall construct. This process ensured that only the most relevant and influential items remained for further analysis. As noted by Joseph et al. (2022), removing such items helps focus on variables with stronger significance in the research. The factor extraction followed the Kaiser Criterion, which identifies meaningful factors based on eigenvalues of 1 or higher. For the government regulations construct, three out of 18 initial statements had factor loadings below 0.3 and were therefore excluded from the formation of the composite variable. These statements were not included in subsequent analysis. The total variance explained by the factors indicates that the remaining 15 statements related to government regulations can be grouped into a single factor, as shown in Figure 5. The scree plot for government regulations displays the eigenvalues of all 15 principal components, all of which were greater than or equal to zero. These 15 components were used to create a single composite variable representing government regulations. Components labeled 16 to 18 were excluded because their eigenvalues fell below zero, indicating they did not contribute meaningfully to the analysis. The factor loadings for the retained components are presented in Appendix IV.

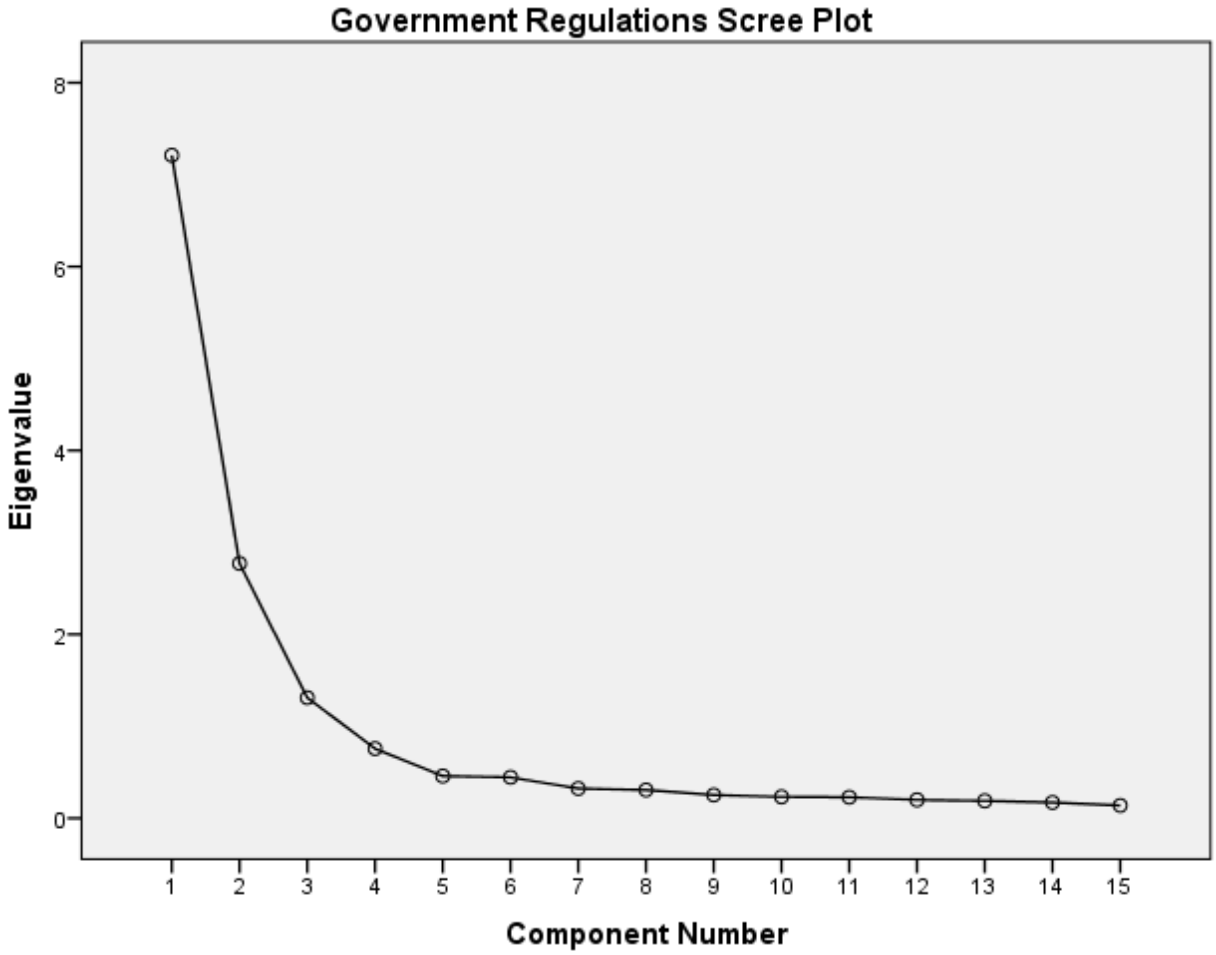

Figure 5: Government regulations scree plot

4.4.4.4 Factor analysis for Insurance Penetration

A factor analysis was performed on the statements related to Insurance Penetration, which was made up of six key dimensions: Insurance penetration rate, Insurance coverage rates, Insurance density, Distribution Channels, Claims settlement ratio, and Insurance awareness levels. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity. The factor analysis serves to elucidate the structure of interrelationships among the variables by defining distinct factors. A factor-analytic approach was employed to reveal the latent structure among the variables by extracting discrete factors. The items were analyzed using Principal Component Analysis with Varimax rotation, implemented in SPSS Statistics (Version 28). This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept insurance

penetration. One widely used approach for deciding how many Principal Components to retain is through a graphical tool called a scree plot. This plot displays the eigenvalues on the y-axis against the corresponding Principal Component numbers on the x-axis. The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain Principal Components that have eigenvalues greater than zero (Field, 2013).

During In the factor analysis of insurance penetration, coefficients with an absolute value below 0.3 were suppressed, following the approach recommended by Joseph et al. (2022). This step ensures that only the most influential and significant items contribute to forming the composite variable. The factor extraction process was guided by the Kaiser criterion, which retains factors with an eigenvalue of 1 or higher, indicating distinct underlying dimensions. For insurance penetration, all 16 statements had coefficients above 0.3, meaning they were all retained in the analysis. Total variance analysis, supported by the scree plot in Figure 6, confirmed that these 16 statements could be combined into a single factor. Consequently, all 16 principal components were used to create one composite variable representing insurance penetration. The factor loadings for these components are detailed in Appendix IV.

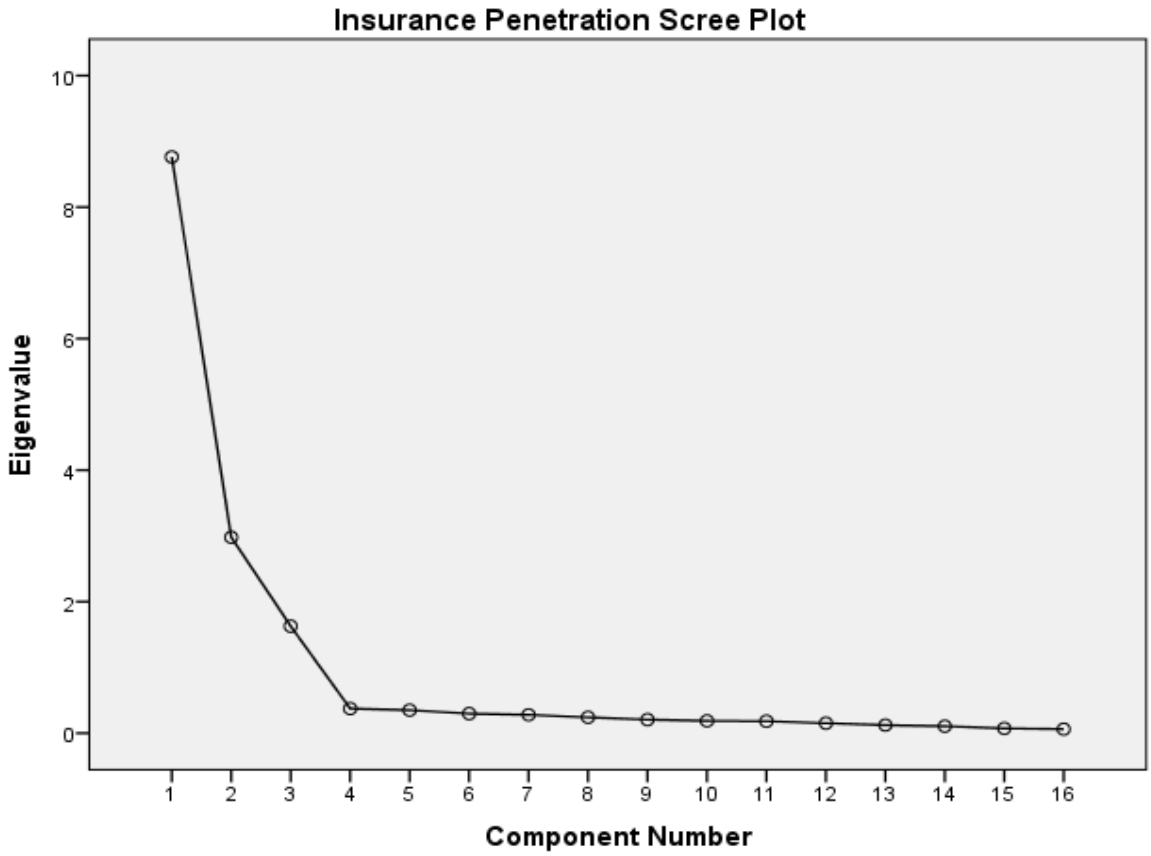

Figure 6: insurance penetration scree plot

4.5 Descriptive Analysis

This section provides a summary of the descriptive statistics for the key variables examined in this research. The core constructs comprise strategic leadership as the predictor (IV), digital transformation as the mediator, government regulation as the moderator, and insurance penetration as the outcome (DV). Each construct was operationalized using a five-point Likert-type scale, the standardized instrument employed for data collection in this study.

4.5.1 Descriptive analysis for strategic leadership

The research examines the association between strategic leadership and insurance penetration in Kenya. The construct of strategic leadership comprises five facets: strategic direction, strategic thinking, change leadership, development of human capital, and leveraging core competencies.

Participants evaluated these facets using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) among Kenyan insurance companies. Findings are displayed in Table 21.

Table 21: strategic leadership descriptive statistics

statement	Mean	Std. Deviation
Our organization mission targets stakeholders, employees and leaders	4.26	.820
Our organization mission serves as a guide in decision making	4.21	.846
Our organization mission clearly states its purpose.	4.16	.914
Our organization responds to arising opportunities to improve service delivery	4.14	.924
Leaders in our organization make decisions on time	4.09	.832
Leaders in our organization clearly connect the present and the future of the organization	4.04	.862
Leaders in our organization are adept at identifying and seizing strategic opportunities.	4.02	.854
Leaders in our organization consider what the organization must keep from its past	3.98	.818
Leaders in our organization clearly articulate a compelling vision for the future	3.98	.800
Decisions in our organization are knowledge-based	3.96	.868
Our organization vision inspires people into action	3.82	.965
The vision of our organization pulls in people, ideas, and other resources	3.78	.967
Our organization's mission shapes strategy	3.78	1.025
The vision of our organization assists staff to focus and work together	3.76	1.022
Our organization goals and objectives facilitate planning	3.71	.989
Average Sum	**3.98**	**.900**

Valid N (listwise) = 201

Results in table 21 gives the average mean score across all statements was 3.98, with a standard deviation of 0.900. This indicates a generally positive perception of strategic leadership attributes, though the variability suggests that not all respondents share the same level of agreement. The standard deviation (SD) values in Table 21 indicate the extent to which respondents' ratings vary around the mean for each statement related to strategic leadership. In this context, the SD measures how consistently participants perceive aspects of strategic leadership within their organization.

Low to Moderate Dispersion: Most SD values range from about 0.80 to 1.02, which suggests a moderate level of agreement among respondents. For example, the statement "Our organization mission targets stakeholders, employees and leaders" has an SD of 0.820, indicating that most responses are fairly close to the mean of 4.26, showing strong consensus on this point. Higher Variation in Some Areas: Statements like "Our organization's mission shapes strategy" (SD = 1.025) and "The vision of our organization assists staff to focus and work together" (SD = 1.022) have slightly higher standard deviations. This implies more diverse opinions or experiences among respondents regarding these aspects, meaning some respondents may strongly agree while others are less convinced.

Implications of Standard Deviation: A smaller SD means responses are clustered tightly around the mean, reflecting shared perceptions or consistent experiences among participants. Conversely, a larger SD indicates more variability, suggesting differing views or inconsistent implementation of certain leadership practices. Overall, the average SD of 0.900 reflects a moderate level of variability in perceptions of strategic leadership, indicating that while there is general agreement on many leadership aspects, some areas show more divergence in opinion. This insight helps identify which leadership elements are well-established and which may require further attention or clarification within the organization.

The proposition "The mission of our institution addresses stakeholders, personnel, and executives" attained the superlative average rating of 4.26. This finding signifies a pronounced endorsement by participants of the necessity for a mission that integrates multifaceted constituencies, thereby manifesting an institutional dedication to comprehensive stakeholder engagement in goal-setting.

The dispersion measure of 0.820 implies a balanced consensus, wherein the dominant perspective predominates, albeit with discernible heterogeneities in participant assessments. The ensuing prominent average of 4.21 corresponded to the assertion "The mission of our institution acts as a navigational framework for decisional activities." This outcome evinces a widespread accord on the mission's pivotal function in orienting institutional choices, accompanied by a variability index of 0.846, which underscores a prevailing recognition of the mission as a bedrock component in participants' decisional paradigms.

The assertion "The mission of our institution explicitly articulates its intent" registered an average rating of 4.16, signifying participants' conviction in the mission's precise delineation. The variability metric of 0.914 intimates moderate inconsistencies in participant evaluations, yet the predominant consensus endures. Such precision is indispensable for synchronizing institutional initiatives and guaranteeing that all constituents comprehend the core aspirations. An average score of 4.14 for the proposition "Our institution capitalizes on emergent prospects to augment service efficacy" conveys an affirmative appraisal of the institution's adaptability to novel avenues. The dispersion indicator of 0.924 implies overarching alignment, notwithstanding certain divergent perspectives on institutional reactivity. The declaration "Executives in our institution render decisions expeditiously" achieved an average of 4.09, reflecting a constructive assessment of decisional promptness. The variability of 0.832 underscores subtle disparities in judgments, albeit with a dominantly optimistic disposition.

The mean scores for statements related to vision, such as "Leaders in our organization clearly articulate a compelling vision for the future" and "Leaders in our organization consider what the organization must keep from its past," were lower, at 3.98 each. This suggests that while there is agreement on the importance of vision, there may be room for improvement in how effectively this vision is communicated and its impact on motivation. The statement "Decisions in our organization are knowledge-based" received a mean score of 3.96, indicating that respondents recognize the importance of informed decision-making. The standard deviation of 0.868 suggests a moderate level of agreement, indicating that while many respondents value knowledge-based decisions, there are differing opinions on how consistently this is practiced.

The mean score of 3.82 for "Our organization vision inspires people into action" reflects a recognition of the motivational aspect of the organization's vision. However, the standard deviation of 0.965 indicates some variability in responses, suggesting that not all respondents feel equally inspired by the vision. The statements regarding the organization's mission shaping strategy and assisting staff to focus received mean scores of 3.78 and 3.76, respectively. These scores indicate that while there is some agreement on the role of the mission and vision in strategic planning, there is also a recognition that improvements could be made in these areas. The descriptive analysis reveals that strategic leadership is perceived positively among respondents in the Kenyan insurance sector, particularly regarding the clarity and relevance of the organizational mission. However, there are areas, particularly related to vision articulation and its inspirational capacity, where improvements could enhance overall strategic leadership effectiveness. The findings underscore the importance of continuous evaluation and adaptation of leadership strategies to align with stakeholder expectations and organizational goals.

4.5.2 Descriptive analysis for digital transformation

This study identifies the specific aspects of digital transformation that influence insurance penetration in Kenya. The digital transformation construct is represented by four indicators: technologically enabled business processes, integrated digital technologies, Big Data analytics, and cybersecurity investment. A five-point Likert scale was used, with 1 = strongly disagree and 5 = strongly agree. Respondents assessed the extent to which these factors were applied in their Kenyan insurance firms. Table 22 summarizes the results.

Table 22: digital transformation descriptive statistics

Statement	Mean	Std. Deviation
Kenyan consumers' concerns about data privacy could limit the full potential of big data analytics in the insurance sector.	4.05	.899
Government initiatives to improve digital literacy have boosted public trust in online insurance platforms	4.02	.848

Statement	Mean	Std. Deviation
Kenyan insurers are using big data to identify new customer groups that traditional insurance hasn't reached.	3.99	.900
Kenyan insurers' increased cyber security investments have made them more attractive to customers.	3.99	.935
Kenyan insurers are using big data to improve risk assessment and offer fairer premiums.	3.98	.902
Insurance companies' investments in data security have increased customer trust in their privacy.	3.97	.854
Analyzing large datasets helps Kenyan insurers identify new customer groups that traditional insurance hasn't reached.	3.95	.928
Digital tools have made insurance more accessible to people in remote areas of Kenya.	3.92	.896
Online insurance comparison tools in Kenya have made it easier to find the best insurance policy.	3.90	.878
Insufficient internet access in some Kenyan regions limits the use of digital technologies to promote insurance.	3.88	.869
Kenyan insurers are using AI to automate risk assessment and make insurance more accessible.	3.88	.886
Kenyan insurers are using cloud computing to improve the efficiency of insurance claim processing.	3.88	.883
Kenyan insurers have used digital marketing to increase public awareness of insurance products.	3.87	.896
The use of mobile apps for insurance purchases has made insurance more accessible in Kenya.	3.87	.887
Cyber security concerns are preventing some Kenyans from buying insurance online	3.87	.881
Kenyan insurers are using big data to create personalized insurance products for different customer groups.	3.84	.865
Average Sum	**3.93**	**0.888**

Valid N (listwise)= 201

Results in table 22 gives an average mean score across all statements was 3.93, with a standard deviation of 0.888. This indicates a generally positive perception of digital transformation attributes, though the variability suggests that not all respondents share the same level of

agreement. The standard deviation (SD) values in Table 22 reflect the degree of variation or consistency in respondents' perceptions regarding digital transformation in the Kenyan insurance sector.

Moderate Consistency: The SD values mostly range between approximately 0.85 and 0.94, indicating a moderate level of agreement among respondents. For example, the statement "Government initiatives to improve digital literacy have boosted public trust in online insurance platforms" has an SD of 0.848, showing relatively consistent views close to the mean of 4.02. Slightly Higher Variation on Some Statements: Statements such as "Kenyan insurers' increased cyber security investments have made them more attractive to customers" (SD = 0.935) and "Analyzing large datasets helps Kenyan insurers identify new customer groups that traditional insurance hasn't reached" (SD = 0.928) show slightly more variability. This suggests that while many agree, there are differing opinions or experiences regarding these aspects of digital transformation. Implications of the SD Range: The overall average SD of 0.888 indicates moderate variability in responses. This means that while respondents generally share similar perceptions about digital transformation efforts, certain topics particularly those linked to cyber security and the use of big data spark more diverse opinions.

The statement "Kenyan consumers' concerns about data privacy could limit the full potential of big data analytics in the insurance sector" received the highest mean score of 4.05. This indicates that respondents strongly agree that data privacy concerns are a significant barrier to leveraging big data analytics effectively. The standard deviation of 0.899 suggests a moderate level of agreement, indicating that while most respondents share this view, there is some variability in opinions. The second highest mean score of 4.02 was for the statement "Government initiatives to improve digital literacy have boosted public trust in online insurance platforms." This reflects a consensus that government efforts to enhance digital literacy are positively impacting public trust, with a standard deviation of 0.848. This suggests that respondents generally perceive these initiatives as beneficial for increasing confidence in digital insurance services.

The statement "Kenyan insurers are using big data to identify new customer groups that traditional insurance hasn't reached" had a mean of 3.99, indicating that respondents feel positively about the use of big data for market expansion. The standard deviation of 0.900 suggests some variability in responses, but overall agreement remains strong. The mean score of 3.99 for "Kenyan insurers' increased cybersecurity investments have made them more attractive to customers" indicates a positive perception of the impact of cybersecurity on customer attraction. The standard deviation of 0.935 suggests that while there is general agreement, some respondents may have differing views on the effectiveness of these investments.

The assertion "Kenyan insurance providers leverage expansive data analytics to refine hazard evaluation and deliver equitable pricing" attained an average rating of 3.98. This implies participants' conviction in the proficient application of expansive data for hazard oversight. The dispersion metric of 0.902 denotes a balanced consensus. The proposition "Allocations to data protection by insurance entities have bolstered client confidence in confidentiality" yielded an average of 3.97. This conveys an affirmative outlook on the nexus between protection investments and client assurance. The variability index of 0.854 signifies uniform participant alignment. The declaration "Technological instruments have rendered insurance more reachable for individuals in Kenya's isolated regions" registered an average of 3.92. This underscores participants' acknowledgment of technological instruments' contribution to reachability. The dispersion value of 0.896 intimates moderate divergences in views on reachability enhancements.

The mean score of 3.90 for "Online insurance comparison tools in Kenya have made it easier to find the best insurance policy" indicates a favorable view of these tools. The standard deviation of 0.878 suggests that while many respondents agree, there are differing opinions on their effectiveness. The statement "Insufficient internet access in some Kenyan regions limits the use of digital technologies to promote insurance" scored a mean of 3.88, highlighting a recognized barrier to digital transformation. The standard deviation of 0.869 indicates some variability in responses. The mean scores for statements related to the use of AI and cloud computing, such as "Kenyan insurers are using AI to automate risk assessment" and "Kenyan insurers are using cloud computing to improve the efficiency of insurance claim processing," were both 3.88. This suggests

that while there is recognition of these technologies, there may be room for further adoption and integration.

The proposition "Kenyan insurance entities employ digital promotion to heighten societal cognizance of coverage offerings" garnered an average rating of 3.87. This outcome signifies participants' affirmative appraisal of promotional digital initiatives. The variability measure of 0.896 implies moderate inconsistencies in participant judgments. The assertion "Mobile applications for procuring insurance have augmented coverage reachability in Kenya" achieved an average of 3.87. This conveys a constructive evaluation of mobile innovations' contribution to access enhancement. The dispersion indicator of 0.887 denotes a reasonable consensus among respondents. The declaration "Cybersecurity apprehensions deter certain Kenyans from online insurance acquisitions" registered an average of 3.87. This underscores participants' recognition of cybersecurity as an impediment to digital transactions.

The dispersion metric of 0.881 implies moderate divergences in participant assessments. Tailored Coverage Offerings: The assertion "Kenyan insurance providers utilize expansive data analytics to formulate customized coverage options for diverse client segments" attained an average rating of 3.84. This outcome signifies participants' affirmative appraisal of coverage personalization. The variability index of 0.865 denotes a balanced consensus. The empirical overview discloses a favorable outlook on technological reconfiguration among Kenyan insurance participants, especially concerning data confidentiality, official programs, and expansive data utilization. Nonetheless, impediments persist, notably in cybersecurity apprehensions and connectivity constraints. The results highlight the imperative for sustained initiatives to bolster technological proficiency, fortify protection protocols, and broaden network availability, thereby harnessing the full scope of technological reconfiguration in the coverage domain.

4.5.3 Descriptive analysis for government regulations

This research aimed to identify the specific dimensions of government regulations that influence insurance penetration in Kenya. The composite variable for government regulations was operationalized through four distinct indicators: the clarity and consistency of the regulatory framework, the effectiveness of regulatory oversight, collaboration in policy formulation, and the

adequacy of regulations for innovation and risk management. Participants evaluated the factors using a five-point Likert scale, where 1 denotes strong disagreement and 5 denotes strong agreement. The ratings reflect the level of implementation in Kenyan insurance firms. The results are presented in Table 23.

