RELATIONSHIP BETWEEN STOCK MARKET CHARACTERISTICS, REGULATORY ENVIRONMENT AND ECONOMIC GROWTH IN KENYA

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DECLARATION

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Declaration by Supervisor

This dissertation is being submitted for approval with my approval as a university Supervisor.

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ABSTRACT

Globally, stock market characteristics are recognized as major drivers of economic growth, with indicators such as market capitalisation, stock turnover, foreign direct investment (FDI), and the quality of the regulatory environment playing a key role in resource mobilization and capital allocation. This study examined the relationship between stock market characteristics, regulatory environment, and economic growth in Kenya. The specific objectives were to assess the effects of stock market capitalisation, turnover, and FDI on economic growth and to evaluate the influence of the regulatory environment. Secondary data were obtained from the Kenya National Bureau of Statistics (KNBS), Nairobi Securities Exchange (NSE), and World Bank, covering 2000–2024. A descriptive research design was employed, and data were analysed using STATA version 17 after diagnostic tests confirmed the robustness of the model. The findings revealed that stock market capitalisation had a strong positive correlation with economic growth (r = 0.6883), indicating that expansion in the value of listed companies is associated with growth in GDP. Stock market turnover showed a moderately strong positive correlation with GDP (r = 0.6176), reflecting the importance of liquidity and trading activity in supporting economic expansion. Foreign direct investment exhibited a very strong positive relationship with GDP (r = 0.8442), showing its critical role in transferring capital, technology, and expertise to Kenya. The regulatory environment, proxied by the cost of listing, was positive but relatively weak (r = 0.4366), suggesting that further reforms are needed to fully unlock its growth-enhancing potential. The study concluded that Kenya's stock market characteristics and FDI are directionally aligned with economic growth, but more needs to be done to deepen their impact on GDP. Based on these findings, the study recommended strengthening market depth by encouraging more listings on the NSE, promoting liquidity through investor education and market-making mechanisms, and reforming regulatory frameworks to enhance transparency and lower compliance costs. Furthermore, it recommended targeted strategies to attract and retain FDI, such as streamlining approval processes, expanding investment protection agreements, and providing tax incentives in priority sectors like manufacturing, renewable energy, and infrastructure to accelerate Kenya's long-term economic growth.

Key Words: *Stock Market Characteristics: Stock Market Capitalization: Stock Market Turnover: Foreign Direct Investment and Economic Growth*

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DEDICATION

The dissertation s dedicated towards my entire family as well as to everyone who has contributed significantly to sustaining me in many ways, especially to my incredible parents, my husband Kefa Mombo, my children Denver, Dave and Darren as well as my sister Precious. God's blessings on you all.

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ACRONYMS AND ABBREVIATIONS

AfCFTA: African Continental Free Trade Area

AfDB: African Development Bank

ARD: Annual Report and Disclosure

ATS: Automated Trading System

CLRM's: Classical Linear Regression Model's

CMA: Capital Markets Authority

CSRC: China Securities Regulatory Commission

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

IIM: Indian Institute of Management

MTN: Mobile Telephone Network

NSE: Nairobi Securities Exchange

VIF: Variance Inflation Factor

DEFINITION OF TERMS

Economic Growth	The increase in a country's production of goods and services over time, typically measured by the rise in Gross Domestic Product (GDP) (KIPPRA 2020)
Foreign Direct Investment (FDI)	Cross-border investments where a foreign entity establishes or acquires a lasting interest in a domestic enterprise, often bringing in capital, technology, and expertise (Mose and Kipchirchir 2024)
Stock Market Capitalization:	The total market value of all listed shares on a stock exchange. It is calculated by multiplying the share price by the number of outstanding shares)Nzomoi and Ikikii 2013)
Stock Market Characteristics	Features such as market capitalization, turnover, liquidity, and regulatory frameworks that define the structure and efficiency of a stock market (Nzomoi and Ikikii 2013)
Stock Market Turnover	The total value of shares traded over a specific period, reflecting the market's liquidity and activity level (Muriithi (2016)

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globally, stock market characteristics are increasingly recognized as key determinants of economic growth. In advanced economies, indicators such as stock market capitalization, turnover ratio, and inflows of foreign direct investment (FDI) have a significant correlation with economic expansion. Stock market capitalization reflects the value of listed companies relative to GDP, indicating the ability of the capital market to support private enterprise financing. Turnover ratio, which measures the liquidity of the market, is critical for investor confidence and pricing efficiency.

In the United States, high liquidity and deep markets, supported by strong technological infrastructure and robust regulatory frameworks, have fostered sustained investor participation reaching over 55% of households by 2023 (Shi & Laurenceson, 2020). Crucially, the regulatory environment moderates the strength of this relationship; countries with transparent and efficient legal frameworks translate capital market activity into tangible economic outcomes more effectively than those with weak regulation (World Bank, 2023).

Across Africa, stock market characteristics remain uneven and relatively underdeveloped compared to global benchmarks. Nonetheless, regional leaders such as South Africa, Nigeria, and Egypt have made strides in enhancing key stock market characteristics. The Johannesburg Stock Exchange (JSE), for example, boasts high market capitalization and strong turnover ratios, contributing to broader economic resilience. Tanzania, Rwanda, and Uganda, face challenges such as low market capitalization, illiquidity, and limited foreign participation. These issues stem largely from structural inefficiencies and weak regulatory cost

of listing. The moderating role of the regulatory environment is especially important in Africa, where the absence of investor protection laws, inadequate financial disclosures, and weak judicial systems dampen the potential of capital markets to contribute to economic development. Therefore, understanding how regulatory structures interact with stock market indicators across African countries