Table 23: government regulations descriptive statistics

Statement	Mean	Std. Deviation
The dispute resolution process between Kenyan insurance companies are efficient	4.26	.820
The current regulatory oversight in Kenya promotes healthy competition among insurance companies.	4.21	.846
Kenyan insurance regulators are proactive in adapting regulations to keep pace with market trends and technologies.	4.16	.914
The Kenyan government effectively enforces insurance regulations to protect consumers	4.14	.924
Kenyan insurance regulations are clear and easy to understand	4.09	.832
Kenya's regulatory framework is well-suited to address the challenges of digital insurance	4.04	.862
A clearer consistent regulatory framework would stimulate innovation in the Kenyan insurance market	4.02	.854
The Kenyan government provides clear guidance on insurance regulations	3.98	.818
Government agencies in Kenya apply insurance regulations consistently	3.98	.800
The current regulatory framework in Kenya adequately identifies unethical practices within the insurance industry	3.96	.868
Consumer protection groups are involved in discussions about insurance regulations in Kenya.	3.82	.965
The Kenyan government effectively consults with insurance industry experts when creating new regulations.	3.78	1.022
There is a clear and transparent process for stakeholders to provide input on proposed insurance regulations in Kenya	3.78	.967
The current regulatory framework balances the interests of insurance companies, consumers, and the government.	3.76	1.022

Kenyan insurance regulations allow insurers to develop innovative products to meet diverse customer needs.	3.71	.989
Average Sum	3.98	0.902

Valid N (listwise) = 201

The results in table 23 shows an average mean score across all statements was 3.98, with a standard deviation of 0.902. This indicates a generally positive perception of government regulations, though the variability suggests that not all respondents share the same level of agreement. The standard deviation (SD) values in Table 23 indicate the degree of variability or consensus among respondents regarding statements about government regulations in the Kenyan insurance sector. Moderate Variation Across Statements: The SD values mostly range from about 0.80 to 1.02, reflecting a moderate spread of responses around the mean. For example, the statement "The dispute resolution process between Kenyan insurance companies are efficient" has an SD of 0.820, indicating relatively consistent agreement among respondents with a mean of 4.26. Higher Variability in Some Areas: Statements such as "The Kenyan government effectively consults with insurance industry experts when creating new regulations" (SD = 1.022) and "The current regulatory framework balances the interests of insurance companies, consumers, and the government" (SD = 1.022) show greater variability. This suggests that opinions differ more widely on these topics, possibly reflecting varied experiences or perceptions of regulatory engagement and balance.

Implications of Standard Deviation: Lower SD values indicate that respondents generally share similar views, suggesting well-understood or consistently experienced regulatory aspects. Higher SD values point to areas where perceptions are more diverse, which may highlight uncertainty, differing stakeholder experiences, or emerging challenges in regulatory practices. The average SD of 0.902 suggests a moderate level of agreement overall, meaning that while many respondents have aligned views on government regulations, some statements reveal notable differences in opinion that could warrant further investigation or policy attention

The statement "The dispute resolution process between Kenyan insurance companies is efficient" received the highest mean score of 4.26. This indicates that respondents strongly agree on the effectiveness of the dispute resolution mechanisms in place, suggesting confidence in the regulatory framework's ability to handle conflicts efficiently. The standard deviation of 0.820 indicates a moderate level of agreement, suggesting that while most respondents share this view, there is some variability in opinions. The second highest mean score of 4.21 was for the statement "The current regulatory oversight in Kenya promotes healthy competition among insurance companies." This reflects a consensus that the regulatory environment fosters competition, which is essential for innovation and consumer choice. The standard deviation of 0.846 suggests that respondents generally agree, but there are differing opinions on the extent of this promotion. The statement "Kenyan insurance regulators are proactive in adapting regulations to keep pace with market trends and technologies" had a mean of 4.16, indicating that respondents feel positively about the regulators' ability to respond to changes in the market. The standard deviation of 0.914 suggests some variability in responses, but overall agreement remains strong.

The mean score of 4.14 for "The Kenyan government effectively enforces insurance regulations to protect consumers" indicates a positive perception of the government's enforcement capabilities. The standard deviation of 0.924 suggests that while there is general agreement, some respondents may have differing views on the effectiveness of enforcement. The statement "Kenyan insurance regulations are clear and easy to understand" scored a mean of 4.09, suggesting that respondents believe the regulations are well-articulated. The standard deviation of 0.832 indicates a relatively consistent agreement among respondents, highlighting the importance of clarity in regulatory frameworks. The mean score of 4.04 for "Kenya's regulatory framework is well-suited to address the challenges of digital insurance" reflects a recognition that the current regulations are relevant in the context of evolving technologies. The standard deviation of 0.862 suggests that while many respondents agree, there are differing opinions on the framework's adaptability. The statement "A clearer consistent regulatory framework would stimulate innovation in the Kenyan insurance market" received a mean score of 4.02, indicating that respondents see the potential for regulatory clarity to drive innovation. The standard deviation of 0.854 suggests a moderate level of agreement.

The assertion "The Kenyan authorities furnish explicit directives on coverage mandates" garnered an average rating of 3.98. This outcome signifies participants' acknowledgment of official endeavors to deliver regulatory orientation, albeit with potential avenues for refinement. The dispersion measure of 0.818 intimates moderate inconsistencies in participant evaluations. The proposition "Official bodies in Kenya enforce coverage mandates uniformly" likewise attained an average of 3.98. This reflects a prevailing conviction in the steadfastness of mandate implementation. The variability index of 0.800 underscores a substantial degree of concurrence among respondents. An average score of 3.96 for the declaration "Kenya's extant mandate structure proficiently discerns illicit conduct in the coverage domain" conveys participants' perception of the structure's efficacy in countering impropriety. The dispersion indicator of 0.868 suggests discernible heterogeneities in appraisals. The statement "Advocacy collectives for consumers partake in deliberations over coverage mandates in Kenya" registered an average of 3.82. This implies a partial endorsement of consumer advocacy engagement, tempered by apprehensions regarding their participatory scope. The variability metric of 0.965 denotes pronounced divergences in viewpoints.

The proposition "Kenyan authorities proficiently solicit input from coverage sector specialists in formulating novel mandates" attained an average rating of 3.78. This outcome evinces participants' acknowledgment of the incorporation of domain expertise, notwithstanding opportunities for augmentation. The dispersion metric of 1.022 signifies a broad spectrum of participant viewpoints on this aspect. The assertion "A lucid and forthright protocol prevails for stakeholders to contribute to prospective coverage mandates in Kenya" likewise registered an average of 3.78. This implies a partial perception of procedural openness, albeit with apprehensions regarding its robustness. The variability index of 0.967 underscores discernible heterogeneities in assessments. An average score of 3.76 for the declaration "Kenya's extant mandate structure harmonizes the concerns of coverage organizations, clientele, and official entities" conveys participants' recognition of initiatives toward equilibrium, tempered by reservations concerning their operational efficacy.

The standard deviation of 1.022 suggests a significant range of opinions. The statement "Kenyan insurance regulations allow insurers to develop innovative products to meet diverse customer needs" received the lowest mean score of 3.71, indicating that while there is some agreement, respondents may feel that regulations could be more conducive to innovation. “The standard deviation of 0.989 suggests a moderate level of agreement”. The descriptive analysis reveals that government regulations are perceived positively among respondents in the Kenyan insurance sector, particularly regarding the efficiency of dispute resolution, regulatory oversight, and clarity of regulations. However, there are areas, particularly related to stakeholder involvement, consultation with industry experts, and the balance of interests, where improvements could enhance the regulatory framework's effectiveness.

4.5.4 Descriptive analysis for Insurance Penetration

The insurance penetration variable was a composite variable measured through six (6) main aspects namely; Insurance penetration rate, Insurance coverage rates, Insurance density, Distribution Channels, Claims settlement ratio and Insurance awareness levels. The survey employed a five-point Likert scale to gauge factors related to insurance penetration, using 1 as the baseline for disagreement and 5 as strong agreement in Kenya’s insurance sector. Table 25 gives the results of the findings.

Table 25: Insurance Penetration descriptive statistics

Statement	Mean	Std. Deviation
Our company has seen a significant increase in average premium per policyholder.	3.96	.976
We actively track and analyze the insurance penetration rate as a key performance indicator.	3.95	.887
The average amount spent on insurance premiums per person in Kenya is relatively high.	3.91	.923
We offer affordable insurance products to cater to different income levels and needs.	3.89	.926
Our company has significantly contributed to the growth of Kenya's insurance market. Our company has significantly contributed to the growth of Kenya's insurance market.	3.89	.907

We believe there is significant potential for further growth in Kenya's insurance market.	3.88	.840
A wider range of insurance products is now available to cater to the diverse needs of Kenyans	3.86	.866
More Kenyans are now insured compared to previous years	3.86	.946
We believe increasing insurance density is crucial for financial protection	3.84	.914
Micro-insurance products have helped to expand insurance coverage to low-income Kenyan.	3.84	1.009
The number of Kenyans with insurance policies has increased significantly in recent years.	3.82	.937
We have invested in digital channels to make our insurance products more accessible.	3.82	.865
Insurance penetration in Kenya has increased significantly in recent years.	3.82	.882
A strong and diversified distribution network is crucial for increasing insurance penetration in Kenya	3.82	.813
Our company uses various channels to reach potential customers	3.81	.796
We continuously improve our distribution channels to reach underserved segments of the population.	3.81	.891
Average Sum	**3.86**	**.899**

Valid N (listwise) =201

The results in table 25 shows an average mean score across all statements was 3.86, with a standard deviation of 0.899. This indicates a generally positive perception of insurance penetration attributes, though the variability suggests that not all respondents share the same level of agreement. The standard deviation (SD) values in Table 25 reflect the variability or dispersion of respondents' perceptions regarding insurance penetration in Kenya. SD measures how spread out the responses are around the mean, indicating the level of agreement or diversity in opinions.

Moderate Variability: The SD values range from approximately 0.79 to 1.01, with an average SD of 0.899. This suggests a moderate level of variation in responses. For example, the statement "Our company has seen a significant increase in average premium per policyholder" has an SD of 0.976, indicating some diversity in how respondents perceive premium increases. Higher Variation in Certain Areas: The statement "Micro-insurance products have helped to expand insurance coverage to low-income Kenyans" has the highest SD of 1.009, showing that opinions vary more widely on the impact of micro-insurance. This could reflect differing experiences or awareness levels among respondents regarding micro-insurance effectiveness. Lower Variation in Other Statements: Statements like "Our company uses various channels to reach potential customers" (SD = 0.796) and "A strong and diversified distribution network is crucial for increasing insurance penetration in Kenya" (SD = 0.813) have lower SDs, indicating stronger consensus on the importance of distribution channels.

Implications: A moderate SD overall means that while there is general agreement on many aspects of insurance penetration, some topics elicit more diverse views. This variability can highlight areas where perceptions differ due to factors such as regional differences, company strategies, or customer segments. The statement "Our company has seen a significant increase in average premium per policyholder" received the highest mean score of 3.96. This suggests that respondents generally agree that their companies have experienced growth in premium income per policyholder, indicating a positive trend in customer engagement and financial performance. The standard deviation of 0.976 indicates some variability in responses, suggesting that while many see this increase, there are differing experiences among companies. The second highest mean score of 3.95 was for "We actively track and analyze the insurance penetration rate as a key performance indicator." This reflects a strong recognition of the importance of monitoring penetration rates as a measure of success in the insurance market. The standard deviation of 0.887 suggests a relatively consistent agreement among respondents regarding the significance of this practice.

The statement "The average amount spent on insurance premiums per person in Kenya is relatively high" scored a mean of 3.91, indicating that respondents perceive the average spending on insurance as substantial. The standard deviation of 0.923 suggests some variability in perceptions,

which may reflect differing views on what constitutes "high" spending in the context of insurance. The mean score of 3.89 for "We offer affordable insurance products to cater to different income levels and needs" indicates that respondents believe their companies are making efforts to provide accessible insurance options. The standard deviation of 0.926 suggests a moderate level of agreement, indicating that while many respondents feel positively about affordability, there may be differing opinions on how well this is achieved.

The statement "Our company has significantly contributed to the growth of Kenya's insurance market" also received a mean score of 3.89, reflecting a belief among respondents that their companies play a vital role in expanding the market. The standard deviation of 0.907 indicates some variability in responses, suggesting that perceptions of contribution may differ based on company size or market segment. The mean score of 3.88 for "We believe there is significant potential for further growth in Kenya's insurance market" indicates optimism about future opportunities. The standard deviation of 0.840 suggests a relatively uniform agreement, highlighting a shared belief in the market's growth potential. The statement "A wider range of insurance products is now available to cater to the diverse needs of Kenyans" received a mean score of 3.86, indicating that respondents recognize the increasing variety of products available. The standard deviation of 0.866 suggests some variability in perceptions, which may reflect differences in product offerings among companies. The mean score of 3.86 for "More Kenyans are now insured compared to previous years" suggests a positive trend in insurance uptake. The “standard deviation of 0.946 indicates some variability in responses, reflecting differing experiences and observations among companies”.

The statement "We believe increasing insurance density is crucial for financial protection" scored a mean of 3.84, indicating that respondents recognize the importance of insurance density in enhancing financial security. The standard deviation of “0.914 suggests a moderate level of agreement”. The mean score of 3.84 for "Micro-insurance products have helped to expand insurance coverage to low-income Kenyans" reflects a belief in the effectiveness of micro-insurance in reaching underserved populations. The standard deviation of “1.009 indicates a higher level of variability, suggesting differing views on the impact of these products”. The statement

"The number of Kenyans with insurance policies has increased significantly in recent years" received a mean score of 3.82, indicating a recognition of growth in policyholder numbers. “The standard deviation of 0.937 suggests some variability in perceptions”. The mean score of 3.82 for "We have invested in digital channels to make our insurance products more accessible" indicates that companies are recognizing the importance of digital transformation in enhancing accessibility. “The standard deviation of 0.865 suggests a moderate level of agreement”.

The statement "Insurance penetration in Kenya has increased significantly in recent years" also scored a mean of 3.82, reflecting a general consensus on the positive trend in penetration rates. “The standard deviation of 0.882 indicates some variability in perceptions”. The mean score of 3.82 for "A strong and diversified distribution network is crucial for increasing insurance penetration in Kenya" highlights the recognition of distribution channels' role in enhancing penetration. “The standard deviation of 0.813 suggests a relatively consistent agreement”. The statement "Our company uses various channels to reach potential customers" received a mean score of 3.81, indicating that companies are employing diverse strategies to engage customers. The standard deviation of 0.796 suggests a moderate level of agreement. The mean score of 3.81 for "We continuously improve our distribution channels to reach underserved segments of the population" indicates a commitment to enhancing access to insurance. The standard deviation of 0.891 suggests some variability in perceptions. The descriptive analysis reveals that insurance penetration is perceived positively among respondents in the Kenyan insurance sector, particularly regarding the increase in average premiums, tracking of penetration rates, and the availability of diverse insurance products. However, there are areas, particularly related to affordability, micro-insurance impact, and the effectiveness of distribution channels, where improvements could enhance overall penetration.

4.6 Correlation Analysis

Correlation analysis is a statistical method used to evaluate the strength and direction of the relationship between two variables (Creswell & Clark, 2017). The analysis yields the correlation coefficient as the outcome. The “coefficient ranges from -1 to 1. A coefficient of +1 represents a perfect positive relationship, indicating that as one variable increases, the other also increases”. In

contrast, a coefficient of -1 signifies a perfect negative, or inverse, relationship, where one variable increases as the other decreases. The closer the coefficient is to 0, the weaker the association between the two variables. The sign of the coefficient (+ or -) reveals the direction of the relationship, while its magnitude (ignoring the sign) indicates its strength. According to guidelines provided by Saunders et al. (2012), the strength of the correlation can be interpreted as follows: a coefficient value below 0.3 suggests a weak correlation; a value between 0.3 and 0.5 indicates a moderate correlation; and a value above 0.5 denotes a strong correlation. A coefficient of 0 means there is no linear relationship between the variables.

4.6.1 Correlation Analysis Results of the Study Variables

The study "first determined the relationships among the study variables". The association between the independent variable and the insurance penetration in Kenya were determined through correlation coefficient. The relevant results are presented in table 26."

Table 26: Correlation of the study Variables

		Insurance Penetration	Digital Transformation	Strategic Leadership	Government Regulations
Insurance Penetration	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	201			
Digital Transformation	Pearson Correlation	.552**	1		
	Sig. (2-tailed)	.000			
	N	201	201		
Strategic Leadership	Pearson Correlation	.639**	.689**	1	
	Sig. (2-tailed)	.000	.000		
	N	201	201	201	
Government Regulations	Pearson Correlation	.552**	1.000**	.689**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	201	201	201	201

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

The correlation results in Table 26 show that the correlation coefficient of 0.639 which indicates a strong positive relationship between strategic leadership and insurance penetration. This suggests that effective strategic leadership practices within insurance companies are associated with higher levels of insurance penetration. The significance level of 0.000 further confirms that this relationship is statistically significant. The relationship between digital transformation and insurance penetration had a positive correlation that suggests a moderate to strong relationship between digital transformation efforts and insurance penetration. A correlation coefficient of 0.552 indicates that as digital transformation initiatives increase, insurance penetration also tends to increase. “The significance level of 0.000 indicates that this relationship is statistically significant, meaning it is unlikely to have occurred by chance”. Similarly, “the relationship between government regulations and insurance penetration, the correlation coefficient of 0.552 indicates a moderate to strong positive relationship between government regulations and insurance penetration”. This suggests that effective regulatory frameworks contribute positively to the growth of insurance penetration in Kenya, with the significance level confirming the robustness of this finding.

The correlational analysis results underscore the interconnectedness of strategic leadership, digital transformation, and government regulations in influencing insurance penetration in Kenya. By recognizing and leveraging these relationships, insurance companies can develop strategies that enhance their market presence and contribute to the overall growth of the insurance industry in the country. The findings suggest that a concerted effort in these areas can lead to improved insurance penetration, ultimately benefiting consumers and the economy as a whole.

The positive correlation between digital transformation and insurance penetration implies that insurance companies should prioritize digital initiatives. This could involve investing in technology, improving online customer engagement, and utilizing data analytics to better understand customer needs. By enhancing digital capabilities, companies can potentially increase their market reach and penetration. The strong correlation between strategic leadership and insurance penetration highlights the importance of effective leadership in driving growth. Insurance companies should focus on developing leadership skills that emphasize strategic

thinking, innovation, and adaptability. Training programs and leadership development initiatives can help cultivate leaders who are equipped to navigate the complexities of the insurance market. The correlation between government regulations and insurance penetration suggests that a favorable regulatory environment is crucial for industry growth. Insurance companies should engage with policymakers to advocate for regulations that promote competition, innovation, and consumer protection. Collaborative efforts between the industry and government can lead to a regulatory framework that supports the expansion of insurance services.

4.7 Regression Analysis and Test of Hypotheses

"To analyze the relationships between the study's variables and to test the proposed hypotheses, a combination of statistical methods was employed". These included Pearson's Product Moment Correlation analysis to measure the strength and direction of relationships, along with various forms of regression analysis. The hypotheses, which were developed from the research objectives, were tested using specific regression techniques tailored to their nature. Simple regression analysis was utilized to examine hypotheses about direct relationships. For the indirect relationships proposed in the second and third hypotheses, stepwise regression analysis was applied. Finally, multiple regression analysis was conducted to evaluate the fourth hypothesis. The choice of these specific analytical methods was guided by the study's objectives, the type of data collected, and the scales used for measurement.

Hypothesis testing was conducted at a 95% confidence level ($\alpha=0.05$), where" a p-value less than 0.05 prompted the rejection of the null hypothesis, and a p-value greater than 0.05 indicated a failure to reject it." The interpretation of the findings relied on several key statistical measures. The F-statistic evaluated the overall significance of the regression model, with larger values indicating a more robust model. The beta coefficient (β) showed the direction of an independent variable's effect on the dependent variable (positive or negative). The correlation coefficient (R) measured the strength of the relationship between variables, and the t-value assessed the statistical significance of each individual predictor. The results were then organized and presented according to the study's objectives and their respective hypotheses.

4.7.1 Strategic leadership and insurance penetration

This section examines the first research objective, which aimed to assess the relationship between strategic leadership and insurance penetration in Kenya. To test this, "the following hypothesis was formulated and evaluated: Ho1: There is no significant effect of strategic leadership on insurance penetration in Kenya". The hypothesis was tested using simple linear regression, which provided regression coefficients, the coefficient of determination (R^2), and analysis of variance (ANOVA), along with diagnostic tests to evaluate model fit, overall significance, and individual variable significance. The results of these analyses are summarized in Tables 27, 28, and 29.

Table 27: Model Summary for strategic leadership and insurance penetration

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.639[a]	.408	.405	.37694	.408	137.171	1	199	.000

a. Predictors: *(Constant), strategic leadership*

The results presented in Table 27 reveal a correlation coefficient (R) of 0.639, indicating a strong positive relationship between strategic leadership and insurance penetration. This means that "as strategic leadership practices improve, insurance penetration tends to increase, suggesting that leadership plays a meaningful role in driving this outcome". The strength of this correlation underscores the importance of strategic leadership as a significant influencing factor.

The R^2 value of 0.408 shows that approximately 40.8% of the variation in insurance penetration can be explained by strategic leadership alone. This reflects a moderate level of explanatory power, meaning that while strategic leadership is important, it does not account for all the variability in insurance penetration. The remaining 59.2% of the variation is attributable to other factors not included in this model such as market conditions, consumer behavior, or regulatory environments that also influence insurance penetration in Kenya.

The Adjusted R^2 value of 0.405 offers a refined measure of the model's explanatory capacity by adjusting for the number of predictors used. This slight reduction from the original R^2 indicates that the model remains stable and reliable even when accounting for the complexity introduced by multiple variables. The consistency between R^2 and Adjusted R^2 suggests that the inclusion of strategic leadership as a predictor is both valid and meaningful, reinforcing its role in the broader model of insurance penetration dynamics.

Table 28: ANOVA of the Relationship between strategic leadership and insurance penetration

	Sum of Squares	df	Mean Square	F	Sig.
Regression	19.490	1	19.490	137.171	.000[b]
Residual	28.275	199	.142		
Total	47.766	200			

a. Dependent Variable: *insurance penetration*
b. Predictors: (Constant), *strategic leadership*

"To evaluate the overall effectiveness of the regression model in predicting insurance penetration, an Analysis of Variance (ANOVA) test was conducted, as shown in Table 28". The results (F = 137.171, p-value = 0.000) confirm that the model is statistically significant and provides a strong fit for the data. This means that strategic leadership significantly contributes to explaining variations in insurance penetration in Kenya. "The high F-statistic and the extremely low p-value indicate that the relationship between strategic leadership and insurance penetration is not due to chance, but rather reflects a meaningful and reliable association." This finding supports the conclusion that strategic leadership is a key driver of insurance market penetration. The results offer valuable evidence for insurance companies and policymakers to focus on leadership development as a strategic tool for increasing market penetration and improving overall industry performance.

Table 29: Model Coefficients of the Relationship between strategic leadership and insurance penetration

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	2.158	.149		14.494	.000	1.864	2.451
strategic leadership	.437	.037	.639	11.712	.000	.363	.510

a. Dependent Variable: *insurance penetration*

The regression coefficients table 29 "provides critical insights into the relationship between strategic leadership and insurance penetration in Kenya." This analysis focuses on the unstandardized and standardized coefficients, significance levels, and confidence intervals for the regression model. The constant term represents the expected value of insurance penetration when the predictor variable, strategic leadership, is held at zero. This indicates a baseline level of insurance penetration that exists independently of strategic leadership practices. "The value of 2.158 suggests that even in the absence of any influence from strategic leadership, there is a foundational level of insurance penetration."

The unstandardized coefficient for strategic leadership indicates that for every one-unit increase in strategic leadership, insurance penetration is expected to increase by 0.437 units, assuming all other factors remain constant. This positive relationship suggests that enhancing strategic leadership practices within insurance companies can significantly contribute to improving insurance penetration rates. The t-statistic of 11.712 for strategic leadership suggests a highly significant effect, reinforcing the importance of strategic leadership in influencing insurance penetration. The p-value for both the constant and strategic leadership is 0.000 ($p < 0.001$), indicating that the results are statistically significant. This means that the likelihood of observing such a relationship by chance is extremely low, providing strong evidence that strategic leadership positively affects insurance penetration in Kenya.

The confidence interval for the coefficient of strategic leadership ranges from 0.363 to 0.510. This interval suggests that we can be 95% confident that the true effect of strategic leadership on insurance penetration lies within this range. Since the entire interval is above zero, it further supports the conclusion that strategic leadership has a positive impact on insurance penetration. This can be expressed by the following equation, $\boldsymbol{Y = 2.158 + 0.437X}$. The relationship is positive.

*(i) Insurance penetration in Kenya =**2.158** + 0.437(strategic leadership)*

The results clearly demonstrate that strategic leadership significantly influences insurance penetration in Kenya. Consequently, the null hypothesis—which posited no significant effect—was rejected, and the alternative conclusion was accepted: strategic leadership does have a meaningful impact on insurance penetration in the country. The regression coefficient analysis further confirms a strong, statistically significant relationship between the two variables. This finding highlights strategic leadership as a critical driver of market performance, suggesting that improvements in leadership practices could directly support higher insurance penetration rates. These insights are particularly valuable for insurance companies, policymakers, and researchers seeking to understand and enhance the factors that shape the Kenyan insurance market. By focusing on strategic leadership development, stakeholders can better position themselves to achieve sustainable growth and broader market reach.

4.8.2 Strategic leadership, digital transformation and insurance penetration

"The second objective of the study was to investigate the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya." This was tested through null hypothesis.

$H0_2$: digital transformation has no mediating role on the relationship between strategic leadership and insurance penetration in Kenya.

The study utilized the four-step approach developed by Baron and Kenny (1986) to conduct regression analyses, examining the significance of the coefficients at each stage. Mediation models for these regression analyses were implemented using Andrew Hayes's (2013) PROCESS macro, a comprehensive set of preprogrammed procedures available in SPSS. Specifically, the PROCESS

model 4 macro calculates the indirect effect coefficient(s) and employs a bootstrap method to assess the significance of the indirect effect.

1. The strategic leadership Predicting insurance penetration

This analysis confirms "the statistical significance of the relationship between strategic leadership (X) and insurance penetration in Kenya (Y), expressed as X → Y." The results, summarized across Tables 27, 28, and 29, indicate that, holding all other factors constant, the baseline value of insurance penetration in Kenya is 2.158. "For every one-unit increase in strategic leadership, insurance penetration is expected to rise by 0.437 units, with a p-value of 0.000—well below the 0.05 significance threshold." This supports the conclusion of a statistically significant positive relationship between the two variables. The model's explanatory power is reflected in an R-squared value of 0.405, meaning that approximately 40.5% of the variation in insurance penetration can be attributed to strategic leadership. "The F-statistic of 137.171 further validates the overall significance of the regression model." Additionally, the positive coefficient (0.437) indicates a direct, positive elasticity, suggesting that strategic leadership is a strong and reliable predictor of insurance penetration in Kenya.

"The regression equation can be expressed as:"

Y = 2.158 + 0.437X

Where Y represents insurance penetration and X represents strategic leadership. This model provides a clear, quantifiable framework for understanding how improvements in leadership practices can drive growth in the insurance sector.

2. Strategic leadership Predicting digital transformation

"This step was intended to confirm whether the relationship between strategic leadership (X) and digital transformation (Z) is significance - illustrated as X → Z."

Table 30: Coefficient of Determination of strategic leadership Predicting digital transformation

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change

.689[a]	.474	.472	.45270	.474	179.539	1	199	.000

a. Predictors: (Constant), strategic leadership

"Results in table 30 show an R-Square adjusted of 0.472 with Sig= 0.000 where p-value <0.05." "This implies that strategic leadership explains 47.2 percent of the variation digital transformation."

Table 31: Analysis of Variance (ANOVA) on strategic leadership predicting digital transformation

	Sum of Squares	df	Mean Square	F	Sig.
Regression	36.795	1	36.795	179.539	.000[b]
Residual	40.783	199	.205		
Total	77.578	200			

a. Dependent Variable: digital transformation

b. Predictors: (Constant), strategic leadership

"As shown in table 31, F-calculated (1, 199) = 179.539 at 2-tail test and 95% confidence level. Results also show p-value = 0.000 < 0.05. This further enhances the inference that strategic leadership significantly influences digital transformation."

Table 32: Regression Coefficients on strategic leadership and digital transformation

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.621	.179		9.069	.000	1.269	1.974
strategic leadership	.600	.045	.689	13.399	.000	.512	.688

a. Dependent Variable: digital transformation

The results shown in table 32 indicate that digital transformation remains at a value of 1.621 when strategic leadership is kept constant. The findings indicate "a statistically significant positive relationship between strategic leadership and digital transformation." For every one-unit increase

in strategic leadership, digital transformation rises by 0.600 units ($p < 0.000$). Consequently, "the researcher summarizes that, strategic leadership significantly and positively predicts digital transformation as summarized by the following model:" **Z = 1.621 + 0.600X**

3. Digital transformation Predicting insurance penetration

This step was intended to confirm whether the relationship between digital transformation (Z) and insurance penetration (Y) is significance of illustrated as Z→Y.

Table 33: Model summary for digital transformation and insurance penetration

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.552[a]	.305	.301	.40856	.305	87.155	1	199	.000

a. Predictors: (Constant), Digital transformation

"Results in table 33 show an adjusted R-Square of 0.301 with Sig= 0.000 where p-value<0.05. This implies that digital transformation explains 30.1% percent of the variation in insurance penetration in Kenya."

Table 34: Analysis of Variance (ANOVA) on digital transformation and insurance penetration

	Sum of Squares	df	Mean Square	F	Sig.
Regression	14.548	1	14.548	87.155	.000[b]
Residual	33.218	199	.167		
Total	47.766	200			

a. Dependent Variable: insurance penetration
b. Predictors: (Constant), digital transformation

As shown in table 34, "F-calculated = 87.155 at 2-tail test and 95% confidence level. Results also show p-value = 0.000 < 0.05." This further enhances the inference that digital transformation significantly influences insurance penetration in Kenya.

Table 35: Regression Coefficients on digital transformation and insurance penetration

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	2.150	.187		11.512	.000	1.782	2.518
digital transformation	.433	.046	.552	9.336	.000	.342	.525

a. Dependent Variable: insurance penetration

Findings as shown in table 35 show that, "when digital transformation is held constant, insurance penetration remains at 2.150. Additionally, a one unit increase digital transformation leads to an increase in insurance penetration by 0.433 units with a p-value of 0.000 < 0.05." Consequently, the researcher summarizes that, digital transformation significantly and positively predicts insurance penetration in Kenya as summarized by the following model:

Y = 2.150 +0.433Z

4. Strategic leadership and digital transformation predicting insurance penetration

This step was intended to confirm whether Strategic leadership (X) and digital transformation (Z) significantly influence insurance penetration in Kenya, expressed as $Z|X \rightarrow Y$

Table 36: Model summary of Strategic leadership and digital transformation predicting insurance penetration

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.657[a]	.432	.426	.37021	.432	75.260	2	198	.000

a. Predictors: (Constant), digital transformation, Strategic leadership

The findings shown in Table 36 indicate "the correlation coefficient (R) of 0.657 that indicates a strong positive relationship between the combined effects of strategic leadership and digital transformation on insurance penetration." This suggests that as both strategic leadership and digital

transformation improve, insurance penetration is likely to increase. The strength of this correlation implies that these two independent variables are significant contributors to the dependent variable. “The R Square value of 0.432 indicates that approximately 43.2% of the variance in insurance penetration can be explained by the combined effects of strategic leadership and digital transformation.” This level of explanatory power suggests that “while these factors are important, there are other variables not included in the model that also contribute to variations in insurance penetration.” An R Square value of 0.432 is considered moderate, indicating a meaningful relationship but also highlighting the complexity of the factors influencing insurance penetration.

The adjusted R-squared value of 0.426 provides a “refined estimate of the model’s explanatory power by accounting for the number of predictors included.” This value is slightly lower than the standard R-squared, which reflects the model’s increased complexity and helps prevent overestimation of fit due to additional variables. Adjusted R-squared is particularly valuable when comparing models with varying numbers of predictors, as it adjusts for the risk of overfitting that can arise from adding more terms. “The adjusted R-squared of 0.426 indicates that approximately 42.6% of the variance in insurance penetration is explained by the combined influence of strategic leadership and digital transformation.” This represents a meaningful improvement over simpler models, suggesting that the inclusion of digital transformation as a mediator significantly enhances the model’s ability to account for changes in insurance penetration. The “results confirm a statistically significant and positive relationship among strategic leadership, digital transformation, and insurance penetration in Kenya.” Both factors emerge as critical predictors, underscoring their importance in driving market growth. These insights offer actionable guidance for insurance companies: by strategically strengthening leadership practices and advancing digital capabilities, firms can more effectively increase their market penetration and achieve sustainable growth.

Table 37: Analysis of Variance (ANOVA) strategic leadership and digital transformation predicting insurance penetration

	Sum of Squares	df	Mean Square	F	Sig.
Regression	20.629	2	10.315	75.260	.000[b]

Residual	27.136	198	.137
Total	47.766	200	

a. Dependent Variable: insurance penetration
b. Predictors: (Constant), digital transformation, strategic leadership

As shown in table 37, "F-calculated = 75.260 at 2-tail test and 95% confidence level. Results also show p-value = 0.000 < 0.05." This reinforces the premise that strategic leadership and digital transformation have a substantial impact on the success insurance penetration in Kenya. The ANOVA results indicate a statistically significant relationship between strategic leadership, digital transformation, and insurance penetration in Kenya. The analysis reveals that "these predictors collectively explain a meaningful portion of the variance in insurance penetration, highlighting their importance in driving market growth." By leveraging these insights, insurance companies can develop targeted strategies to enhance their leadership and digital capabilities, ultimately improving their penetration in the insurance market.

Table 38: Regression Coefficients of strategic leadership and digital transformation predicting insurance penetration

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
	B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
(Constant)	1.887	.174		10.855	.000	1.544	2.229
strategic leadership	.337	.051	.492	6.661	.000	.237	.436
digital transformation	.167	.058	.213	2.883	.004	.053	.281

a. Dependent Variable: insurance penetration

The results in table 38 shows that the constant term (B = 1.887) that represents the expected value of insurance penetration when both strategic leadership and digital transformation are held at zero, indicating a foundational level of insurance penetration that exists independently of the influences

of the predictors. “The unstandardized coefficient for strategic leadership (B = 0.337) indicates that for every one-unit increase in strategic leadership, insurance penetration is expected to increase by 0.337 units, holding digital transformation constant.” This positive relationship suggests that enhancing strategic leadership practices within insurance companies can significantly contribute to improving insurance penetration rates. Similarly, “the unstandardized coefficient for digital transformation (B = 0.167) indicates that for every one-unit increase in digital transformation, insurance penetration is expected to increase by 0.167 units, holding strategic leadership constant.” This suggests that “improvements in digital transformation initiatives also positively impact insurance penetration, albeit to a lesser extent than strategic leadership.”

The relationship between strategic leadership and insurance penetration remains statistically significant even when digital transformation is introduced as a mediator. This is evidenced by the coefficient for strategic leadership in Table 29, which is $\beta = 0.437$ with a significant p-value ($p = 0.000 < 0.05$). When digital transformation is included in the model, this coefficient decreases to $\beta = 0.337$, still maintaining significance ($p = 0.000 < 0.05$). This reduction indicates that digital transformation partially mediates the relationship between strategic leadership and insurance penetration in Kenya meaning strategic leadership influences insurance penetration both directly and indirectly through its effect on digital transformation. The regression equation for this model is:

Insurance penetration in Kenya = 1.887 + 0.337 (strategic leadership) + 0.167 (digital transformation)

This equation shows that strategic leadership and digital transformation both contribute positively and significantly to insurance penetration, with strategic leadership having a greater direct impact. “The inclusion of digital transformation as a partial mediator enhances the model’s explanatory power and provides a more nuanced understanding of how leadership practices and digital capabilities jointly drive market performance.” The findings suggest that while digital transformation plays an important role in amplifying the effects of strategic leadership, strategic leadership itself remains a critical driver of insurance penetration. This underscores the value of investing in both leadership development and digital innovation to achieve sustainable growth in Kenya’s insurance sector.

The null hypothesis (Ho2), which claimed that digital transformation does not mediate the relationship between strategic leadership and insurance penetration in Kenya, was rejected. This confirms that digital transformation partially mediates and it is has a significant mediating role in this relationship. The regression coefficients reveal that both strategic leadership and digital transformation contribute uniquely and synergistically to enhancing insurance penetration. Digital transformation not only mediates but also amplifies the positive influence of strategic leadership, making it a vital component for achieving higher market penetration.

The findings emphasize that strategic leadership is a powerful predictor of insurance penetration, with a strong positive correlation indicating that improved leadership directly supports market growth. Although strategic leadership has a greater impact, digital transformation's positive effect highlights "the necessity for insurers to invest in digital capabilities—such as technology adoption, digital customer engagement, and data-driven decision-making—to complement leadership initiatives." Moreover, the mediating role of digital transformation suggests that effective leadership enhances digital strategies, which in turn further boost penetration. This interdependence underscores the strategic value of aligning leadership development with digital transformation efforts to maximize market performance in Kenya's insurance sector.

4.7.3 Strategic leadership, government regulations and insurance penetration

The third objective of this study "aimed to assess the moderating role of the government regulations on the relationship between strategic leadership and insurance penetration in Kenya." This objective was pursued by testing the hypothesis

$H0_3$, which states that government regulations has no moderating role on the relationship between strategic leadership and insurance penetration in Kenya.

To evaluate this null hypothesis, "a hierarchical multiple regression analysis was employed." The moderation effect was examined using the linear regression capabilities in SPSS version 28, following the methodology established by Baron and Kenny (1986). This process involved analysing the regression relationships among strategic leadership, government regulation, and insurance penetration in Kenya. The regression analysis was conducted in a hierarchical manner;

specifically, an interaction term derived from the product of strategic leadership and government regulation, was included as an additional predictor in the model. The hierarchical regression models utilized in this analysis are elaborated upon in the following sections. The results of this test were presented in table 39.

Table 39: Model Summary strategic leadership, government regulation, and insurance penetration

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.654[a]	.428	.422	.37162	.428	73.933	2	198	.000
2	.979[b]	.958	.958	.10054	.531	2508.339	1	197	.000

a. Predictors: (Constant), strategic leadership, government regulation

b. Predictors: (Constant), strategic leadership, government regulation, Interaction Term

The statistical outcomes for the initial analytical framework, designated as Model 1 (the Baseline Model) and detailed in Table 39, "were generated to examine the predictive relationship between strategic leadership and government regulations on insurance penetration within Kenya." The primary objective of this model is to elucidate the extent to which these two independent variables collectively influence the dependent variable, insurance penetration. The analysis yielded a multiple correlation coefficient (R) of 0.654, a value that signifies a moderately strong and positive association between the predictor variables and insurance penetration. This suggests that enhancements in strategic leadership practices and more effective government regulations are correspondingly linked with a higher degree of insurance penetration in the country.

Furthermore, "the coefficient of determination (R Square) was calculated at 0.428, indicating that the combined effect of strategic leadership and government regulations accounts for approximately 42.8% of the observed variance in insurance penetration." This substantial percentage underscores the significant role these factors play in shaping the insurance landscape in Kenya. To ensure a more precise assessment that considers the number of predictors, the adjusted R Square value was

reviewed and found to be 0.422. This figure, “which is only marginally lower than the R Square, confirms the statistical robustness of the model, demonstrating that its explanatory power remains strong even when adjusting for the inclusion of two predictor variables.” Finally, the model's overall statistical validity was confirmed through the F Change statistic, which reported a significance level of 0.000. This result demonstrates that the predictive relationships identified are highly statistically significant and are not attributable to random chance, thereby validating the model's utility for this investigation.

The analysis presented in Table 39 for Model 2, designated as the Moderation Model, investigates the interplay between strategic leadership, government regulations, and their combined interaction as key predictors of insurance penetration in Kenya. This model evaluates how the synergistic effects of these variables, including their interaction, influence insurance uptake. The multiple correlation coefficient (R) of 0.979 demonstrates a very strong positive association between the independent variables (strategic leadership, government regulations, and their interaction) and the dependent variable (insurance penetration), indicating that these factors collectively and significantly drive higher insurance penetration rates. “The R-square value of 0.958 reveals that approximately 95.8% of the variance in insurance penetration can be attributed to the combined influence of strategic leadership, government regulations, and their interaction term.” This figure highlights an exceptionally high level of explanatory capacity, emphasizing the critical role these variables play in shaping insurance market dynamics. “The adjusted R-square, also 0.958, aligns closely with the R-square, suggesting that the model remains statistically robust and reliable, even when accounting for the inclusion of multiple predictors, including the interaction term.”

Furthermore, the R-square change statistic of 0.531 underscores a notable improvement in the model’s explanatory power compared to Model 1. This substantial increase indicates that incorporating the interaction term between strategic leadership and government regulations significantly enhances the model’s predictive accuracy. Collectively, these findings suggest that the interplay between strategic leadership practices and regulatory frameworks not only individually contribute to insurance penetration but also amplify their effects when considered

together, thereby providing a more comprehensive understanding of the factors driving insurance market development in Kenya..

The analysis in Table 39 for Model 2 highlights the statistical significance of introducing an interaction term between strategic leadership and government regulations as predictors of insurance penetration in Kenya. “The F Change statistic of 2508.339, an exceptionally high value, demonstrates that the inclusion of the interaction term significantly increases the variance explained by the model.” “This is further supported by a p-value of 0.000 ($p < 0.001$), confirming that the addition of the interaction term enhances the model’s predictive accuracy beyond what would be expected by chance.” These results strongly suggest that the relationship between strategic leadership and insurance penetration is not static but is instead shaped by the moderating influence of government regulations. The findings indicate that government regulations act as a contextual factor that modifies the strength or direction of the association between strategic leadership and insurance penetration. This implies that the effectiveness of strategic leadership in driving insurance penetration depends on the regulatory environment. For instance, in contexts with stronger regulatory frameworks, strategic leadership may have a more pronounced impact on improving insurance uptake, whereas weaker regulations could diminish this effect. The substantial improvement in model fit, evidenced by the R Square change of 0.531 (as noted in prior analyses), underscores the critical role of considering such interaction effects to fully capture the dynamics influencing insurance market development.

The hierarchical regression results provide strong empirical support for the moderating role of government regulations. By accounting for this interaction, the model achieves a far more nuanced understanding of how strategic leadership and regulatory policies collectively—and interdependently—influence insurance penetration. This suggests that policymakers and industry leaders must consider regulatory contexts when designing strategies to enhance insurance market performance, as the interplay between leadership practices and institutional frameworks plays a decisive role in shaping outcomes. Ultimately, the analysis underscores the necessity of examining contextual variables like government regulations to refine theoretical and practical insights into insurance market dynamics in Kenya.

Table 40: ANOVA for strategic leadership, government regulations, and insurance penetration

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.421	2	10.210	73.933	.000[b]
	Residual	27.345	198	.138		
	Total	47.766	200			
2	Regression	45.774	3	15.258	1509.562	.000[c]
	Residual	1.991	197	.010		
	Total	47.766	200			

a. Dependent Variable: insurance penetration

b. Predictors: (Constant), strategic leadership, government regulations

c. Predictors: (Constant), strategic leadership, government regulations, Interaction Term

Analysis of Variance (ANOVA) results for Model 1, as presented in Table 40, offer a detailed breakdown of the variance in insurance penetration, partitioning it into components explained and unexplained by the model's predictors. The regression sum of squares is reported as 20.421, a value that quantifies the specific amount of variability in insurance penetration that can be directly attributed to the combined influence of strategic leadership and government regulations. This substantial figure indicates that these two factors are significant contributors to the overall levels of insurance penetration. Conversely, "the residual sum of squares is 27.345, which represents the portion of variance in insurance penetration that remains unaccounted for by the model." This suggests that while the identified predictors are important, other external or unmeasured variables also exert a considerable influence on the outcome. The total sum of squares for the analysis is 47.766, which reflects the aggregate variance present in the data and is mathematically the sum of the regression and residual sums of squares. In essence, the ANOVA results for Model 1 demonstrate the meaningful contribution of strategic leadership and government regulations to explaining insurance penetration, while simultaneously acknowledging the existence and potential impact of other factors not included in this particular analytical framework.

Additionally table 40 Model 2, which focuses on the regression analysis with the interaction term, the Sum of Squares reveals significant insights into the relationship between strategic leadership, government regulations, and insurance penetration. The Regression Sum of Squares increases significantly to 45.774, indicating “that the inclusion of the interaction term—representing the combined effect of strategic leadership and government regulations—substantially enhances the model's explanatory power.” This suggests that the interaction between these predictors plays a crucial role in influencing insurance penetration. In contrast, the Residual Sum of Squares decreases to 1.991, reflecting that the model now explains a much larger portion of the variance in insurance penetration compared to Model 1. This reduction in unexplained variance highlights the effectiveness of including the interaction term in the analysis. The Total Sum of Squares remains the same as in Model 1 at 47.766, reflecting the overall variance in insurance penetration.

The F-statistic for this model is exceptionally high at 1509.562, indicating a very strong relationship between the predictors and insurance penetration. This suggests that the interaction term significantly enhances the model's ability to explain the variance in the dependent variable. Furthermore, the significance associated with the F-statistic is reported as 0.000, confirming that the addition of the interaction term significantly improves the model's fit. This reinforces “the conclusion that government regulations play a crucial moderating role in the relationship between strategic leadership and insurance penetration, emphasizing the importance of considering the interaction effects in understanding the dynamics of these variables within the insurance sector.” The ANOVA results indicate a significant relationship between strategic leadership, government regulations, and insurance penetration in Kenya. “The analysis highlights the importance of considering the moderating role of government regulations in enhancing the effectiveness of strategic leadership, providing valuable insights for both insurance companies and policymakers aiming to improve market outcomes.”

Table 41: Model Coefficients for strategic leadership, government regulations, and insurance penetration

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.458	.187		13.154	.000	2.089	2.826
	strategic leadership	.199	.099	.290	2.010	.046	.004	.394
	government regulations	.040	.015	.375	2.596	.010	.010	.070
2	(Constant)	3.366	.054		62.684	.000	3.261	3.472
	strategic leadership	-.760	.033	-1.112	-23.122	.000	-.825	-.696
	government regulations	-.009	.004	-.084	-2.097	.037	-.017	-.001
	Interaction Term	.236	.005	1.976	50.083	.000	.226	.245

a. Dependent Variable: insurance penetration

The coefficient results in table 41 reveals that in Model 1 the coefficients for strategic leadership and government regulations provide valuable insights into their respective impacts on insurance penetration. The constant term is represented by a value of 2.458, which indicates the expected value of insurance penetration when both strategic leadership and government regulations are held at zero. “This baseline level of 2.458 exists independently of the influences of the predictors, and the significance level (Sig.) is 0.000 ($p < 0.001$), indicating that the constant is highly statistically significant.” The unstandardized coefficient for strategic leadership is 0.199, suggesting that for every one-unit increase in strategic leadership, insurance penetration is expected to increase by 0.199 units, holding government regulations constant. This positive relationship implies that enhancing strategic leadership practices within insurance companies can significantly contribute to improving insurance penetration rates. “The standardized coefficient (Beta = 0.290) indicates a moderate effect size, reinforcing the notion that strategic leadership is an important predictor of insurance penetration.” The t-value of 2.010 and a significance level (Sig.) of 0.046 confirm that this relationship is statistically significant at the 0.05 level, providing robust evidence that strategic leadership positively influences insurance penetration.

Additionally," the unstandardized coefficient for government regulations is 0.040, indicating that for every one-unit increase in government regulations, insurance penetration is expected to increase by 0.040 units, holding strategic leadership constant." This finding suggests that effective government regulations also positively impact insurance penetration, albeit to a lesser extent than strategic leadership. The standardized coefficient (Beta = 0.375) reflects a relatively strong effect size, highlighting the importance of government regulations in influencing insurance penetration. The t-value of 2.596 and a significance level of 0.010 confirm that this relationship is statistically significant, reinforcing the role of government regulations in enhancing insurance penetration. Overall, Model 1 illustrates the significant contributions of both strategic leadership and government regulations to the prediction of insurance penetration, emphasizing their importance in the context of the insurance sector in Kenya.

Consequently," the results in table 41 reveals that Model 2 known as the Moderation Model, the constant term increases to 3.366, indicating a higher baseline level of insurance penetration when considering the interaction term along with the other predictors." The significance level for the constant is 0.000 ($p < 0.001$), which indicates that the constant is highly statistically significant. The unstandardized coefficient for strategic leadership becomes negative at -0.760, suggesting that when the interaction term is included, the direct effect of strategic leadership on insurance penetration is reversed. This indicates "that the relationship between strategic leadership and insurance penetration is moderated by government regulations." The standardized coefficient (Beta = -1.112) reflects a strong negative effect size, suggesting "that the impact of strategic leadership on insurance penetration is significantly influenced by the presence of government regulations." The t-value of -23.122 and a significance level of 0.000 confirm that this relationship is highly statistically significant, indicating a robust finding that strategic leadership is indeed a significant predictor.

The unstandardized coefficient for government regulations is -0.009, indicating a negligible negative effect on insurance penetration when the interaction term is included. The standardized coefficient (Beta = -0.084) suggests a weak effect size. The t-value of -2.097 and a significance level of 0.037 indicate that this relationship is statistically significant, albeit with a minimal impact

on insurance penetration, confirming that government regulations are a statistically significant predictor. 'The inclusion of the interaction term yields a positive unstandardized coefficient of 0.236, indicating that the combined effect of strategic leadership and government regulations significantly enhances insurance penetration." The standardized coefficient (Beta = 1.976) indicates a strong positive effect size, suggesting that the interaction between these predictors plays a crucial role in influencing insurance penetration. "The t-value of 50.083 and a significance level of 0.000 confirm that this relationship is highly statistically significant, reinforcing the conclusion that government regulations effectively moderate the relationship between strategic leadership and insurance penetration."

The moderating model can be summarized as:

(iii)…insurance penetration in Kenya = 2.458 + 0.199(strategic leadership) + 0.40 (government regulations)

(iv)...insurance penetration in Kenya =3.366 – 0.76(strategic leadership) – 0.009 (government regulations) + 0.236 (strategic leadership and government regulations)

Consequently, "based on the empirical evidence, the researcher rejects the null hypothesis three ($H0_3$) and concludes that government regulations exert a significant moderating influence on the relationship between strategic leadership and insurance penetration in Kenya." The model coefficients further reveal that both strategic leadership and government regulations independently and positively influence insurance penetration. However, the most critical insight emerges from their interaction, which demonstrates a particularly significant combined effect. This indicates that the effectiveness of strategic leadership is not constant but is rather contingent upon the prevailing regulatory environment. These findings underscore the necessity of considering both direct and interaction effects when assessing the drivers of insurance penetration, highlighting the pivotal function of government regulations in amplifying the impact of strategic leadership. Ultimately, this research emphasizes the need for an integrated approach that synergizes strategic leadership with a supportive regulatory framework to effectively advance insurance penetration in Kenya.

4.7.4 The Moderated Mediation of government regulation, digital transformation on strategic leadership and insurance penetration

The "fourth objective of this study was to examine how government regulations influence the mediating role of digital transformation in the relationship between strategic leadership and insurance penetration in Kenya." This was tested using hypothesis $H0_4$: There is no moderated mediated effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya through digital transformation. Moderated mediation refers to a situation where an independent variable (strategic leadership) affects a dependent variable (e.g., insurance penetration) both directly and indirectly through a mediating variable (digital transformation). However, "the strength of both the direct and indirect pathways is influenced by a third variable—the moderator (in this case, government regulations)." This means that the indirect effect of strategic leadership on insurance penetration via digital transformation may vary depending on the level or nature of government regulations.

To evaluate this hypothesis, the study followed the framework proposed by Hayes (2013), which provides a systematic approach to assess both direct and indirect effects in moderated mediation models. This methodology helps determine whether government regulations alter the indirect relationship between strategic leadership and insurance penetration as mediated by digital transformation. By analyzing these interactions, the research aimed to uncover whether regulatory policies shape how digital transformation acts as a bridge between leadership strategies and insurance market growth in Kenya. In simpler terms, the study sought to determine if government regulations not only directly influence insurance penetration but also modify how digital transformation (as a mediator) connects strategic leadership to insurance uptake. This dual examination of direct and conditional indirect effects provides a nuanced understanding of the complex interplay between leadership, digital initiatives, and regulatory environments in driving insurance market development.

To determine if moderated mediation exists using the Hayes-Macro Process, the index of moderated mediation and its confidence intervals (LLCI and ULCI) must be examined. A statistically significant moderated mediation effect occurs when zero falls outside the range

defined by the LLCI and ULCI. Additionally, “the direct effect of the independent variable (X) on the dependent variable (Y) must be significant, meaning zero should not be contained within the confidence interval for this effect.” When both conditions are satisfied, it confirms the presence of statistically significant direct and indirect effects within the moderated mediation model.

To test this hypothesis, “the researcher utilised moderated mediation analyses, concentrating specifically on the conditional indirect effect, employing the bootstrapping method within SPSS through PROCESS macros Andrew Hayes's (2013).” This approach is particularly effective in providing precise and formal estimates of conditional indirect relationships. “It enables the examination of mediation effects while accommodating variations introduced by different levels of the moderating variable.” Importantly, the bootstrapping technique is robust, making it suitable for analysis regardless of the statistical distribution of the variables or the sample size. Due to bootstrapping the index of moderated mediation doesn’t have p-value but rather has a confidence interval where the index of moderated mediation is significant if the confidence interval doesn’t contain zero (0). Additionally, by generating confidence intervals, this method supports reliable statistical inferences regarding conditional indirect relationships.

The interaction between the independent variable and the dependent variable is significantly shaped by both mediating and moderating variables. As articulated by Hayes and Preacher (2013), conditional indirect effects arise when the moderating variable influences the indirect link between the independent variable and the dependent variable through a mediator. Conversely,” conditional direct effects pertain to how the moderating variable specifically impacts the direct relationship between the independent and dependent variables.” For results to be both valid and reliable, it is crucial to assess these different types of effects concurrently (Hayes & Preacher, 2013a, 2013b).

The PROCESS macro, created by Andrew Hayes, offers numerous advantages for researchers. First, “it overcomes the limitations of conventional sequential approaches that typically treat mediation and moderation analyses separately.” Second, “it produces more robust and accurate results by employing the bootstrapping technique, which enhances the reliability of confidence intervals around the estimates.” Third, “the macro can be integrated with both standard multiple

regression techniques and structural equation modeling (Hayes & Preacher, 2013).” Fourth, it has been designed for ease of use, featuring user-friendly macros that streamline the analysis process. Due to its complexity and accessibility, along with its extensive utilization in prominent research publications, the PROCESS macro is highly endorsed for testing conditional indirect effects (Sylvie et al., 2015). The outcomes of the moderated mediation analysis are detailed in tables 42, 43, 44, and 45, with explanations provided following these tables.

1. **Model Summary for digital transformation**

Table 42: Overall Model Fit

OUTCOME VARIABLE: digital transformation						
Model Summary						
R	**R-sq**	**MSE**	**F(HC4)**	**df1**	**df2**	**p**
.703	.494	.199	50.624	3.0000	197.0000	0.000

The statistical indicators presented in Table 42, which evaluate the first stage of the moderated mediation model, reveal significant findings regarding the prediction of digital transformation. “The multiple correlation coefficients (R) of 0.703 demonstrate a strong positive association between the set of predictor variables strategic leadership, government regulations, and their interaction and the mediating variable of digital transformation.” This suggests that as strategic leadership and government regulations become more pronounced, their combined effect is positively associated with the advancement of digital transformation.

Furthermore, “the R-squared value of 0.494 indicates that the model's predictors collectively account for approximately 49.4% of the variance observed in digital transformation.” This substantial proportion confirms that the independent variables and their interplay possess considerable explanatory power over the mediator. The overall statistical validity of the model is

established by an F-statistic of 50.624, which was calculated using a heteroskedasticity-consistent (HC4) estimator. This robust method ensures the reliability of the statistic by adjusting for potential inconsistencies in data variance. “The significance of this high F-value is confirmed by a p-value of 0.000, indicating that the observed predictive relationship is highly unlikely to be a result of random chance, thereby affirming the model's overall significance.”

Table 43: Direct Effects on digital transformation

	coeff	se	t	p	LLCI	ULCI
Constant	3.984	.056	71.681	.000	3.875	4.094
strategic leadership	.290	.116	2.504	.013	.062	.519
government regulations	.057	.020	2.911	.004	.018	.096
Int_1	-.002	.021	-.106	.916	-.043	.039

In Table 43, “shows that Strategic leadership has a significant positive effect on digital transformation.” For each unit increase in strategic leadership, digital transformation increases by 0.290 units, holding other variables constant. “The effect is statistically significant ($p < 0.05$) and practically meaningful given the positive confidence interval range. Government regulations exhibit a significant positive effect on digital transformation.” A unit increase in government regulations is associated with a 0.057 unit increase in digital transformation. The effect is highly significant ($p < 0.01$) with a narrow confidence interval indicating precise estimation. The interaction effect is negligible as show in table 43 and not statistically significant ($p > 0.05$) since zero is included within the range of plausible values for the interaction effect. The confidence interval straddles zero,” suggesting that the relationship between strategic leadership and digital transformation does not meaningfully vary across different levels of government regulations.” The model's baseline level of digital transformation (when all predictors are zero) is approximately 3.984 units, estimated with high precision as indicated by the narrow confidence interval [LLCI=3.875, ULCI= 4.094] and highly significant p-value ($p < 0.001$).

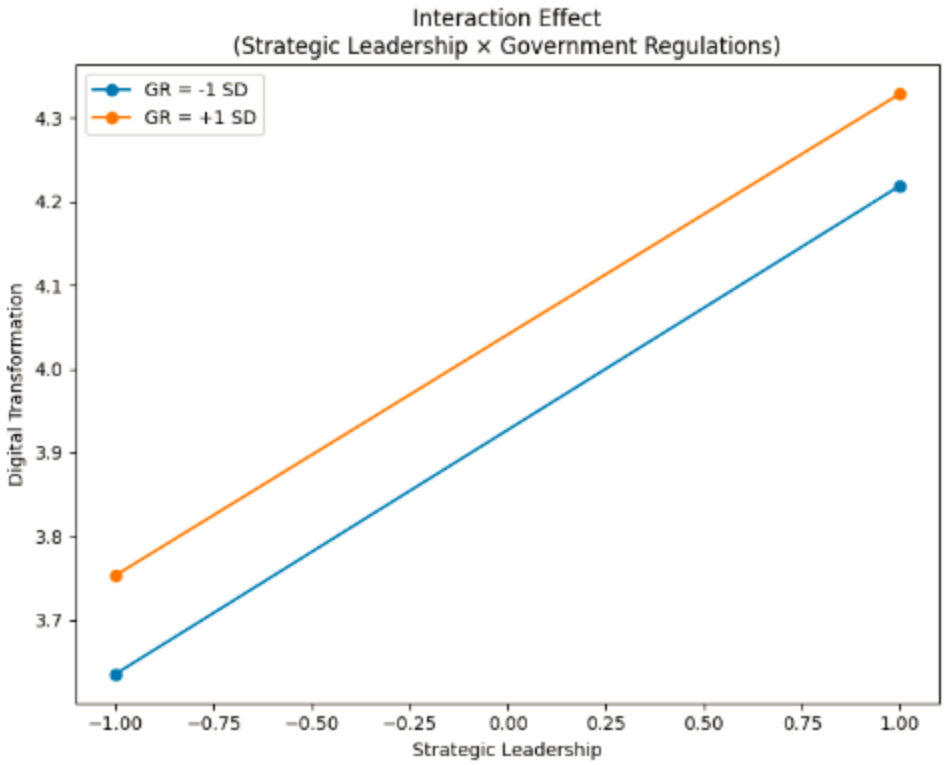

Figure 7: Interaction Effect Analysis

The lack of a significant interaction effect implies "that the direct effect of strategic leadership on digital transformation is relatively consistent across different levels of government regulations as shown in Figure 7." Similarly, "the direct effect of government regulations on digital transformation is not significantly moderated by the level of strategic leadership." The analysis of the interaction term suggests that government regulations do not play a significant moderating role in the relationship between strategic leadership and digital transformation in this specific model. The non-significant interaction term suggests that strategic leadership and government regulations influence digital transformation independently. This independence implies that improvements in either factor can contribute to enhanced digital transformation regardless of the other's level This finding has important implications for understanding the drivers of digital transformation within the context of insurance penetration in Kenya. The analysis provides robust evidence that both strategic leadership and government regulations are significant drivers of digital transformation in Kenya's insurance sector.

2. Model Summary for insurance penetration

Table 44: Overall Model Fit for insurance penetration

OUTCOME VARIABLE: insurance penetration						
Model Summary						
R	**R-sq**	**MSE**	**F(HC4)**	**df1**	**df2**	**p**
.973	.946	.021	1160.785	3.000	197.000	.000

The model summary presented in Table 44, which details the final moderated mediation analysis, reveals key statistical findings. "The multiple correlation coefficient (R) of 0.973 indicates an exceptionally strong positive linear relationship between the set of predictor variables—strategic leadership, digital transformation, government regulations, and their interaction—and the outcome variable of insurance penetration." This suggests the model is highly effective at capturing the dynamics among these factors. Furthermore, "the R-squared value (R^2) of 0.946 demonstrates that the model accounts for approximately 94.6% of the total variance in insurance penetration." This substantial figure signifies an outstanding model fit and affirms the robustness of the predictive framework. The statistical validity of these results is conclusively established by a p-value of 0.000, indicating that the model's overall predictive power is highly significant at conventional levels ($p < 0.001$).

Table 45: Direct Effects on insurance penetration

	coeff	**se(HC4)**	**t**	**p**	**LLCI**	**ULCI**
Constant	3.901	.039	100.255	.000	3.824	3.978
strategic leadership	.962	.020	49.182	.000	1.000	.923
digital transformation	.010	.010	2.037	.031	.009	.029
government regulations	.249	.003	89.869	.000	.244	.255
Int_1	.025	.002	11.425	.000	.030	.021

The analysis of direct effects, as detailed in Table 45, "provides specific insights into the individual contributions of each predictor variable." The model first establishes the constant term, which has

a coefficient of β = 3.901 and a standard error of 0.039. “With a t-value of 100.255 and a p-value of 0.000, this term is highly significant, representing the estimated baseline level of insurance penetration in the absence of any influence from the predictor variables.”

Strategic leadership was found to be a powerful predictor, demonstrating a coefficient of β = 0.962 (SE = 0.020). This effect is highly statistically significant, “as indicated by a t-value of 49.182 and a p-value of 0.000.” The 95% confidence interval, ranging from [0.923, 1.000], does not include zero, further reinforcing the significance and reliability of this positive relationship. This finding underscores the crucial role that effective leadership practices play in enhancing insurance penetration within the sector. In contrast, digital transformation, while also statistically significant, exerts a more modest influence. Its coefficient is β = 0.010 (SE = 0.010), with a corresponding t-value of 2.037 and a p-value of 0.031. The 95% confidence interval of [0.009, 0.029] confirms a positive effect but highlights its relatively small magnitude. This suggests that while digital transformation initiatives are beneficial, their current implementation may require further optimization to achieve a more substantial impact on insurance penetration.

The analysis further revealed that government regulations exert a significant and substantial positive influence on insurance penetration. The coefficient for this variable is β = 0.249, “with a standard error of 0.003, a t-value of 89.869, and a p-value of 0.000.” This strong statistical evidence indicates that a more supportive regulatory environment is closely linked to higher levels of insurance uptake. The reliability of this effect is confirmed by the 95% confidence interval, which ranges from [0.244, 0.255] and does not include zero, thereby underscoring the critical role of conducive policies in facilitating sector growth. Of particular importance is “the interaction term (Int_1), which has a coefficient of β = 0.025 (SE = 0.002), a t-value of 11.425, and a p-value of 0.000.” The corresponding 95% confidence interval of [0.021, 0.030] confirms that this interaction is statistically significant. This finding suggests that the combined effect of strategic leadership and government regulations on insurance penetration is synergistic, meaning their total impact is greater than the sum of their individual contributions. It implies that a strong regulatory framework can significantly amplify the positive influence of strategic leadership, highlighting the necessity

of aligning leadership initiatives with supportive government policies to achieve optimal market performance.

The results of this analysis "provide critical insights into the factors influencing insurance penetration in Kenya." The exceptionally high R-squared value indicates that the model explains a significant portion of the variance in insurance penetration. In summary, "the direct effects analysis reveals that strategic leadership and government regulations are significant positive predictors of insurance penetration in Kenya, while digital transformation also contributes positively, albeit to a lesser extent." The significant interaction effect suggests that the relationship between strategic leadership and insurance penetration is strengthened by supportive government regulations. These findings emphasize the need for a coordinated approach that integrates effective leadership, robust regulatory frameworks, and enhanced digital strategies to improve insurance penetration in the Kenyan market.

Table 46: Conditional Indirect Effects

government regulations	Effect	BootSE	BootLLCI	BootULCI
-4.099	-.857	.020	-.896	-.81
.000	-.962	.020	-1.000	-.923
4.099	-1.066	.023	-1.112	-1.020

The results presented in Table 46, "provide an analysis of the conditional indirect effects of strategic leadership on insurance penetration through digital transformation, moderated by government regulations." The conditional indirect effects analysis reveals "significant insights into the relationship between strategic leadership, digital transformation, and insurance penetration, moderated by government regulations." At low levels of the regulatory framework, the effect is -4.099, with a bootstrap standard error (BootSE) of -0.857 and a confidence interval ranging from -0.896 to -0.810. This negative effect indicates that when regulatory support is minimal, the pathway from strategic leadership to digital transformation and subsequently to insurance penetration is detrimental, suggesting that insufficient regulatory support may hinder the positive outcomes expected from strategic leadership initiatives, potentially leading to decreased insurance

penetration. In contrast, at average levels of government regulations, the effect is 0.000, with a BootSE of -0.962 and a confidence interval from -1.000 to -0.923. This finding indicates that there is no significant indirect pathway from strategic leadership through digital transformation to insurance penetration, highlighting the need for either stronger leadership or regulatory frameworks to foster positive outcomes in insurance penetration. At high levels of the regulatory framework, the effect is 4.099, with a BootSE of -1.066 and a confidence interval ranging from -1.112 to -1.020. This positive effect suggests that when regulatory support is strong, strategic leadership positively influences digital transformation, which in turn enhances insurance penetration, reinforcing the importance of a supportive regulatory environment in facilitating the positive impact of strategic leadership on insurance penetration.

Table 47: Index of Moderated Mediation

	Index	BootSE	BootLLCI	BootULCI
Government regulations	.020	.027	.010	.090

Table 47 show the index of moderated mediation which is reported as 0.020, with a standard error of 0.027 and a confidence interval ranging from 0.010 to 0.090. “This index indicates a significant moderated mediation effect, suggesting that government regulations do indeed influence the indirect effect of strategic leadership on insurance penetration through digital transformation.” The confidence interval does not include zero (BootLLCI = .010, BootULCI = 0.90), confirming that the moderation effect is statistically significant. This finding highlights the critical role of government regulations in shaping the effectiveness of strategic leadership initiatives aimed at enhancing insurance penetration. The null hypothesis (Ho_4), “which posited no significant moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya, was rejected.”

4.8 Results Discussion

This section outlines the research findings by highlighting both the consistencies and discrepancies in comparison to results from similar studies addressing the issues explored in this research. It includes an in-depth analysis of the relationships between key research variables namely; strategic

leadership, digital transformation, and government regulations on insurance penetration in Kenya. These analyses are presented in the context of the study's four primary objectives, providing insights specific to the findings.

4.8.1 Strategic leadership and insurance penetration in Kenya

The results of the study highlighted the effect of strategic leadership and insurance penetration in Kenya. The descriptive statistics on strategic leadership showed “an average mean score across all statements was 3.98, with a standard deviation of 0.900.” The results indicate a generally positive perception of strategic leadership attributes among respondents, although there is variability in agreement levels. The statement regarding the organization's mission targeting stakeholders, employees, and leaders received the highest mean score of 4.26, “reflecting strong consensus on the importance of an inclusive mission.” This is further supported by a standard deviation of 0.820, which suggests that while most respondents agree on this point, there are differing opinions. Similarly, “the statement that the organization's mission serves as a guide in decision-making garnered a mean score of 4.21, indicating that respondents view the mission as a crucial element in guiding decisions, although the standard deviation of 0.846 points to some variability in perceptions.” Other statements related to the organization's mission and vision also received positive feedback, with mean scores indicating general agreement on their clarity and motivational aspects. For instance, “the statement "Our organization mission clearly states its purpose" had a mean of 4.16, while "Our organization responds to arising opportunities to improve service delivery" scored 4.14, both suggesting a positive perception of the organization's clarity and agility.” However, mean scores for vision-related statements, such as "Leaders in our organization clearly articulate a compelling vision for the future," were lower at 3.98, indicating potential areas for improvement in communication and motivation. Overall, while there is a strong recognition of the importance of strategic leadership and its attributes, the variability in responses suggests that there is room for enhancement in how these elements are perceived and implemented within the organization.

These The findings of this study align with previous research, such as the work by Mutembei and Njuguna (2019), who explored how competitive strategies including cost leadership, differentiation, focus strategies, and critical success factors influence insurance penetration in

Kenya. Their study similarly highlighted a positive perception of strategic leadership attributes among respondents, though they noted variations in how strongly these attributes were endorsed. This variability suggests that while strategic leadership is recognized as important, there is potential for organizations to improve how these principles are implemented and perceived internally. Further, the results resonate with a study by Wang and Chen (2020), "which examined how CEO personality traits affect business performance." They found that certain traits, such as CEO extraversion, emotional stability, and agreeableness, positively influence cost efficiency and profitability, while conscientiousness had a negative impact. Additionally, openness to experience was linked to lower profitability, and all personality facets except conscientiousness improved employee productivity. These findings emphasize the nuanced role of leadership traits in organizational outcomes, a theme reflected in the current study's emphasis on strategic leadership's dual potential for driving success and requiring refinement.

In the current research, while the foundational recognition of strategic leadership's importance is clear, the variability in responses underscores opportunities for organizations to strengthen leadership practices to better align employee motivation and organizational goals. Ultimately, "the study's rejection of the null hypothesis confirms that strategic leadership has a statistically significant and positive influence on insurance penetration in Kenya." This conclusion reinforces the need for insurers and policymakers to prioritize leadership development as a key strategy for enhancing market penetration, while also addressing gaps in how these leadership principles are perceived and applied in practice.

4.8.2 Strategic leadership, digital transformation, and insurance penetration in Kenya

The second objective of the study was to "determine the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya." The descriptive statics result gives an average mean score across all statements was 3.93, with a standard deviation of 0.888. This indicates a generally positive perception of digital transformation attributes, though the variability suggests that not all respondents share the same level of agreement. The results reveal a nuanced perspective on digital transformation in the Kenyan insurance sector, with respondents expressing strong agreement about data privacy concerns and

the potential of big data analytics. The statement "Kenyan consumers' concerns about data privacy could limit the full potential of big data analytics in the insurance sector received the highest mean score of 4.05", indicating significant apprehension about privacy issues. Complementing this, "the statement about government initiatives to improve digital literacy received a mean score of 4.02, suggesting that efforts to enhance public trust are being recognized." Respondents also showed positive perceptions about the use of big data for market expansion, with a mean score of 3.99 for identifying new customer groups, and an equally positive view of cybersecurity investments' impact on customer attraction. The subsequent findings highlight the multifaceted nature of digital transformation in the insurance sector, with varying levels of agreement across different technological aspects. Statements about using big data for risk assessment (mean score 3.98), data security investments' impact on customer trust (3.97), and digital tools' role in enhancing accessibility (3.92) all received moderately positive scores. The research also uncovered potential barriers to digital transformation, such as insufficient internet access in some regions (mean score 3.88) and cybersecurity concerns preventing online insurance purchases (3.87). Technologies like AI, cloud computing, and mobile apps were acknowledged, but the mean scores suggested there is still room for more comprehensive adoption and integration. The overall results paint a picture of a sector in transition, with promising digital initiatives being tempered by ongoing challenges related to privacy, security, and technological infrastructure.

The study results are in concurrence with study by Niraula, and Kautish in (2019) explored the digitization status of insurance industry of Nepal. The analysis of the responses from insurance customers shows that the implementation of ICT on the insurance sphere of Nepal is below the average, the facilities like SMS notification for premium transactions, policy and claim information, online premium payment and claim intimation were found to be implemented just above the average but the implementation of facilities like online policy buying, viewing policy/claim information, claim payments directly to the bank account of the claimant which are basic insurance activities were found below the average. From the analysis of the result, suggested that the insurance regulatory body of Nepal should facilitate the digital transformation in insurance companies and also Nepalese insurance companies should adopt appropriate digital medium to interact with its customers, to streamline the large customer base willing to get insurance services

online. Additionally, “the study results are in agreement with Mwangi, Musembi, Kamau, and Obunga (2024) research examined the effect of digital transformation strategy on the performance of e-claims systems at the National Health Insurance Fund in Kenya.” The study results found that, “integration of digital technologies significantly affects the performance of E-Claims Systems, Data security compliance has a significant and positive effect on the performance of E-Claims Systems, user-experience has a significant and positive effect on the performance of E-Claims Systems and that compatibility with external systems has a significant and positive effect on the performance of E-Claims System.” The study concludes that the integration of digital technologies, data security compliance, user experience, and interoperability with external systems is integral to enhancing E-Claims Systems performance at NHIF. The descriptive analysis reveals that digital transformation is perceived positively among respondents in the Kenyan insurance sector, particularly regarding the importance of data privacy, government initiatives, and the use of big data.

The second objective of the study “was to investigate the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya.” The findings indicated the correlation coefficient (R) of 0.657 that, “indicates a strong positive relationship between the combined effects of strategic leadership and digital transformation on insurance penetration.” This suggests that as both strategic leadership and digital transformation improve, insurance penetration is likely to increase. The strength of this correlation implies that these two independent variables are significant contributors to the dependent variable. The R Square value of 0.432 indicates that “approximately 43.2% of the variance in insurance penetration can be explained by the combined effects of strategic leadership and digital transformation.” This level of explanatory power suggests that while these factors are important, there are other variables not included in the model that also contribute to variations in insurance penetration. An R Square value of 0.432 is considered moderate, indicating a meaningful relationship but also highlighting the complexity of the factors influencing insurance penetration. The results “suggest that both strategic leadership and digital transformation are essential predictors of insurance penetration, highlighting the importance of these factors in driving market growth.” The analysis suggests that digital transformation serve as a mediator in the relationship between strategic leadership and insurance

penetration. This implies that effective strategic leadership can enhance digital transformation efforts, which in turn positively influence insurance penetration. This mediating effect underscores the importance of integrating digital strategies into leadership practices.

The The findings of this study align with recent research, such as the work by Joan, Àngels, and Joaquín (2024), who explored the impact of digital transformation (DT) on firm performance in innovative small and medium-sized enterprises (SMEs). The study demonstrated "that business model innovation (BMI) acts as a partial mediator in the relationship between DT and performance." This underscores BMI's role as a strategic tool for aligning investments in digital initiatives with organizational goals, particularly for SMEs aiming to enhance performance through innovation. Similarly, research by Mahmoud, Mohamed, and Aiman (2024) in Egypt's oil and gas sector found that technological infrastructure partially mediates the relationship between DT and employee performance. This contextualizes the current study's focus on Kenya's insurance sector, where digital transformation's effects may similarly depend on supportive technological frameworks to drive outcomes.

Further alignment is seen with Musaigwa and Mutula (2022), who conducted a qualitative case study on digital transformation in a South African insurance firm. Their findings highlighted that while the firm recognized the need to integrate DT into its business strategy, efforts to address slow adoption remained insufficient. This mirrors the current study's emphasis on the necessity for insurance companies to prioritize both strategic leadership and digital transformation. Collectively, these studies underscore the importance of integrating DT into organizational strategies, supported by strong leadership and adaptive business models. In the Kenyan insurance context, prioritizing investments in leadership development and digital transformation could create a synergistic effect, enhancing performance and market competitiveness. This dual focus aligns with the findings of the current study, which highlight the complementary roles of strategic leadership and digital initiatives in driving sectoral growth. The current research therefore advocates for a holistic approach that combines robust leadership practices with deliberate digital transformation strategies to address gaps in adoption and maximize performance improvements in the insurance sector. Such an approach aligns with global trends observed in similar industries,

reinforcing the need for proactive alignment between technological innovation, leadership, and organizational strategy.

4.8.3 Strategic leadership, government regulations, and insurance penetration in Kenya

The third objective of the study was to, "assess the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya." The descriptive statistics result shows an average mean score across all statements was 3.98, with a standard deviation of 0.902. "This indicates a generally positive perception of government regulations, though the variability suggests that not all respondents share the same level of agreement." The results reveal a predominantly positive perception of the regulatory framework in the Kenyan insurance sector, with respondents expressing strong confidence in dispute resolution and regulatory oversight. The statement about the efficiency of dispute resolution between Kenyan insurance companies received the highest mean score of 4.26, indicating strong agreement about the effectiveness of conflict resolution mechanisms. Complementing this, the statement regarding regulatory oversight promoting healthy competition scored 4.21, suggesting that respondents view the regulatory environment as conducive to innovation and consumer choice. The proactive nature of insurance regulators in adapting to market trends and technologies was also positively perceived, with a mean score of 4.16, reflecting confidence in the regulators' responsiveness to changing market dynamics. The subsequent findings further underscore the positive sentiment towards the regulatory framework, with high mean scores for government enforcement capabilities, regulatory clarity, and adaptability to digital insurance challenges. The statement about government enforcement of insurance regulations to protect consumers scored 4.14, while the clarity of regulations received a mean of 4.09. Respondents also recognized the potential for regulatory clarity to stimulate innovation, with a mean score of 4.02 for this statement. However, the results also revealed some areas for potential improvement, particularly in stakeholder consultation and innovation-friendly regulations. The lowest mean score of 3.71 for the statement about regulations allowing insurers to develop innovative products suggests that while the regulatory framework is generally viewed positively, there is room for enhancement in supporting product innovation and diversification in the Kenyan insurance market.

The findings of this study align with research by Wasim, Ahmad, Mohamad, and Akmalia (2024), who examined how regulatory quality influences the relationship between financial development and economic growth or volatility in developed and developing countries. “Their work revealed that in developed nations, higher regulatory quality strengthens the positive association between banking-based financial development and economic growth.” This underscores the importance of maintaining robust regulatory frameworks to support both banking and market-driven economic progress. Policymakers in such contexts should prioritize enhancing regulatory quality, “as it not only fosters growth but also reduces the contribution of banking-sector development to economic instability—a dynamic observed across both developed and developing economies.” Continuous efforts to refine regulatory systems and institutional governance are critical to sustaining these benefits.

Additionally, the current study’s results resonate with Joyce and Rael’s (2024) investigation into the impact of government regulations on insurance firm performance in Uasin Gishu County, Kenya. Using a mixed-methods approach combining descriptive and correlational analyses, their research demonstrated that government regulations significantly influence insurance sector performance. Descriptive findings indicated that stakeholders in Kenya’s insurance industry generally view regulations positively, particularly in areas such as dispute resolution efficiency, regulatory oversight clarity, and procedural transparency. However, respondents highlighted room for improvement in aspects like stakeholder engagement, consultation with industry experts during policy formulation, and balancing regulatory requirements with the diverse needs of market participants. These insights suggest that while existing regulations provide a solid foundation, their effectiveness could be further enhanced by fostering greater collaboration between regulators and the private sector.

Together, these studies emphasize the dual role of regulatory quality: first, as a critical enabler of economic stability and growth, and second, as a framework that requires continuous adaptation to align with evolving industry needs. In the context of Kenya’s insurance sector, the findings reinforce the importance of refining regulatory practices to better support strategic leadership,

digital transformation, and overall market development. Policymakers and industry leaders must collaborate to address gaps in stakeholder involvement and ensure regulations remain dynamic enough to meet the demands of a rapidly changing business environment. Such efforts would not only improve regulatory effectiveness but also create a more resilient and competitive insurance market.

Similarly the multiple correlation coefficients (R) was 0.654, "indicating a moderately strong positive correlation between the strategic leadership and government regulations and the dependent variable insurance penetration in Kenya, suggesting that as strategic leadership and government regulations improve, insurance penetration is likely to increase." The R Square value of 0.428 signifies that, "approximately 42.8% of the variance in insurance penetration can be explained by the two predictors (strategic leadership and government regulations), highlighting their significance in influencing insurance penetration in Kenya." The adjusted R Square value of 0.422 accounts for the number of the two predictors (strategic leadership and government regulations) in the model and provides an estimate of the variance explained, indicating that the model remains robust despite the inclusion of multiple predictors. Additionally, "the relationship between strategic leadership, government regulations, and their interaction term as predictors of insurance penetration in Kenya showed that the multiple correlation coefficients (R) is 0.979, indicating a very strong positive correlation between the predictors (strategic leadership and government regulations) and insurance penetration." This suggests that the combined effects of strategic leadership, government regulations, and their interaction significantly enhance insurance penetration. The R Square value is 0.958, which indicates that approximately 95.8% of the variance in insurance penetration is explained by strategic leadership and government regulations, demonstrating an exceptional level of explanatory power.

The moderation model results revealed that the constant term increases to 3.366, indicating a higher baseline level of insurance penetration when considering the interaction term along with the predictors' namely strategic leadership and government regulations. The significance level for the constant is 0.000 ($p < 0.001$), "which indicates that the constant is highly statistically significant." The unstandardized coefficient for strategic leadership becomes negative at -0.760,

suggesting that when the interaction term is included, the direct effect of strategic leadership on insurance penetration is reversed. This indicates that the relationship between strategic leadership and insurance penetration is moderated by government regulations.

These The findings of this study align with research by Mbole, Arasa, and Mang'unyi (2021), who analyzed how government policies (GP) influence the relationship between corporate social responsibility (CSR) initiatives and financial performance (FP) in Kenya's cement manufacturing sector. Their study revealed a statistically significant negative moderating effect ($\beta = -0.891$), indicating that government policies weaken the positive association between CSR activities and financial performance in this industry. This suggests that current policies may inadvertently hinder the benefits of CSR investments for companies' profitability. The researchers recommended that cement manufacturers should proactively align their CSR strategies with government policies to optimize financial outcomes, emphasizing the need for a deeper understanding of regulatory implications on business practices.

Similarly, the current study's conclusions resonate with Gichuhi's (2023) exploration of how organizational environment—including regulatory frameworks—moderates the relationship between shared leadership and organizational resilience in Kenya's telecommunications sector. Gichuhi's findings highlighted that regulatory policies significantly influence how leadership practices translate into resilience, underscoring their role in shaping organizational outcomes. These external studies collectively reinforce the current research's conclusion that government regulations play a critical moderating role in strategic leadership's impact on insurance penetration in Kenya. Just as regulatory frameworks in other sectors either hinder or enhance organizational effectiveness, the insurance industry's performance is also contingent on the interplay between leadership strategies and regulatory environments. The negative moderating effect observed in the cement sector serves as a cautionary example of how misaligned policies can dampen desired outcomes, while the telecom study demonstrates how supportive regulations can amplify leadership's positive effects.

For Kenya's insurance sector, these insights highlight the importance of aligning strategic leadership initiatives with adaptive regulatory frameworks. Policymakers must ensure that regulations foster, rather than constrain, leadership-driven improvements in market penetration.

Simultaneously, insurance firms should engage proactively with regulators to shape policies that enable effective leadership practices and drive industry growth. By addressing gaps in policy alignment and regulatory design, stakeholders can create a synergistic environment where strategic leadership and robust policies work together to enhance insurance market performance. This dual focus on leadership development and regulatory optimization offers a pathway to overcoming sectoral challenges and achieving sustainable market expansion.

4.8.4 Strategic leadership, digital transformation, government regulation, and insurance penetration in Kenya

The fourth objective of the study was, "to examine the moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya." This study objective was built on the hypothesized statement that "there is no significant moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya." The study findings rejected the null hypothesis.

The overall model fit for insurance penetration reveals that the multiple correlation coefficients (R) is 0.973, indicating an exceptionally strong positive linear relationship between the predictor variables strategic leadership, digital transformation, government regulations, and their interaction and the outcome variable, insurance penetration. This suggests that the model effectively captures the relationship between these variables, "explaining a significant portion of the variance in insurance penetration." Furthermore, the R-squared value (R^2) of 0.946 signifies that 94.6% of the total variance in insurance penetration is explained by the predictor variables included in the model, indicating an outstanding fit and suggesting that the predictors account for nearly all the variability in insurance penetration, thereby affirming the model's robustness. The p-value of 0.000 indicates that the results are statistically significant at conventional levels ($p < 0.001$).

The conditional indirect effects analysis reveals, "Significant insights into the relationship between strategic leadership, digital transformation, and insurance penetration, moderated by government regulations." At low levels of the regulatory framework, the effect is -4.099, with a bootstrap

standard error (BootSE) of -0.857 and a confidence interval ranging from -0.896 to -0.810. This negative effect indicates that when regulatory support is minimal, the pathway from strategic leadership to digital transformation and subsequently to insurance penetration is detrimental, suggesting that insufficient regulatory support may hinder the positive outcomes expected from strategic leadership initiatives, potentially leading to decreased insurance penetration. In contrast, at average levels of government regulations, the effect is 0.000, with a BootSE of -0.962 and a confidence interval from -1.000 to -0.923. This finding indicates that there is no significant indirect pathway from strategic leadership through digital transformation to insurance penetration, highlighting the need for either stronger leadership or regulatory frameworks to foster positive outcomes in insurance penetration. At high levels of the regulatory framework, the effect is 4.099, with a BootSE of -1.066 and a confidence interval ranging from -1.112 to -1.020. This positive effect suggests that when regulatory support is strong, strategic leadership positively influences digital transformation, which in turn enhances insurance penetration, reinforcing the importance of a supportive regulatory environment in facilitating the positive impact of strategic leadership on insurance penetration.

The index of moderated mediation was reported as 0.020, "with a standard error of 0.027 and a confidence interval ranging from 0.010 to 0.090." This index indicates a significant moderated mediation effect, "suggesting that government regulations do indeed influence the indirect effect of strategic leadership on insurance penetration through digital transformation." The confidence interval does not include zero (BootLLCI = .010, BootULCI = 0.90), "confirming that the moderation effect is statistically significant." This finding highlights the critical role of government regulations in shaping the effectiveness of strategic leadership initiatives aimed at enhancing insurance penetration.

The findings of this study align with research by Zhou, Zhou, Zhang, and Miao (2022), who explored how executive overconfidence influences environmental innovation, with digital transformation acting as a mediator and internal control as a moderating factor. Their analysis of Chinese publicly listed companies between 2007 and 2019 revealed that, "overconfident executives significantly boosted environmental technology innovation but had no notable impact on environmental management innovation." Additionally, executive overconfidence was found to

enhance digital transformation, which in turn positively influenced both types of environmental innovation. “The study also highlighted that industry competition and economic policy uncertainty amplified the positive effect of executive overconfidence on digital transformation.” Furthermore, larger firms experienced stronger impacts of digital transformation on environmental technology innovation, while internal control mechanisms moderated these effects differently: positively for technology innovation and negatively for management innovation.

These insights parallel the current study’s findings, “which emphasize the critical role of strategic leadership and government regulations in driving digital transformation within Kenya’s insurance sector.” While Zhou et al. focused on executive overconfidence in the context of environmental innovation, the current research underscores strategic leadership as a key enabler of digital transformation outcomes. Similarly, the moderating role of internal control in Zhou’s study mirrors the importance of regulatory frameworks in shaping the effectiveness of digital initiatives in the Kenyan insurance industry. The results collectively “suggest that leadership—whether through overconfidence in executive decision-making or through intentional strategic practices—plays a pivotal role in advancing digital transformation.” In the Kenyan context, the study’s findings reinforce the necessity for insurance organizations to prioritize strategic leadership development to strengthen their capacity for digital innovation. Additionally, “government regulations must be designed to support, rather than hinder, these efforts, ensuring alignment between regulatory policies and organizational strategies.”

For practitioners, this implies a need to invest in leadership training programs that foster adaptive and forward-thinking practices. Policymakers, meanwhile, should collaborate with industry stakeholders to create regulatory environments that encourage rather than constrain digital adoption. By addressing these interlinked factors—leadership quality and regulatory alignment—organizations can enhance their ability to leverage digital transformation for competitive advantage and sector-wide growth, as evidenced by both studies. This dual focus on internal leadership capabilities and external regulatory frameworks offers a strategic pathway for organizations to navigate the complexities of digital innovation in evolving markets.

The findings of this study are also consistent with the research conducted by Owuori, Ngala, and Obwatho (2021), which sought to establish the moderating effect of governance principle application on a mediation model within Kenya's water sector. Their study revealed a statistically significant moderating effect, “where governance principles influenced the mediating role of technological capability on the relationship between management practices and service sustainability.” The joint effect of governance and technology was found to be more substantial than their individual contributions, confirming a moderated mediation relationship. The researchers concluded that the application of good governance had a buffering and enhancing effect on the pathway from management to sustainability.

In a similar vein, the current study's results highlight the crucial role of the regulatory environment. The findings suggest that for Kenya's insurance sector, regulatory compliance should be viewed as an enabler rather than a barrier to digital transformation. Furthermore, the analysis indicates that both strategic leadership and regulatory alignment possess strong, independent effects. This implies that interventions designed to improve either leadership capabilities or regulatory frameworks can be pursued independently and are still likely to yield significant positive outcomes, even as their combined interaction ultimately produces the most powerful impact on market performance.

The empirical outcomes of this investigation align closely with the research by Joseph, Timothy, Washington, and James (2022), which explored the moderated mediation dynamics of the external environment and strategy implementation in linking strategic leadership to organizational performance within Kenya's agricultural, livestock, and fisheries parastatals. Their analysis demonstrated a robust positive association among the variables, evidenced by a multiple correlation coefficient (R) of 0.7731. Moreover, the coefficient of determination (R^2) of 0.598 indicated that approximately 59.8% of the variation in performance could be attributed to changes in strategic leadership, strategy implementation, and the external environment. Through bootstrapping procedures, “the index for moderated mediation proved statistically significant, as the 95% confidence interval ranged from 0.154 to 0.384 and excluded zero, thereby confirming the model's validity.” The study ultimately highlighted that, “the external environment exerts both direct and indirect influences on performance, advising parastatal leaders to adopt a balanced

approach that harmonizes strategic leadership with effective strategy execution and responsiveness to external conditions for optimal results."

Building on this framework, the present research similarly underscores the multifaceted pathways through which leadership influences market outcomes in the insurance sector. The direct effects assessment reveals that strategic leadership and government regulations serve as strong positive predictors of insurance penetration in Kenya, with digital transformation also exerting a beneficial, albeit supplementary, influence. Notably, the significant interaction between strategic leadership and government regulations indicates that a supportive regulatory landscape amplifies the positive impact of leadership on penetration levels. These insights collectively advocate for an integrated strategy that weaves together strong leadership practices, well-designed regulatory mechanisms, and proactive digital advancements, thereby fostering greater market accessibility and sustainability within Kenya's insurance landscape.

4.9 Summary of Research Findings

Chapter 4 of this thesis offers a comprehensive analysis and interpretation of the study's empirical results, drawing on established statistical principles alongside a synthesis of relevant theoretical frameworks and prior scholarly research. Through this lens, the chapter elucidates the implications of the data, connecting quantitative outcomes to broader conceptual insights. The evidence gathered led to the rejection of null hypotheses $H0_1$, $H0_3$, and $H0_4$, thereby supporting the alternative propositions regarding the direct influences of strategic leadership and government regulations, as well as their moderated mediation dynamics. In contrast, hypothesis $H0_2$ indicated a partial mediation effect, highlighting the nuanced role of digital transformation in channeling these relationships. A concise overview of these key outcomes is presented in Table 48, providing a clear reference for the study's core contributions.

Table 48: Summary of Hypotheses Results

Objectives	Hypotheses	Hypotheses Test Results
Objective 1 To "assess the relationship between strategic leadership and insurance penetration in Kenya."	H_{01}: here is no significant relationship between strategic leadership and insurance penetration in Kenya.	**Rejected**
Objective 2 To "establish the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya."	H_{02}: There is no significant mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya	**Rejected**
Objective 3 To "assess the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya."	H_{03}: There is no significant moderating effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya	**Rejected**
Objective 4 To "examine the moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya."	H_{04}: There is no significant moderated mediation effect of government regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya.	**Rejected**

The study findings led to the rejection of the first null hypothesis ($H0_1$), "confirming a statistically significant relationship between strategic leadership and insurance penetration in Kenya." This indicates that strategic leadership practices are a key driver of insurance market growth in the

country. Hypothesis two ($H0_2$) was also rejected, "revealing that digital transformation acts as a partial mediator in the relationship between strategic leadership and insurance penetration." While digital initiatives do not fully explain the relationship, "they play a role in indirectly linking leadership practices to improved insurance uptake." The third null hypothesis ($H0_3$) was rejected, "demonstrating that government regulations exert a statistically significant moderating role on the relationship between strategic leadership and insurance penetration." This means regulatory frameworks influence the strength or direction of how leadership practices translate into market outcomes.

Finally, Hypothesis 4 was rejected, confirming the existence of a significant moderated mediation effect. Specifically, government regulations moderate the indirect relationship between strategic leadership and insurance penetration, as mediated by digital transformation. This implies that regulatory policies shape both the direct and indirect pathways through which leadership strategies and digital initiatives influence market penetration. Collectively, these results highlight the complex interplay of strategic leadership, digital transformation, and regulatory environments in driving insurance market dynamics in Kenya. The findings underscore the need for a holistic approach that integrates leadership practices, digital innovation, and supportive regulatory frameworks to enhance insurance penetration effectively.

4.10 Optimal Model

Following the empirical insights derived from the research, a systematic refinement of the analytical model was undertaken to enhance its precision and applicability. The primary objective of this optimization process was to streamline the framework by retaining only those predictors that demonstrated statistical significance, thereby promoting a more focused and objective representation of the underlying relationships. This refinement was achieved through iterative applications of regression analysis, allowing for the evaluation and selection of the most robust variables. The resulting streamlined conceptual model, which encapsulates these key elements, is visually depicted in Figure 8, offering a clear and concise illustration of the optimized structure.

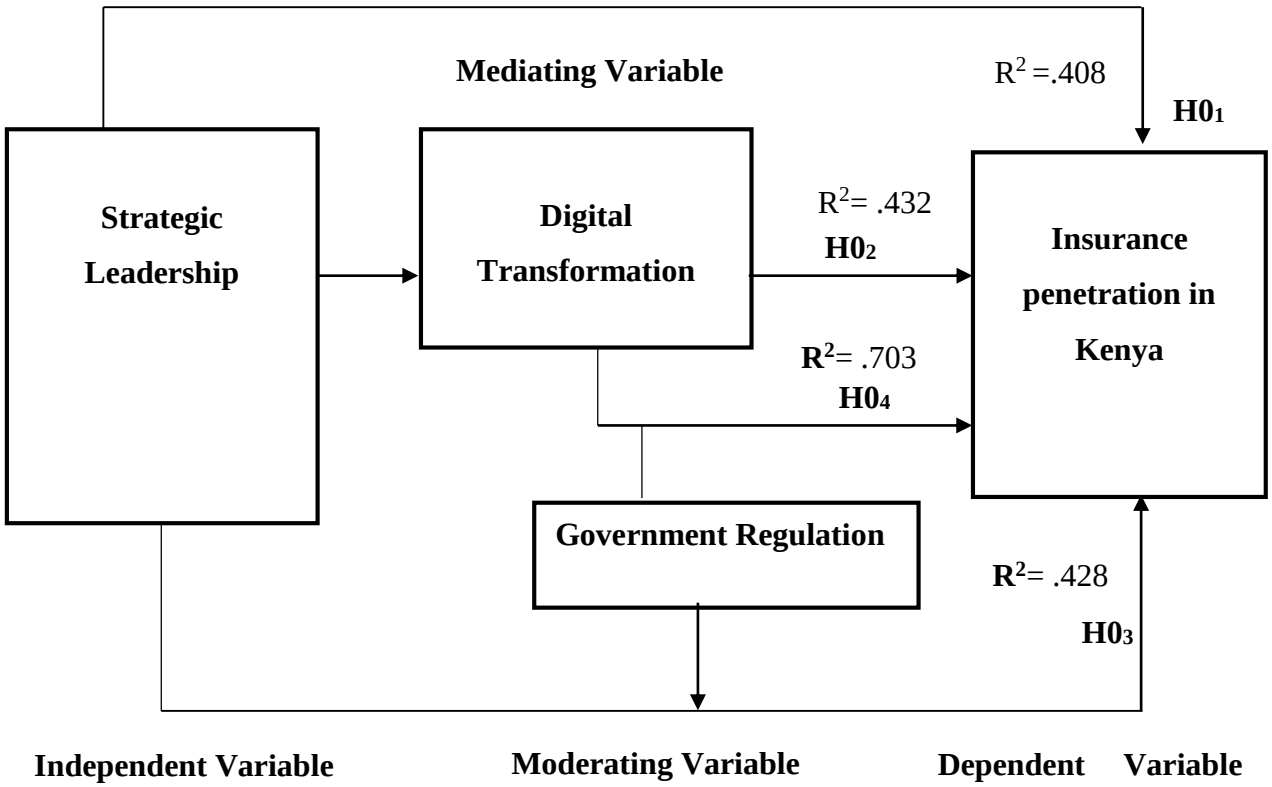

Figure 8: Optimal Model

The model depicted in Figure 8 demonstrates that no variables were excluded, as all null hypotheses of the study were rejected, leading to the acceptance of the model as originally conceptualized. Consequently, this model is regarded as the optimal representation of the relationships being examined.

4.11 Chapter Summary

The findings of this study have been analyzed and compared with previous research results, revealing a significant degree of consistency with earlier studies. The propositions derived from these findings support the conceptualized and validated model illustrated in Figure 8. This model outlines the interactions among strategic leadership (independent variable), digital transformation (mediating variable), government regulations (moderating variable), and insurance penetration (dependent variable) in Kenya. Additionally, it illustrates the mediated-moderation of government

regulations and digital transformation on the relationship between strategic leadership and insurance penetration in Kenya.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key results and conclusions derived from the research. The primary aim of this study was to examine the influence of strategic leadership, digital transformation, and government regulations on insurance penetration in Kenya. To evaluate the research hypotheses, both descriptive and inferential statistical analyses were employed. The findings from these analyses were then synthesized to highlight the summary and conclusions, aligning with the objectives of the study.

5.2 Summary of Study

The first objective of the study was, " to assess the relationship between strategic leadership and insurance penetration in Kenya." The findings indicate a generally positive perception of strategic leadership attributes among respondents, although there is some variability in agreement levels. Respondents strongly agree on the importance of an organizational mission that targets various stakeholders, reflecting a commitment to inclusivity. There is also a consensus that, "the mission serves as a crucial guide in decision-making processes, highlighting its foundational role within the organization." The clarity of the mission is perceived positively, with respondents feeling it is well-defined, which is essential for aligning organizational efforts and ensuring that all members understand the goals. Additionally, "there is a favorable view of the organization's ability to respond to new opportunities for improving service delivery, although opinions on responsiveness vary." Timely decision-making by leaders is viewed positively, indicating that this aspect is generally appreciated. However, statements related to vision received lower agreement, suggesting that while respondents recognize its importance, there is room for improvement in how effectively it is communicated and its motivational impact.

Respondents acknowledge the significance of informed decision-making, although there are differing opinions on how consistently this practice is applied. The motivational aspect of the organization's vision is recognized, but not all respondents feel equally inspired by it. Lastly, while

there is some agreement on the role of the mission and vision in shaping strategy and assisting staff focus, there is also an acknowledgment that improvements could be made in these areas. The descriptive analysis reveals that strategic leadership is perceived positively among respondents in the Kenyan insurance sector, particularly regarding the clarity and relevance of the organizational mission. However, there are areas, particularly related to vision articulation and its inspirational capacity, where improvements could enhance overall strategic leadership effectiveness. The findings underscore the importance of continuous evaluation and adaptation of leadership strategies to align with stakeholder expectations and organizational goals.

The study findings conclusively demonstrate, "a statistically significant positive relationship between strategic leadership and insurance penetration in Kenya, leading to the rejection of the initial null hypothesis." The correlation coefficient ($R = 0.639$) underscores a strong positive association between these variables, suggesting that improvements in strategic leadership practices are strongly linked to increased insurance penetration. This relationship is further validated by the p-value of 0.000 (< 0.001)," which confirms its statistical significance. The R-squared value of 0.408 reveals that approximately 40.8% of the variance in insurance penetration can be attributed to strategic leadership." While this highlights strategic leadership as a critical factor influencing market penetration, "it also indicates that other variables not included in the model account for the remaining 59.2% of the variance." This moderate-to-strong explanatory power emphasizes the importance of strategic leadership in driving insurance market growth while acknowledging the complexity of the issue, as additional contextual or organizational factors likely contribute to variations in insurance uptake. These results collectively affirm that strategic leadership plays a pivotal role in enhancing insurance penetration in Kenya, though further research is warranted to identify and analyze other influential variables. The statistical significance and strength of the observed relationship underscore the need for insurers and policymakers to prioritize strategic leadership development as a key lever for improving market performance.

The Model Coefficients analysis reveals, "That an increase in strategic leadership is associated with a corresponding increase in insurance penetration." Specifically, "for every one-unit increase in strategic leadership, insurance penetration is expected to rise by 0.437 units, assuming other

factors remain constant." This positive correlation indicates that improving strategic leadership practices within insurance companies can significantly enhance insurance penetration rates. The t-statistic for strategic leadership is notably high, suggesting a highly significant effect, which underscores the critical role of strategic leadership in influencing insurance penetration. The p-value for both the constant and strategic leadership is 0.000, indicating statistical significance and suggesting that the observed relationship is unlikely to be due to chance. Additionally, "the confidence interval for the coefficient of strategic leadership ranges from 0.363 to 0.510, providing 95% confidence that the true effect lies within this range." Since this interval is entirely above zero, it further reinforces the conclusion that strategic leadership positively impacts insurance penetration in Kenya.

The results indicate that, "strategic leadership is a significant predictor of insurance penetration in Kenya, This underscores the importance of effective leadership practices in enhancing market penetration and suggests that insurance companies should prioritize leadership development." Given the strong positive relationship identified, insurance companies may benefit from investing in training and development programs aimed at enhancing strategic leadership capabilities. This could lead to improved decision-making, innovation, and ultimately, higher insurance penetration rates.

The study's second objective focused on establishing, "the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya." The results indicate a generally positive perception of digital transformation attributes among respondents, although there is some variability in agreement levels. Respondents strongly agree that concerns about data privacy significantly hinder the effective use of big data analytics in the insurance sector. There is also a consensus that government initiatives aimed at improving digital literacy have positively influenced public trust in online insurance platforms. Additionally, respondents feel positively about the use of big data for identifying new customer groups and recognize that increased investments in cybersecurity have made insurers more attractive to customers. The effective utilization of big data for risk assessment and fairer premiums is also acknowledged, along with the belief that investments in data security enhance customer trust. The

role of digital tools in making insurance more accessible, particularly for people in remote areas, is recognized, as is the effectiveness of online insurance comparison tools. However, respondents also identify insufficient internet access in certain regions as a barrier to digital transformation. While there is recognition of the use of AI and cloud computing in the insurance sector, there is room for further adoption. Respondents view digital marketing efforts positively and acknowledge that mobile apps have improved accessibility. However, concerns about cybersecurity are seen as a barrier to online insurance purchases.

Finally, there is a favorable perception of the customization of insurance products through big data, indicating a positive view of personalized offerings for different customer groups. The descriptive analysis reveals that digital transformation is perceived positively among respondents in the Kenyan insurance sector, "particularly regarding the importance of data privacy, government initiatives, and the use of big data." However, there are areas, particularly related to cybersecurity concerns and internet access limitations, where challenges remain. The findings underscore the need for continuous efforts to enhance digital literacy, "improve cybersecurity measures, and expand internet access to fully realize the potential of digital transformation in the insurance industry."

The empirical evidence from this study highlights a meaningful and reliable connection between digital transformation initiatives and the expansion of insurance coverage in Kenya, "as demonstrated by a correlation coefficient (r) of 0.552 with a p-value less than 0.001." This points to a moderately robust positive link, where greater adoption of digital tools and processes aligns with elevated levels of insurance market reach, and the statistical rigor ensures this pattern is far from coincidental. When considering the joint contributions of strategic leadership and digital transformation, the analysis further reveals a compelling positive association with insurance penetration, quantified by a multiple correlation coefficient (R) of 0.657. This outcome implies that elevated proficiency in both leadership strategies and digital advancements tends to correspond with stronger insurance uptake across the sector. In terms of predictive strength, the coefficient of determination (R^2) reaches 0.432, meaning these two elements together explain about 43.2% of the fluctuations observed in insurance penetration. While this represents a solid

foundation for understanding key drivers, it also signals that additional influences—beyond the scope of this model—account for the remaining variability, encouraging a broader exploration of contextual factors.

A closer examination of the mediation dynamics uncovers that digital transformation operates as a partial intermediary in the pathway from strategic leadership to insurance penetration. This is evident from the initial direct effect, where strategic leadership showed a strong positive coefficient (ß = 0.437, $p < 0.001$) on insurance penetration. Upon incorporating digital transformation into the equation, this coefficient diminished to ß = 0.337 ($p < 0.001$) yet retained its statistical importance, illustrating how digital efforts transmit and somewhat attenuate the leadership's influence without fully supplanting it. On this basis, the researcher dismisses the second null hypothesis (H02), affirming that digital transformation indeed plays a substantial mediating role in linking strategic leadership to enhanced insurance penetration in Kenya..

The results indicate that, “strategic leadership is a significant predictor of insurance penetration in Kenya.” The strong positive relationship suggests that enhancing leadership practices within insurance companies can lead to improved market penetration. While strategic leadership has a more substantial impact, the positive effect of digital transformation on insurance penetration highlights the need for insurance companies to invest in digital initiatives. This could involve adopting new technologies, improving customer engagement through digital platforms, and leveraging data analytics to enhance decision-making. The analysis suggests that “digital transformation serve as a mediator in the relationship between strategic leadership and insurance penetration.” This implies that effective strategic leadership can enhance digital transformation efforts, which in turn positively influence insurance penetration. This mediating effect underscores the importance of integrating digital strategies into leadership practices.

The study's third objective was to, “evaluate the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya.” Descriptive statistics results indicate a generally positive perception of government regulations among respondents, although there is some variability in agreement levels. Respondents strongly agree

that the dispute resolution process between Kenyan insurance companies is efficient, reflecting confidence in the regulatory framework's ability to manage conflicts. There is also a consensus that the current regulatory oversight promotes healthy competition among insurance companies, which is essential for innovation and consumer choice. Additionally, respondents feel positively about the regulators' ability to adapt regulations to keep pace with market trends and technologies. The effectiveness of the government's enforcement of insurance regulations to protect consumers is viewed positively, and respondents believe that the regulations are clear and easy to understand. There is recognition that the regulatory framework is well-suited to address the challenges posed by digital insurance. Respondents see potential for a clearer and more consistent regulatory framework to stimulate innovation in the insurance market. They acknowledge the government's efforts to provide guidance on insurance regulations, although there is room for improvement in this area. The consistency of regulatory application by government agencies is also recognized. While respondents feel that the current regulatory framework adequately identifies unethical practices within the insurance industry, there is some concern regarding the involvement of consumer protection groups in discussions about insurance regulations. Additionally, there is a belief that the government could improve its consultation with industry experts when creating new regulations. Transparency in the process for stakeholders to provide input on proposed regulations is seen as somewhat present, but there is a desire for a more robust process. Respondents recognize efforts to balance the interests of insurance companies, consumers, and the government, though there are concerns about the effectiveness of this balance. Lastly, while there is some agreement that regulations allow for the development of innovative insurance products, respondents feel that there is still room for improvement in fostering innovation. The descriptive analysis reveals that government regulations are perceived positively among respondents in the Kenyan insurance sector, particularly regarding the efficiency of dispute resolution, regulatory oversight, and clarity of regulations. However, there are areas, particularly related to stakeholder involvement, consultation with industry experts, and the balance of interests, where improvements could enhance the regulatory framework's effectiveness.

The analysis revealed a moderate to strong positive correlation ($r = 0.552$) between government regulations and insurance penetration in Kenya. This suggests that, “effective regulatory

frameworks are associated with higher levels of insurance penetration, a finding supported by a statistically significant significance level." The Moderation Model examined the relationship between strategic leadership, government regulations, their interaction term, and insurance penetration in Kenya. The analysis yielded a multiple correlation coefficient (R) of 0.979, indicating a very strong positive correlation between the predictors (strategic leadership and government regulations, including their interaction) and insurance penetration. This suggests that the combined and interactive effects of these factors significantly enhance insurance penetration. The model demonstrated exceptional explanatory power, "with an R-squared value of 0.958, accounting for approximately 95.8% of the variance in insurance penetration." The adjusted R-squared value was also 0.958, confirming the model's robustness and accurate representation of the explained variance. Change statistics revealed a substantial increase in explanatory power (R^2 change = 0.531) from a baseline model to the moderation model, further supported by a statistically significant F-change ($p < 0.001$). This significant improvement upon the inclusion of the interaction term indicates that, "government regulations moderate the relationship between strategic leadership and insurance penetration, highlighting the critical role of the regulatory context in the effectiveness of leadership strategies aimed at improving insurance market performance in Kenya." The researcher therefore, Rejects the null hypothesis three ($H0_3$) and consequently concludes that government regulations has significant moderating role on the relationship between strategic leadership and insurance penetration in Kenya.

The unstandardized coefficient in model 1 for government regulations was 0.040, indicating that a one-unit increase in government regulations is associated with a 0.040-unit increase in insurance penetration, while holding strategic leadership constant. This suggests a positive impact of government regulations on insurance penetration. The standardized coefficient (Beta = 0.375) further reflects a relatively strong effect size for government regulations. A statistically significant t-value of 2.596 ($p = 0.010$) confirms this positive relationship. Overall, Model 1 demonstrates the significant and independent contributions of both strategic leadership and government regulations in predicting insurance penetration within the Kenyan context.

In the Moderation Model (Model 2), the constant term increased to 3.366 and was highly statistically significant ($p < 0.001$), indicating a higher baseline level of insurance penetration when the interaction term of strategic leadership and government regulations was included. Notably, "the unstandardized coefficient for strategic leadership became significantly negative (-0.760, $p < 0.001$), suggesting that the direct effect of strategic leadership on insurance penetration is reversed in the presence of the interaction term." This reversal underscores the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration. The strong negative standardized coefficient (Beta = -1.112) further highlights the substantial influence of government regulations in shaping the impact of strategic leadership on insurance penetration. The findings suggest that, "government regulations significantly moderate the relationship between strategic leadership and insurance penetration." This implies that effective regulatory frameworks can enhance the positive effects of strategic leadership on market performance.

The fourth objective of this study aimed to, "investigate how government regulations influence the mediating role of digital transformation in the relationship between strategic leadership and insurance penetration in Kenya." The analysis revealed a statistically significant moderated mediation effect, "leading to the rejection of the null hypothesis ($H0_4$)." This means that government regulations play a critical role in shaping the indirect relationship between strategic leadership, digital transformation, and insurance penetration. "The statistical model demonstrated an exceptionally strong positive association between the predictor variables—strategic leadership, digital transformation, government regulations, and their interaction—and insurance penetration, as indicated by a multiple correlation coefficient ($R = 0.973$)." This high R value underscores the model's effectiveness in capturing the combined influence of these factors on insurance penetration.

The R-squared value ($R^2 = 0.946$) further highlights the model's robustness, explaining 94.6% of the total variance in insurance penetration. This near-complete explanatory power suggests that the included variables account for nearly all observed variability in insurance uptake, indicating a highly reliable and well-fitted model. The statistical significance of the model is confirmed by a

p-value of 0.000 ($p < 0.001$), reinforcing the likelihood that these relationships are not due to chance. Collectively, these findings emphasize the critical interplay between strategic leadership, digital transformation, and government regulations in driving insurance penetration in Kenya. The results underscore the necessity of considering regulatory frameworks as a moderating force that enhances or alters the indirect effects of leadership practices and digital initiatives on market outcomes. This has important implications for policymakers and industry leaders, who must align regulatory policies with strategic and technological advancements to optimize insurance market growth.

The direct effects analysis provides critical insights into the relationships between the predictor variables and insurance penetration in Kenya. The constant term ($\beta = 3.901$, standard error = 0.039) represents a statistically significant baseline estimate of insurance penetration when all predictors are held at zero. Its extremely high t-value ($t = 100.255$, $p < 0.001$) and narrow confidence interval [3.824, 3.978] confirm its reliability as a foundational value for interpreting the model. Strategic leadership exhibited a strong positive association with insurance penetration ($\beta = 0.962$, SE = 0.020, $t = 49.182$, $p < 0.001$). The confidence interval [0.923, 1.000] further reinforces this relationship, indicating that enhanced strategic leadership practices are strongly linked to higher insurance uptake. This underscores the critical role of leadership in driving market growth within the insurance sector. Digital transformation also demonstrated a statistically significant, though smaller, positive impact on insurance penetration ($\beta = 0.010$, SE = 0.010, $t = 2.037$, $p = 0.031$). The confidence interval [0.009, 0.029] suggests that while digital initiatives contribute to insurance penetration, their current implementation may require further enhancement to maximize their influence.

Government regulations were found to have a robust positive relationship with insurance penetration ($\beta = 0.249$, SE = 0.003, $t = 89.869$, $p < 0.001$), with a confidence interval [0.244, 0.255] confirming this effect's reliability. This highlights the importance of supportive regulatory frameworks in fostering insurance market development. Notably, the interaction term between strategic leadership and government regulations ($\beta = 0.025$, SE = 0.002, $t = 11.425$, $p < 0.001$) revealed a significant synergistic effect. The confidence interval [0.021, 0.030] indicates that

strong government regulations amplify the positive influence of strategic leadership on insurance penetration, creating a combined impact greater than either factor alone.

Collectively, these results emphasize that strategic leadership and government regulations are critical positive predictors of insurance penetration in Kenya. While digital transformation contributes positively, its effect is smaller, suggesting opportunities for improvement. The significant interaction effect underscores the necessity of aligning strategic leadership practices with supportive regulatory policies to maximize their combined influence on market outcomes. This integrated approach ensures that leadership initiatives are enhanced by regulatory environments, creating a more effective pathway to improving insurance penetration in the Kenyan market.

The study's analysis revealed a statistically significant moderated mediation effect, as evidenced by an index of moderated mediation of 0.020 (standard error = 0.027). The 95% bias-corrected bootstrap confidence interval for this effect ranged from 0.010 to 0.090, which does not include zero (BootLLCI = 0.010; BootULCI = 0.090). This confirms that government regulations significantly influence the indirect pathway through which strategic leadership affects insurance penetration via digital transformation. "The rejection of the null hypothesis ($H0_4$) underscores that government regulations play a critical role in modifying how digital transformation mediates the relationship between strategic leadership and insurance penetration in Kenya." This finding highlights that regulatory frameworks are not merely contextual factors but actively shape the effectiveness of leadership-driven strategies aimed at improving insurance market penetration. The results emphasize the necessity of a holistic strategy that integrates three key elements: strategic leadership to guide organizational direction, robust regulatory frameworks to align and amplify these efforts, and digital transformation initiatives to bridge the gap between leadership practices and market outcomes. Policymakers and industry stakeholders must collaborate to ensure that regulatory policies are designed to support, rather than constrain, the interplay between leadership, technology, and market growth. Such a coordinated approach would optimize the synergies between these factors, ultimately driving improvements in insurance penetration and sector-wide performance in Kenya..

5.3 Study conclusions

The primary objective of this study was to assess the relationship between strategic leadership and insurance penetration in Kenya. The findings reveal a generally positive perception of strategic leadership attributes among respondents, although there are notable variations in agreement levels. A strong consensus emerged regarding the importance of an organizational mission that targets various stakeholders, reflecting a commitment to inclusivity. This underscores the foundational role of a well-defined mission in guiding decision-making processes and aligning organizational efforts, ensuring that all members clearly understand the goals. Respondents expressed a favorable view of their organization's ability to respond to new opportunities for improving service delivery, although opinions regarding responsiveness varied. Timely decision-making by leaders was similarly viewed positively, indicating that this aspect of strategic leadership is generally appreciated. However, the analysis also highlighted lower agreement levels concerning the organization's vision. While respondents acknowledged the vision's importance, it became evident that there is significant room for improvement in its communication and motivational impact. This suggests that organizations may need to invest more effort in articulating their vision to inspire and engage employees effectively. Furthermore, while respondents recognized the significance of informed decision-making, there were differing opinions on how consistently this practice is applied within their organizations. The findings indicate that the motivational aspect of the organization's vision is not uniformly felt, leading to the conclusion that enhancing the inspirational capacity of the vision could further strengthen its influence on employee engagement and performance. Overall, the descriptive analysis suggests that strategic leadership is perceived positively within the Kenyan insurance sector, particularly regarding the clarity and relevance of the organizational mission. However, there are clear areas for improvement, particularly in the articulation of the vision and its ability to inspire and motivate staff. This points to the necessity for continuous evaluation and adaptation of leadership strategies to better align with stakeholder expectations and organizational goals. In conclusion, the study emphasizes the critical role of strategic leadership in shaping the effectiveness of organizations within the insurance sector in Kenya. By prioritizing the development of clear missions and inspiring visions, organizations can enhance their strategic leadership effectiveness, which in turn could bolster insurance penetration.

The findings advocate for ongoing leadership development initiatives that focus on communication, decision-making, and responsiveness to market opportunities as essential components for achieving sustained growth and success in the competitive insurance landscape.

This study has conclusively established that, “strategic leadership significantly and positively influences insurance penetration in Kenya, leading to the rejection of the null hypothesis.” The strong correlation coefficient indicates a robust relationship between strategic leadership and insurance penetration, suggesting that improvements in leadership practices are likely to result in increased penetration rates. The statistical significance of this relationship further reinforces the notion that, “strategic leadership is a critical factor in driving insurance uptake.” “The analysis revealed that approximately 40.8% of the variance in insurance penetration can be attributed to strategic leadership, indicating a moderate level of explanatory power.” This finding suggests that while strategic leadership is essential, other factors not included in the model also play a role in influencing insurance penetration. The implication is that a comprehensive approach, considering additional variables, may be necessary to fully understand the dynamics of insurance uptake in Kenya. Model coefficients analysis demonstrated that, “for every unit increase in strategic leadership, insurance penetration is expected to rise correspondingly.” This positive correlation highlights the importance of enhancing strategic leadership practices within insurance companies as a means to significantly boost penetration rates. The high t-statistic and the statistical significance of the results underscore the critical role of strategic leadership in this context. Moreover, the confidence interval for the coefficient of strategic leadership, which lies entirely above zero, provides strong evidence that the positive impact of strategic leadership on insurance penetration is reliable and not due to chance. This reinforces the conclusion that effective leadership practices are vital for enhancing market penetration in the insurance sector. Given the strong positive relationship identified, “it is recommended that insurance companies in Kenya prioritize leadership development initiatives.” Investing in training and development programs aimed at enhancing strategic leadership capabilities can lead to improved decision-making, foster innovation, and ultimately contribute to higher insurance penetration rates. By focusing on effective leadership practices, organizations can better navigate the complexities of the insurance market, respond to consumer needs, and achieve sustained growth in penetration rates. This study

highlights the necessity for continuous evaluation and adaptation of leadership strategies to align with stakeholder expectations and organizational goals, ensuring that the insurance sector in Kenya can thrive in an increasingly competitive environment.

The second objective of this study aimed to, "establish the mediating effect of digital transformation on the relationship between strategic leadership and insurance penetration in Kenya." The findings indicate a generally positive perception of digital transformation attributes among respondents, although there is notable variability in agreement levels. Respondents strongly agree that concerns about data privacy significantly hinder the effective use of big data analytics within the insurance sector, suggesting that addressing these concerns is crucial for maximizing the benefits of digital transformation. A consensus emerged around the idea that government initiatives aimed at improving digital literacy have positively influenced public trust in online insurance platforms. This highlights the importance of supportive policies and programs in fostering an environment conducive to digital transformation. Additionally, respondents expressed optimism regarding the use of big data for identifying new customer groups, and they recognized that increased investments in cybersecurity have made insurers more attractive to customers. This acknowledgment indicates that as organizations enhance their digital capabilities, they also build consumer confidence and drive engagement. The effective utilization of big data for risk assessment and the formulation of fairer premiums was also recognized, further emphasizing the potential of digital transformation to improve service delivery in the insurance sector. Respondents noted the role of digital tools in making insurance more accessible, particularly for individuals in remote areas, and appreciated the effectiveness of online insurance comparison tools. However, challenges persist, as insufficient internet access in certain regions was identified as a significant barrier to fully realizing the benefits of digital transformation. While there is recognition of the use of artificial intelligence (AI) and cloud computing within the insurance sector, the findings suggest there is still ample room for further adoption of these technologies. Respondents evaluated digital marketing efforts positively and acknowledged that mobile applications have improved accessibility to insurance products. Nevertheless, concerns about cybersecurity were cited as a barrier to online insurance purchases, indicating that enhancing security measures is vital for building consumer trust in digital transactions. Furthermore, the favorable perception of the

customization of insurance products through big data reflects a positive view of personalized offerings tailored to different customer groups. The descriptive analysis reveals that, while digital transformation is viewed positively within the Kenyan insurance sector—especially concerning data privacy, government initiatives, and the application of big data—significant challenges remain. These challenges primarily relate to cybersecurity concerns and limitations in internet access. In conclusion, the findings underscore the need for continuous efforts to enhance digital literacy, improve cybersecurity measures, and expand internet access to fully harness the potential of digital transformation in the insurance industry. By addressing these challenges, "organizations can better leverage digital tools and big data analytics to drive strategic leadership and enhance insurance penetration in Kenya." The results suggest that a concerted focus on digital transformation will not only facilitate improved service delivery but also strengthen the overall effectiveness of strategic leadership within the insurance sector, ultimately benefiting both insurers and consumers alike.

The study has successfully demonstrated, "a positive and statistically significant correlation between digital transformation and insurance penetration, indicating a moderate to strong relationship where increased efforts in digital transformation are associated with higher levels of insurance penetration." This finding, "supported by a correlation coefficient, suggests that the relationship is robust and unlikely to be due to chance." Furthermore, "the results reveal a strong positive correlation between the combined influences of strategic leadership and digital transformation on insurance penetration, signifying that organizations that excel in both areas are more likely to achieve greater market penetration." The analysis reveals that the combined effect of strategic leadership and digital transformation accounts for approximately 43.2% of the variance in insurance penetration. This moderate R-squared value implies that while these two variables are significant predictors of insurance penetration, other factors not examined in this study also contribute to this variability, indicating the complexity of the factors influencing insurance uptake in Kenya. Importantly, the study provides evidence that digital transformation partially mediates the relationship between strategic leadership and insurance penetration. The significant positive coefficient between strategic leadership and insurance penetration indicates a strong direct effect, which, while still significant, diminishes after the introduction of digital transformation as a

mediator. This suggests that while strategic leadership has a substantial impact on insurance penetration, the enhancement of digital transformation efforts plays a crucial role in this dynamic. As a result, “the null hypothesis concerning the mediating effect of digital transformation has been rejected.” The findings conclude that digital transformation significantly mediates the relationship between strategic leadership and insurance penetration in Kenya. This insight emphasizes the need for insurance companies to prioritize both effective leadership practices and digital initiatives to optimize market penetration. The implications of these findings are profound, suggesting that an enhancement of leadership practices within insurance companies is fundamental to achieving improved market penetration. While the impact of strategic leadership is more pronounced, “the positive correlation of digital transformation highlights the necessity for insurance firms to invest in digital initiatives.” These investments could include the adoption of new technologies, the improvement of customer engagement through digital platforms, and the leveraging of data analytics to enhance decision-making processes. In summary, the analysis indicates that digital transformation serves as a vital mediator in the relationship between strategic leadership and insurance penetration. This mediating effect underscores the importance of integrating digital strategies into leadership practices, suggesting that effective strategic leadership can bolster digital transformation efforts, which in turn positively influences insurance penetration. Consequently, insurance companies should focus on aligning their leadership strategies with digital initiatives to capitalize on the synergies between these two critical dimensions, ultimately leading to enhanced performance in the sector.

The third objective of this study was, “to evaluate the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration in Kenya.” The findings indicate a generally positive perception of government regulations among respondents, although there is variability in agreement levels regarding specific regulatory aspects. Notably, respondents express strong confidence in the efficiency of the dispute resolution process between Kenyan insurance companies, reflecting a belief in the regulatory framework's ability to manage conflicts effectively. This perception is critical as it underscores the importance of having mechanisms in place to resolve disputes, which can enhance consumer trust in the insurance sector. Furthermore, there is a consensus that the current regulatory oversight promotes healthy competition among

insurance companies. This competitive environment is essential for fostering innovation and providing consumers with diverse choices. Respondents also appreciate the regulators' ability to adapt regulations to keep pace with evolving market trends and technologies, indicating that a responsive regulatory framework is vital for the sector's growth and relevance. The effectiveness of the government's enforcement of insurance regulations to protect consumers is viewed positively, and respondents believe that the clarity and comprehensibility of these regulations facilitate compliance and understanding.

While respondents acknowledge that the regulatory framework is well-suited to address the challenges posed by digital insurance, there is recognition of the potential for a clearer and more consistent regulatory framework to further stimulate innovation in the market. This suggests that while the current regulations are beneficial, enhancements could be made to better support the development of innovative insurance products. Additionally, respondents recognize the government's efforts to provide guidance on insurance regulations, though they also indicate that there is room for improvement in this regard. Concerns regarding the involvement of consumer protection groups in discussions about insurance regulations suggest that stakeholder engagement could be strengthened. Respondents believe that the government could improve its consultation with industry experts when formulating new regulations, highlighting the need for a more inclusive approach that considers diverse perspectives. While transparency in the regulatory process is somewhat present, there is a desire for a more robust mechanism that allows stakeholders to provide input, which could enhance the legitimacy and acceptance of regulatory changes. The findings also indicate that respondents recognize the efforts to balance the interests of insurance companies, consumers, and the government, although there are concerns about the effectiveness of this balance. This highlights the complexity of regulatory dynamics and the necessity for ongoing dialogue among all stakeholders to ensure that regulations serve the interests of all parties involved. In conclusion, the descriptive analysis reveals that government regulations are perceived positively within the Kenyan insurance sector, particularly regarding dispute resolution efficiency, regulatory oversight, and clarity of regulations. However, the study also identifies areas for improvement, particularly related to stakeholder involvement, the consultation process with industry experts, and the balance of interests among stakeholders. Addressing these areas could

significantly enhance the regulatory framework's effectiveness and, in turn, “its moderating role on the relationship between strategic leadership and insurance penetration.” By fostering a more collaborative and transparent regulatory environment, the Kenyan insurance sector can better leverage the benefits of strategic leadership and innovation, ultimately leading to improved market penetration and consumer satisfaction.

The analysis has revealed, “a moderate to strong positive correlation between government regulations and insurance penetration in Kenya, with a correlation coefficient of r=0.552.” This suggests that effective regulatory frameworks are closely associated with higher levels of insurance penetration, a finding that is statistically significant. The moderation model further examined the intricate relationship between strategic leadership, government regulations, their interaction term, and insurance penetration, yielding a multiple correlation coefficient (R) of 0.979. This indicates a very strong positive correlation between these predictors and insurance penetration, suggesting that the combined and interactive effects of strategic leadership and government regulations significantly enhance insurance market performance. “The model demonstrated exceptional explanatory power, accounting for approximately 95.8% of the variance in insurance penetration, as indicated by an R^2 value of 0.958.” The adjusted R^2 value, which also stood at 0.958, confirms the robustness of the model and its accurate representation of the explained variance. The change statistics revealed a substantial increase in explanatory power (R^2 change = 0.531) from the baseline model to the moderation model, further supported by a statistically significant F-change ($p<0.001$). This significant improvement upon the inclusion of the interaction term indicates that government regulations effectively moderate the relationship between strategic leadership and insurance penetration, underscoring the critical role of the regulatory context in enhancing the effectiveness of leadership strategies aimed at improving insurance market performance in Kenya. Consequently, “the null hypothesis three ($H0_3$) has been rejected, confirming that government regulations play a significant moderating role in the relationship between strategic leadership and insurance penetration.” The unstandardized coefficient for government regulations in model 1 was 0.040, suggesting that a one-unit increase in government regulations is associated with a 0.040-unit increase in insurance penetration while holding strategic leadership constant. This finding indicates a positive impact of government

regulations on insurance penetration, supported by a standardized coefficient (Beta = 0.375) that reflects a relatively strong effect size. The statistically significant t-value of 2.596 (p=0.010) further affirms this positive relationship. In the moderation model (Model 2), the constant term increased to 3.366 and was highly statistically significant (p<0.001), indicating a higher baseline level of insurance penetration when the interaction term of strategic leadership and government regulations was included. Notably, "the unstandardized coefficient for strategic leadership became significantly negative (-0.760, p<0.001), suggesting that the direct effect of strategic leadership on insurance penetration is reversed in the presence of the interaction term." This reversal underscores the moderating effect of government regulations on the relationship between strategic leadership and insurance penetration, with the strong negative standardized coefficient (Beta = -1.112) highlighting the substantial influence of government regulations in shaping the impact of strategic leadership. Overall, these findings suggest that while strategic leadership is crucial for enhancing insurance penetration, the effectiveness of these leadership strategies is significantly moderated by the regulatory framework in place. Effective regulatory frameworks can enhance the positive effects of strategic leadership on market performance, indicating that insurance companies must navigate the regulatory landscape effectively to maximize their leadership efforts and improve penetration rates. This study emphasizes the importance of a synergistic approach, where both strategic leadership and robust government regulations collaborate to drive growth and innovation within the Kenyan insurance sector, ultimately benefiting consumers and the industry as a whole.

The fourth objective of this study was to, "examine the moderating effect of government regulations on the mediating role of digital transformation in the relationship between strategic leadership and insurance penetration in Kenya." The findings led to the rejection of the null hypothesis ($H0_4$), confirming the presence of a significant moderated mediation effect. The model summary indicates an exceptionally strong positive linear relationship among the predictor variables strategic leadership, digital transformation, government regulations, and their interaction with insurance penetration, as demonstrated by a multiple correlation coefficient (R=0.973). This high correlation suggests that, "the model effectively captures the combined influence of these factors on insurance penetration."

Furthermore, the R^2 value of 0.946 signifies that 94.6% of the total variance in insurance penetration is explained by the predictor variables, demonstrating an outstanding model fit. This indicates that these factors account for nearly all the variability in insurance penetration, underscoring the model's robustness. The statistical significance of the overall model is confirmed by a p-value of 0.000 ($p<0.001$), providing strong evidence for the reliability of the findings. Direct effects analysis revealed a highly significant constant term, representing a reliable baseline level of insurance penetration when all predictors are set to zero. Strategic leadership showed a significant positive association with insurance penetration, indicating that higher levels of strategic leadership correlate with increased insurance penetration, underscoring its crucial role within the sector. Digital transformation, "while exhibiting a statistically significant impact on insurance penetration, demonstrated a smaller effect, suggesting the need for further enhancement of digital initiatives to maximize their potential benefits." Government regulations were also shown to significantly positively relate to insurance penetration, emphasizing the importance of a supportive regulatory environment. Moreover, the interaction term between strategic leadership and government regulations revealed a significant positive effect on insurance penetration, indicating a synergistic relationship where strong government regulations enhance the positive impact of strategic leadership.

This finding suggests that effective regulatory frameworks can amplify the benefits derived from strategic leadership efforts in the insurance sector. "The index of moderated mediation was reported as 0.020, with a standard error of 0.027 and a confidence interval ranging from 0.010 to 0.090." This index indicates a significant moderated mediation effect, suggesting that government regulations influence the indirect effect of strategic leadership on insurance penetration through digital transformation. The confidence interval does not include zero, confirming the statistical significance of the moderation effect. "This finding highlights the critical role of government regulations in shaping the effectiveness of strategic leadership initiatives aimed at enhancing insurance penetration." In conclusion, "the study rejects the null hypothesis ($H0_4$), emphasizing the need for a coordinated approach that integrates effective leadership, robust regulatory frameworks, and enhanced digital strategies to improve insurance penetration in the Kenyan market." By recognizing the moderated mediation effect of government regulations on the

relationship between strategic leadership and digital transformation, stakeholders can develop more comprehensive strategies that leverage these dynamics to foster growth and innovation in the insurance sector. Ultimately, the results advocate for a collaborative effort among insurance companies, regulators, and digital transformation initiatives to enhance market performance and ensure higher levels of insurance penetration, benefiting both consumers and the industry as a whole.

5.4 Recommendation

Based on research findings and conclusions of this study, the key recommendations are described in these sub-sections.

5.4.1 Recommendations for Practice

Based on the findings of this study, practitioners in the Kenyan insurance sector are strongly encouraged to prioritize the continuous development and articulation of both their organizational missions and visions as central components of their strategic leadership initiatives. Specifically, organizations should invest in clearly defining and communicating their missions to ensure that they resonate with all stakeholders, thereby fostering a greater sense of inclusivity and alignment within the workforce. This clarity will serve as a foundational guide for decision-making processes and help align organizational efforts towards common goals. Moreover, enhancing the motivational capacity of the organizational vision is paramount. Practitioners should engage in regular dialogue with employees to understand their perspectives and incorporate their feedback into the visioning process. This collaborative approach can help inspire and engage staff more effectively, driving higher levels of commitment and performance. Additionally, “organizations should implement training programs that focus on enhancing strategic leadership skills, particularly in the areas of communication, timely decision-making, and responsiveness to emerging market opportunities.” By fostering an environment that encourages informed decision-making and adaptability, organizations can better respond to the dynamic challenges of the insurance market. This, in turn, will not only strengthen employee engagement but also improve overall organizational effectiveness and insurance penetration rates. Ultimately, a strategic focus on mission and vision development, coupled with ongoing leadership training, will position

insurance companies to achieve sustained growth and success in an increasingly competitive landscape.

In light of the findings from this study, it is imperative for practitioners in the Kenyan insurance sector to prioritize the enhancement of strategic leadership practices as a means to significantly boost insurance penetration rates. Given the strong correlation established between strategic leadership and insurance penetration, organizations should invest in comprehensive leadership development initiatives that focus on cultivating effective leadership skills and practices. Practitioners are encouraged to implement targeted training programs that not only enhance decision-making capabilities but also foster innovation and adaptability within their leadership teams. This could involve workshops, mentorship programs, and leadership coaching that emphasize the importance of strategic vision, stakeholder engagement, and responsiveness to market dynamics. By equipping leaders with the necessary tools and insights, organizations can better navigate the complexities of the insurance market and respond effectively to consumer needs. Moreover, it is essential for organizations to continuously evaluate and adapt their leadership strategies to align with evolving stakeholder expectations and organizational goals. This ongoing assessment will ensure that leadership practices remain relevant and effective in driving insurance uptake. Additionally, fostering a culture of open communication and collaboration within teams can enhance the motivational impact of leadership, further driving employee engagement and performance. Ultimately, by focusing on the development of strong strategic leadership, insurance companies in Kenya can create a solid foundation for sustained growth and success in the competitive landscape, leading to improved market penetration and better service delivery for consumers.

Based on the findings of this study, it is essential for practitioners in the Kenyan insurance sector to prioritize and accelerate their digital transformation initiatives as a means to enhance strategic leadership and improve insurance penetration. Recognizing the positive perception of digital transformation attributes among respondents, organizations should actively address the concerns surrounding data privacy and cybersecurity, which are significant barriers to the effective use of digital tools and big data analytics. To build consumer trust in online insurance platforms,

practitioners must invest in robust cybersecurity measures that protect customer data and ensure secure transactions. Clear communication regarding the steps taken to safeguard personal information can further enhance consumer confidence and drive engagement. Additionally, organizations should prioritize compliance with data protection regulations and best practices to mitigate risks associated with data privacy concerns. Furthermore, enhancing digital literacy among both employees and consumers is crucial. Practitioners should collaborate with government initiatives aimed at improving digital literacy to create supportive programs that educate stakeholders on the benefits and functionalities of digital tools. This could include training sessions, workshops, and resources that empower employees to leverage digital technologies effectively and inform consumers about the advantages of using online platforms for insurance services. Recognizing the potential of big data analytics, organizations should strive to develop sophisticated tools for risk assessment and personalized product offerings tailored to specific customer segments. This involves investing in artificial intelligence (AI) and cloud computing technologies, which can significantly enhance data processing capabilities and improve service delivery. By embracing these technologies, insurance companies can better identify new customer groups, customize their offerings, and ultimately increase market penetration. Additionally, addressing the issue of insufficient internet access in certain regions is vital for fully realizing the benefits of digital transformation. Practitioners should advocate for improved infrastructure and collaborate with stakeholders to expand internet accessibility, particularly in remote areas, ensuring that all consumers can benefit from digital insurance services. In conclusion, by focusing on enhancing digital transformation initiatives, improving cybersecurity, and fostering digital literacy, insurance practitioners in Kenya can significantly strengthen their strategic leadership capabilities. This holistic approach will not only enhance service delivery and customer engagement but also contribute to greater insurance penetration, ultimately benefiting both insurers and consumers in the dynamic insurance landscape.

In light of the findings from this study, it is crucial for insurance practitioners in Kenya to prioritize the integration of digital transformation initiatives alongside effective strategic leadership practices to optimize insurance penetration. The strong correlation between digital transformation and insurance penetration suggests that organizations that enhance their digital capabilities are

likely to achieve greater market success. Practitioners should invest in adopting and implementing innovative technologies that facilitate digital transformation, such as advanced data analytics, artificial intelligence, and customer relationship management systems. These technologies can significantly improve customer engagement, streamline operations, and enable more informed decision-making processes, ultimately leading to higher insurance penetration rates. Furthermore, it is essential for leadership within insurance companies to cultivate a culture that embraces digital innovation. This involves not only promoting digital literacy among employees but also encouraging a mindset that values agility and responsiveness to market changes. Leadership training programs should emphasize the importance of digital strategies in enhancing overall organizational effectiveness and guiding teams through the complexities of digital transformation. Additionally, "organizations should actively seek to leverage data analytics to gain insights into customer behavior and preferences." This understanding can inform the development of tailored insurance products and services that meet the specific needs of different market segments, thereby enhancing customer satisfaction and loyalty. Moreover, insurance companies should maintain a continuous dialogue between leadership and digital transformation teams to ensure alignment of strategic objectives and digital initiatives. This collaboration will help to identify opportunities for innovation and improvement, allowing organizations to navigate the competitive landscape more effectively. In summary, by prioritizing the synergy between strategic leadership and digital transformation, insurance companies can capitalize on the benefits of both dimensions to enhance their market penetration. This holistic approach will not only drive growth but also strengthen the overall resilience and adaptability of organizations in the evolving insurance sector. Practitioners are encouraged to take proactive steps in integrating these elements into their strategic frameworks to achieve sustained success and better serve their customers.

5.4.2 Recommendations for Policy Makers

In light of the findings from this study, it is essential for policymakers in Kenya to enhance the regulatory framework governing the insurance sector to foster improved insurance penetration and consumer satisfaction. While the current regulations are perceived positively, there are clear areas for improvement that can significantly strengthen the effectiveness of the regulatory environment. First and foremost, policymakers should prioritize the establishment of a more inclusive

consultation process when formulating and revising insurance regulations. Engaging a diverse range of stakeholders including consumer protection groups, industry experts, and insurance companies will ensure that regulations are well-informed and reflective of the needs and concerns of all parties involved. This collaborative approach will not only enhance the legitimacy of regulatory changes but also promote a sense of ownership among stakeholders, leading to better compliance and acceptance. Additionally, it is crucial to improve transparency in the regulatory process. Implementing robust mechanisms that allow stakeholders to provide input on proposed regulations will foster trust and confidence in the regulatory framework. This transparency can be achieved through public consultations, stakeholder forums, and regular updates on regulatory developments, which will help demystify the regulatory process and encourage active participation.

Policymakers should also focus on enhancing the clarity and consistency of regulations, particularly as they pertain to digital insurance products and services. As the market evolves, regulations must adapt to keep pace with technological advancements and innovation. Clear and comprehensive guidelines will facilitate compliance and support the development of innovative insurance solutions that meet the diverse needs of consumers. Furthermore, strengthening the dispute resolution mechanisms within the regulatory framework is vital. By ensuring that these processes are efficient and accessible, policymakers can enhance consumer trust in the insurance sector, encouraging more individuals to engage with insurance products. This trust is essential for increasing market penetration and fostering a competitive environment that benefits both consumers and providers. Lastly, ongoing monitoring and evaluation of the regulatory framework is necessary to assess its effectiveness and adaptability over time. By regularly reviewing the impact of regulations and soliciting feedback from stakeholders, policymakers can make informed adjustments that better serve the insurance market's dynamic nature. In conclusion, by fostering a collaborative, transparent, and adaptive regulatory environment, policymakers can enhance the effectiveness of government regulations in the Kenyan insurance sector. This approach will not only support strategic leadership efforts within insurance companies but will also drive innovation, improve market penetration, and ultimately lead to greater consumer satisfaction and trust in the insurance industry.

The strong positive correlation between government regulations and insurance penetration underscores the critical role that effective regulatory frameworks play in driving market performance. To capitalize on this relationship, policymakers should focus on the following key areas: Policymakers should ensure that the regulatory environment is not only robust but also adaptable to the evolving dynamics of the insurance market. This includes regularly reviewing and updating regulations to reflect technological advancements and market trends, particularly in areas such as digital insurance and data privacy. It is crucial to foster a more inclusive dialogue among stakeholders, including insurance companies, consumer protection groups, and industry experts. By actively involving these parties in the regulatory process, policymakers can gain valuable insights that will lead to more effective regulations. This collaborative approach will also enhance the legitimacy and acceptance of regulatory changes.

Regulations should be clear, comprehensible, and easily accessible to all stakeholders. Policymakers should prioritize transparency in the regulatory process, providing stakeholders with opportunities to contribute feedback on proposed regulations. This will help build trust and ensure that the regulations are well understood and effectively implemented. Given the positive perception of the dispute resolution process among respondents, policymakers should continue to support and enhance these mechanisms. Ensuring that disputes are resolved efficiently will bolster consumer confidence in the insurance sector, encouraging greater participation and engagement.

Policymakers should create an environment that encourages innovation within the insurance sector. This can be achieved by providing incentives for insurance companies to develop new products and services that meet the diverse needs of consumers. A regulatory framework that supports experimentation and innovation will help drive market penetration and improve service delivery. Establishing a system for ongoing monitoring and evaluation of the regulatory framework's effectiveness is essential. Policymakers should regularly assess the impact of regulations on insurance penetration and market performance, making adjustments as necessary to ensure that the regulatory environment remains conducive to growth. By implementing these recommendations, policymakers can significantly enhance the moderating role of government

regulations on the relationship between strategic leadership and insurance penetration. This proactive approach will not only strengthen the insurance sector in Kenya but also contribute to broader economic growth and consumer welfare. Ultimately, a well-regulated insurance market will benefit all stakeholders, fostering a more resilient and competitive industry.

5.4.3 Recommendations for Academia and Theory

This study highlights, “the importance of integrating both mediating and moderating variables in understanding complex relationships within organizational contexts.” “By demonstrating how government regulations moderate the mediating role of digital transformation in the relationship between strategic leadership and insurance penetration, the research provides a nuanced perspective that can be applied to various fields beyond insurance, such as finance, healthcare, and technology.” This integration encourages future researchers to adopt more sophisticated models that reflect the multifaceted nature of organizational dynamics.

The findings contribute to the development of a comprehensive framework for understanding the factors influencing insurance penetration in emerging markets. By establishing a strong correlation between strategic leadership, digital transformation, and government regulations, the study offers a theoretical basis for future research aimed at exploring how these elements interact to affect market performance. This framework can serve as a foundation for subsequent studies investigating similar relationships in different contexts or industries.

The research underscores, “the critical role of government regulations in shaping the effectiveness of strategic leadership initiatives.” This contribution is particularly relevant in the context of developing economies, where regulatory environments can significantly impact business operations and market dynamics. By emphasizing the need for a supportive regulatory framework, the study encourages scholars to further investigate how regulatory policies can be designed to foster innovation and enhance market penetration.

The study's findings suggest that while digital transformation is a vital component of enhancing insurance penetration, its effectiveness is contingent upon the regulatory environment and strategic

leadership. This insight adds depth to existing theories of digital transformation by illustrating that successful implementation requires not only technological advancements but also alignment with leadership strategies and regulatory frameworks. Future research can build on this by exploring the specific mechanisms through which digital transformation influences organizational outcomes in various sectors.

Finally, the study advocates for a collaborative effort among insurance companies, regulators, and digital transformation initiatives. This perspective contributes to the theoretical understanding of stakeholder engagement and collaboration in achieving organizational goals. It encourages researchers to explore how collaborative frameworks can be developed and implemented to enhance the effectiveness of strategic leadership and regulatory policies in driving market performance.

5.5 Further Research

To build upon the insights gained from this investigation into the roles of strategic leadership, digital transformation, and government regulations in driving insurance penetration in Kenya, subsequent studies could broaden the scope by examining additional contextual elements that may intersect with these core dynamics. For instance, researchers might investigate how factors such as financial literacy levels among consumers, the state of supporting infrastructure (like broadband access and payment systems), cultural attitudes toward risk and insurance, and the intensity of competition within the insurance market either amplify or temper the direct, mediating, and moderating effects identified here—particularly in relation to how government regulations interact with these influences. Such explorations would help clarify whether these variables act as enablers or constraints in the moderated mediation pathways observed in this study.

In addition, to deepen the understanding of the nuanced mechanisms at play, future work could integrate qualitative methods alongside quantitative analyses, such as conducting in-depth interviews with insurance executives, regulatory officials, and potential policyholders. This approach would uncover nuanced perceptions and experiential factors that explain the moderated mediation effect of government regulations on the digital transformation pathway from strategic

leadership to insurance penetration, revealing barriers or facilitators not fully captured by statistical models alone. Ultimately, adopting mixed-methods designs—blending surveys and regressions with thematic analysis of narratives—would yield a more comprehensive view of the phenomenon, bridging empirical patterns with lived realities to inform more targeted strategies for enhancing insurance market growth in Kenya.

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APPENDICES

Appendix I: Letter of Introduction

Date……

To……

……

Dear sir/madam,

Re: collection of research data

My name is Abdullahi Mohamed Abdi and a PhD student in management and leadership of the Management University of Africa. Currently, i am carrying out a research on the *"strategic leadership, digital transformation, government regulations and Insurance Penetration in Kenya"*. I am in the process of gathering relevant data for this study. You have been identified as one of the collaborators and respondents in this study. I request for your assistance towards making this study a success. I therefore kindly request you to take some time to respond to the attached questionnaire. I wish to assure you that your responses will be treated with confidentiality and will be used solely for the purpose of this study.

It will be appreciated if you can fill the questionnaire within the next 5-days to enable early finalization of the study.

Thank you in advance

Yours sincerely

Abdullahi Mohamed Abdi

Student Reg No. DML/19/00145/3/21

Appendix II: Study Questionnaire

This questionnaire seeks to investigate "strategic leadership, digital transformation, government regulations and insurance penetration in Kenya". This study is an academic study and the information obtained through this questionnaire will be treated confidentially and will not be used for any other purpose other than academic research.

Part A: Respondent's Information

1) Please state your Gender

Male [ ] Female [ ]

2) Kindly indicate number of years you have worked in your organization

Less than 1 year [ ] 1- 5 years [ ] 6 – 10 years [ ] Over 10 years [ ]

3) What is your highest level of education you have attained?

Diploma [ ] Bachelor's degree [ ] Master's degree [ ] PhD/Doctorate [ ]

4). what is your position (title) in this organization?

Chief Executive Director [ ] Finance manager [ ] Sales and marketing manager [ ]
Risk and compliance manager [ ] ICT manager [ ]

Section B: Strategic Leadership

4) Please tick the box to indicate how your company handles the following aspects of Strategic leadership on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

	Strategic thinking	**1**	**2**	**3**	**4**	**5**
1	Leaders in our organization make decisions on time					
2	Leaders in our organization clearly articulate a compelling vision for the future					
3	Leaders in our organization consider what the organization must keep from its past					
4	Leaders in our organization clearly connect the present and the future of the organization					
5	Leaders in our organization are adept at identifying and seizing strategic opportunities.					
6	Our organization responds to arising opportunities to improve service delivery					

7	Decisions in our organization are knowledge-based					
	Strategic direction	**1**	**2**	**3**	**4**	**5**
8	Our organization mission clearly states its purpose.					
9	Our organization mission serves as a guide in decision making.					
10	Our organization mission targets stakeholders, employees and leaders					
11	Our organization's mission shapes strategy					
12	The vision of our organization pulls in people, ideas, and other resources					
13	Our organization vision inspires people into action					
14	The vision of our organization assists staff to focus and work together					
15	Our organization goals and objectives facilitate planning					
	Leading change	**1**	**2**	**3**	**4**	**5**
16	There are frequent changes in the structure of our organization					
17	Task allocation in our organization is fair					
18	There are no bureaucracies in our organization					
19	There is easy coordination and supervision in our organization					
20	There is knowledge sharing in our organization					

	Core competencies development	**1**	**2**	**3**	**4**	**5**
21	Our organization has staff development policies					
22	Staff development policies at our organization are frequently revised					
23	Our organization strictly adheres to staff development policies					
24	Our organization has mentorship and coaching programs					
25	Training in our organization improves employee productivity and performance					

PART C: Digital Transformation

1) Please tick the box to indicate how your company handles the following aspects of Digital Transformation on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

	Statement	**1**	**2**	**3**	**4**	**5**
	Integrated digital technologies					
1	The use of mobile apps for insurance purchases has made insurance more accessible in Kenya.					
2	Kenyan insurers have used digital marketing to increase public awareness of insurance products.					
3	Kenyan insurers are using cloud computing to improve the efficiency of insurance claim processing.					
4	Insufficient internet access in some Kenyan regions limits the use of digital technologies to promote insurance.					
5	Online insurance comparison tools in Kenya have made it easier to find the best insurance policy.					
6	Kenyan insurers are using AI to automate risk assessment and make insurance more accessible.					
	Big Data analytics					
7	Kenyan insurers are using big data to create personalized insurance products for different customer groups.					
8	Kenyan insurers are using big data to improve risk assessment and offer fairer premiums.					
9	Analyzing large datasets helps Kenyan insurers identify new customer groups that traditional insurance hasn't reached.					
10	Kenyan insurers are using big data to identify new customer groups that traditional insurance hasn't reached.					
11	Kenyan consumers' concerns about data privacy could limit the full potential of big data analytics in the insurance sector.					
	Cyber security Investment					
12	Kenyan insurers' increased cyber security investments have made them more attractive to customers.					
13	Digital tools have made insurance more accessible to people in remote areas of Kenya.					
14	Cyber security concerns are preventing some Kenyans from buying insurance online					

	Statement	1	2	3	4	5
15	Insurance companies' investments in data security have increased customer trust in their privacy.					
16	Government initiatives to improve digital literacy have boosted public trust in online insurance platforms					

PART D: Government Regulations

2) Please tick the box to indicate how your company handles the following aspects of Government Regulations on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

	Statement	1	2	3	4	5
	Clarity and consistency of the regulatory framework					
1	Kenyan insurance regulations are clear and easy to understand					
2	Government agencies in Kenya apply insurance regulations consistently					
3	The Kenyan government provides clear guidance on insurance regulations					
4	Kenya's regulatory framework is well-suited to address the challenges of digital insurance					
5	A clearer consistent regulatory framework would stimulate innovation in the Kenyan insurance market					
	Regulatory effectiveness in oversight					
6	The Kenyan government effectively enforces insurance regulations to protect consumers.					
7	The current regulatory framework in Kenya adequately identifies unethical practices within the insurance industry					
8	Kenyan insurance regulators are proactive in adapting regulations to keep pace with market trends and technologies.					
9	The current regulatory oversight in Kenya promotes healthy competition among insurance companies.					
10	The dispute resolution process between Kenyan insurance companies are efficient					
	Collaboration in policy formulation					
11	The Kenyan government effectively consults with insurance industry experts when creating new regulations.					

	Statement	1	2	3	4	5
12	There is a clear and transparent process for stakeholders to provide input on proposed insurance regulations in Kenya					
13	Consumer protection groups are involved in discussions about insurance regulations in Kenya.					
14	The current regulatory framework balances the interests of insurance companies, consumers, and the government.					
	Regulation adequacy for innovation and risk management					
15	Kenyan insurance regulations allow insurers to develop innovative products to meet diverse customer needs.					
16	Kenya's regulatory framework provides clear guidelines for managing the risks associated with new insurance products and services.					
17	Kenyan insurance regulations are flexible enough to adapt to technological advancements in the insurance industry.					
18	The current level of regulation in Kenya creates too much burden on insurance companies seeking to innovate					

PART E: Insurance penetration

3) Please tick the box to indicate how your company handles the following aspects of Organisation Performance on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

	Statements	1	2	3	4	5
	Insurance Penetration Rate:					
1	Insurance penetration in Kenya has increased significantly in recent years.					
2	Our company has significantly contributed to the growth of Kenya's insurance market.					
3	We believe there is significant potential for further growth in Kenya's insurance market.					
4	We actively track and analyze the insurance penetration rate as a key performance indicator.					
	Insurance coverage rates					
5	The number of Kenyans with insurance policies has increased significantly in recent years.					
6	A wider range of insurance products is now available to cater to the diverse needs of Kenyans.					
7	More Kenyans are now insured compared to previous years					
8	Micro-insurance products have helped to expand insurance coverage to low-income Kenyan.					

	Statements	1	2	3	4	5
	Insurance Density:					
9	The average amount spent on insurance premiums per person in Kenya is relatively high.					
10	Our company has seen a significant increase in average premium per policyholder.					
11	We offer affordable insurance products to cater to different income levels and needs.					
12	We believe increasing insurance density is crucial for financial protection					
	Distribution Channels:					
13	Our company uses various channels to reach potential customers					
14	We have invested in digital channels to make our insurance products more accessible.					
15	We continuously improve our distribution channels to reach underserved segments of the population.					
16	A strong and diversified distribution network is crucial for increasing insurance penetration in Kenya					
	Claims settlement ratio					
17	It is easy and straightforward to file a claim with a Kenyan insurance company.					
18	Kenyan insurance companies typically settle claims in a timely manner.					
19	The claim settlement process in Kenya is fair and transparent for policyholders.					
20	Dissatisfaction with claim settlement practices discourages some Kenyans from buying insurance					
21	Improved claim settlement efficiency and fairness would increase trust in Kenyan insurance companies.					
	Insurance awareness level					
22	The level of public awareness about insurance products and benefits in Kenya is sufficient.					
23	Our current marketing and outreach efforts are effectively raising public awareness about our company's insurance products and services.					
24	Investing in innovative awareness campaigns, such as digital marketing or mobile outreach programs, is crucial to reaching new customer segments in Kenya.					
25	Our marketing and education efforts are effectively raising awareness about the benefits of insurance.					

THANK YOU FOR YOUR TIME AND PATIENCE

Appendix III: List of Licensed General Insurance Companies 2024

1 AAR Insurance Company Limited
2 Africa Merchant Assurance Company Limited
3 AIG Kenya Insurance Company Limited
4 APA Insurance Limited
5 APA Life Assurance Limited
6 Britam General Insurance Company (K) Limited
7 Cannon General Insurance Company Limited
8 CIC General Insurance Limited
9 Corporate Insurance Company Limited
10 Directline Assurance Company Limited
11 Fidelity Shield Insurance Company Limited
12 First Assurance Company Limited
13 GA Insurance Limited
14 Geminia Insurance Company Limited
15 ICEA LION General Insurance Company Limited
16 ICEA LION Life Assurance Company Limited
17 Intra Africa Assurance Company Limited
18 Invesco Assurance Company Limited ((Under Statutory Management))
19 Jubilee Allianz General Insurance Limited
20 Jubilee Health Insurance Limited
21 Jubilee Life Insurance Limited
22 Kenindia Assurance Company Limited
23 Kenindia Assurance Company Limited
24 Kenya Orient Insurance Limited
25 Kenya Orient Life Assurance Limited
26 Madison General Insurance Kenya Limited
27 Madison Life Assurance Kenya Limited

28 Mayfair Insurance Company Limited
29 MUA Insurance (Kenya) Limited
30 Occidental Insurance Company Limited
31 Old Mutual General Insurance Kenya Limited
32 Old Mutual Life Assurance Kenya Limited
33 Pacis Insurance Company Limited
34 Pioneer General Insurance Limited
35 Pioneer Assurance Company Limited
36 Sanlam General Insurance Company Limited
37 Sanlam Life Insurance Limited
38 Star Discover Insurance Limited
39 Takaful Insurance of Africa Limited
40 Tausi Assurance Company Limited
41 The Heritage Insurance Company Limited
42 The Kenyan Alliance Insurance Company Limited
43 The Kenyan Alliance Insurance Company Limited
44 The Monarch Insurance Company Limited
45 The Monarch Insurance Company Limited
46 Trident Insurance Company Limited
47 ABSA Life Assurance Kenya Limited
48 Britam Life Assurance Company (K) Limited
49 Cannon Life Assurance (K)Limited

50 Capex Life Assurance Company Limited
51 CIC Life Assurance Limited
52 Equity Life Assurance (Kenya) Limited
53 GA Life Assurance Limited
54 Geminia Life Insurance Company Limited
55 KUSCCO Mutual Assurance Limited
56 Liberty Life Assurance Kenya Limited

57 Prudential Life Assurance Kenya Limited
58 Star Discover Life Insurance Limited

Source : https://www.ira.go.ke/

Appendix IV: Factor Loading

Strategic Leadership	
Component	**Factor Loading**
SLST1_Leaders in our organization make decisions on time	.779
SLST2_Leaders in our organization clearly articulate a compelling vision for the future	.711
SLST3_Leaders in our organization consider what the organization must keep from its past	.752
SLST4_Leaders in our organization clearly connect the present and the future of the organization	.764
SLST5_Leaders in our organization are adept at identifying and seizing strategic opportunities.	.739
SLST6_Our organization responds to arising opportunities to improve service delivery	.752
SLST7_Decisions in our organization are knowledge-based	.727
SLSD8_Our organization mission clearly states its purpose.	.811
SLSD9_Our organization mission serves as a guide in decision making	.764
SLSD10_Our organization mission targets stakeholders, employees and leaders	.773
SLSD11_Our organization's mission shapes strategy	.707
SLSD12_The vision of our organization pulls in people, ideas, and other resources	.783
SLSD13_Our organization vision inspires people into action	.727
SLSD14_The vision of our organization assists staff to focus and work together	.798
SLSD15_Our organization goals and objectives facilitate planning	.784

Digital Transformation	
Component	**Factor Loading**
DTIDT1_The use of mobile apps for insurance purchases has made insurance more accessible in Kenya.	.833

DTIDT2_Kenyan insurers have used digital marketing to increase public awareness of insurance products.	.836
DTIDT3_Kenyan insurers are using cloud computing to improve the efficiency of insurance claim processing.	.844
DTIDT4_Insufficient internet access in some Kenyan regions limits the use of digital technologies to promote insurance.	.841
DTIDT5_Online insurance comparison tools in Kenya have made it easier to find the best insurance policy.	.852
DTIDT6_Kenyan insurers are using AI to automate risk assessment and make insurance more accessible.	.847
DTBDA7_Kenyan insurers are using big data to create personalized insurance products for different customer groups.	.810
DTBDA8_Kenyan insurers are using big data to improve risk assessment and offer fairer premiums.	.792
DTBDA9_Analyzing large datasets helps Kenyan insurers identify new customer groups that traditional insurance hasn't reached.	.814
DTBDA10_Kenyan insurers are using big data to identify new customer groups that traditional insurance hasn't reached.	.805
DTBDA11_Kenyan consumers' concerns about data privacy could limit the full potential of big data analytics in the insurance sector.	.834
DTCSI12_Kenyan insurers' increased cyber security investments have made them more attractive to customers.	.788
DTCSI13_Digital tools have made insurance more accessible to people in remote areas of Kenya.	.820
DTCSI14_Cyber security concerns are preventing some Kenyans from buying insurance online	.819
DTCSI15_Insurance companies' investments in data security have increased customer trust in their privacy.	.773
DTCSI16_Government initiatives to improve digital literacy have boosted public trust in online insurance platforms	.754
Government Regulations	
Component	**Factor Loading**
GRCCRF1_Kenyan insurance regulations are clear and easy to understand	.773

GRCCRF2_Government agencies in Kenya apply insurance regulations consistently	.710
GRCCRF3_The Kenyan government provides clear guidance on insurance regulations	.751
GRCCRF4_Kenya's regulatory framework is well-suited to address the challenges of digital insurance	.763
GRCCRF5_A clearer consistent regulatory framework would stimulate innovation in the Kenyan insurance market	.738
GRREO6_The Kenyan government effectively enforces insurance regulations to protect consumers	.751
GRREO7_The current regulatory framework in Kenya adequately identifies unethical practices within the insurance industry	.728
GRREO8_Kenyan insurance regulators are proactive in adapting regulations to keep pace with market trends and technologies.	.811
GRREO9_The current regulatory oversight in Kenya promotes healthy competition among insurance companies.	.763
GRREO10_The dispute resolution process between Kenyan insurance companies are efficient	.772
GRCPF11_The Kenyan government effectively consults with insurance industry experts when creating new regulations.	.707
GRCPF12_There is a clear and transparent process for stakeholders to provide input on proposed insurance regulations in Kenya	.783
GRCPF13_Consumer protection groups are involved in discussions about insurance regulations in Kenya.	.727
GRCPF14_The current regulatory framework balances the interests of insurance companies, consumers, and the government.	.796
GRAIR15_Kenyan insurance regulations allow insurers to develop innovative products to meet diverse customer needs.	.783
Insurance Penetration	
Component	**Factor Loading**
IPIPR1_Insurance penetration in Kenya has increased significantly in recent years.	.733
IPIPR2_Our company has significantly contributed to the growth of Kenya's insurance market. Our company has significantly contributed to the growth of Kenya's insurance market.	.745

IPIPR3_We believe there is significant potential for further growth in Kenya's insurance market.	.770
IPIPR4_We actively track and analyze the insurance penetration rate as a key performance indicator.	.793
IPICR5_The number of Kenyans with insurance policies has increased significantly in recent years.	.735
IPICR6_A wider range of insurance products is now available to cater to the diverse needs of Kenyans	.741
IPICR7_More Kenyans are now insured compared to previous years	.768
IPICR8_Micro-insurance products have helped to expand insurance coverage to low-income Kenyan.	.720
IPID9_The average amount spent on insurance premiums per person in Kenya is relatively high.	.765
IPID10_Our company has seen a significant increase in average premium per policyholder.	.767
IPID11_We offer affordable insurance products to cater to different income levels and needs.	.794
IPID12_We believe increasing insurance density is crucial for financial protection	.736
IPDC13_Our company uses various channels to reach potential customers	.799
IPDC14_We have invested in digital channels to make our insurance products more accessible.	.708
IPDC15_We continuously improve our distribution channels to reach underserved segments of the population.	.783
IPDC16_A strong and diversified distribution network is crucial for increasing insurance penetration in Kenya	.771

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix V: ANALYSIS

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.3 *******************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 8
    Y  : insurance penetration
    X  : strategic leadership
    M  : digital transformation
    W  : government regulations

Sample
Size:  201

**************************************************************************
OUTCOME VARIABLE:
 digital transformation

Model Summary
          R         R-sq          MSE       F(HC4)          df1          df2
p
       .703         .494         .199       50.624        3.000      197.000
.000

Model
                        coeff       se(HC4)        t           p         LLCI
ULCI
constant                 3.984        .056      71.681      .000        3.875
4.094
strategic leadership      .290        .116       2.504      .013         .062
.519

government regulations    .057        .020       2.911      .004         .018
.096
Int_1                      .022        .021       1.906      .016        .009
.039

Product terms key:
 Int_1    :        strategic leadership x  government regulations

Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC4)        df1         df2          p
X*W       .000       .011      1.000     197.000       .916
----------
    Focal predict: strategic leadership (X)
          Mod var: government regulations  (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   strategic leadership    government regulations     digital transformation
.
BEGIN DATA.
      -.715     -4.099      3.536
       .000     -4.099      3.749
```

```
       .715     -4.099      3.963
      -.715       .000      3.777
       .000       .000      3.984
       .715       .000      4.192
      -.715      4.099      4.018
       .000      4.099      4.219
       .715      4.099      4.420
END DATA.
GRAPH/SCATTERPLOT=
 strategic leadership WITH      digital transformation BY        government
regulations  .

************************************************************************
OUTCOME VARIABLE:
 insurance penetration

Model Summary
          R         R-sq          MSE       F(HC4)          df1           df2
p
         .973         .946      .021      1160.785        3.000       197.000
.000
Model
              coeff    se(HC4)          t          p       LLCI       ULCI
constant      3.901       .039    100.255       .000      3.824      3.978
strategic leadership       .962       .020     -9.182       .000      1.000
.923
digital transformation          .010          .010        1.037          .301
.009       .029
government regulations           .249          .003       89.869          .000
.244       .255
Int_1          .025       .002     11.425       .000       .030       .021

Product terms key:
 Int_1    :        strategic leadership x        government regulations

 Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC4)         df1         df2           p
X*W       .034    130.524       1.000    196.000        .000
----------
     Focal predict: strategic leadership (X)
           Mod var: government regulations   (W)

 Conditional effects of the focal predictor at values of the moderator(s):

     government regulations      Effect     se(HC4)           t           p
LLCI       ULCI
         -4.099               -.857       .020    -43.629       .000      -
.896      -.819
          .000                -.962       .020    -49.182       .000      -
1.000      -.923
         4.099                -1.066       .023    -45.647       .000      -
1.112     -1.020

 There are no statistical significance transition points within the observed
 range of the moderator found using the Johnson-Neyman method.

 Conditional effect of focal predictor at values of the moderator:
     government regulations      Effect     se(HC4)           t           p
LLCI       ULCI
    -12.200       -.651        .030    -21.894       .000       -.710      -
.593
```

-11.143	-.678	.028	-24.240	.000	-.733	-.623
-10.086	-.705	.026	-26.808	.000	-.757	-.653
-9.029	-.732	.025	-29.591	.000	-.781	-.683
-7.971	-.759	.023	-32.562	.000	-.805	-.713
-6.914	-.786	.022	-35.662	.000	-.829	-.742
-5.857	-.813	.021	-38.788	.000	-.854	-.771
-4.800	-.840	.020	-41.794	.000	-.879	-.800
-3.742	-.867	.019	-44.495	.000	-.905	-.828
-2.685	-.894	.019	-46.697	.000	-.931	-.856
-1.628	-.920	.019	-48.243	.000	-.958	-.883
-.571	-.947	.019	-49.051	.000	-.985	-.909
.487	-.974	.020	-49.138	.000	-1.013	-.935
1.544	-1.001	.021	-48.603	.000	-1.042	-.961
2.601	-1.028	.022	-47.593	.000	-1.071	-.985
3.658	-1.055	.023	-46.263	.000	-1.100	-1.010
4.716	-1.082	.024	-44.749	.000	-1.130	-1.034
5.773	-1.109	.026	-43.155	.000	-1.160	-1.058
6.830	-1.136	.027	-41.558	.000	-1.190	-1.082
7.887	-1.163	.029	-40.003	.000	-1.220	-1.105

```
      8.945      -1.190        .031     -38.521        .000      -1.251      -
1.129

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   strategic leadership    government regulations     insurance penetration
.
BEGIN DATA.
      -.715     -4.099      3.532
       .000     -4.099      2.919
       .715     -4.099      2.306
      -.715        .000     4.629
       .000        .000     3.942
       .715        .000     3.254
      -.715       4.099     5.726
       .000       4.099     4.964
       .715       4.099     4.202
END DATA.
GRAPH/SCATTERPLOT=
 strategic leadership WITH      insurance penetration BY        government
regulations  .
```

```
****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effect(s) of X on Y:
    government regulations      Effect     se(HC4)           t           p
LLCI        ULCI
     -4.099       -.857        .020     -43.629        .000       -.896       -
.819
       .000       -.962        .020     -49.182        .000      -1.000       -
.923
      4.099      -1.066        .023     -45.647        .000      -1.112       -
1.020

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 strategic leadership     ->     digital transformation     ->     insurance
penetration

    government regulations   Effect     BootSE   BootLLCI   BootULCI
                -4.099       -.857       .020    -.896         -.81

                  .000       -.962        .020   -1.000        -.923
                 4.099      -1.066        .023   -1.112       -1.020
          Index of moderated mediation:
                              Index     BootSE   BootLLCI   BootULCI
government regulations         .020       .027       .010       .090
---

*********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS ************

OUTCOME VARIABLE:
 digital transformation


              Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant      3.984      3.989       .044      3.905      4.076
strategic leadership       .290        .292        .116        .061        .521
government regulations           .057          .057          .019          .019
.096
Int_1         -.002      -.004       .013      -.031       .019

----------

OUTCOME VARIABLE:
 insurance penetration

              Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant      3.901      3.906       .034      3.836      3.972
strategic leadership      -.962       -.961        .018       -.999       -.927
digital transformation          .010          .009          .009         -.007
.026
government regulations           .249          .249          .003          .245
.255
Int_1         -.025      -.025       .002      -.029      -.022

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
```

```
  5000

W values in conditional tables are the mean and +/- SD from the mean.

NOTE: A heteroscedasticity consistent standard error and covariance matrix
estimator was used.

NOTE: The following variables were mean centered prior to analysis:
          government regulations  strategic leadership

NOTE: Variables names longer than eight characters can produce incorrect
output.
      Shorter variable names are recommended.

------ END MATRIX -----
```

Appendix VI: NACOSTI LICENSE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **268360**

Date of Issue: **21/January/2025**

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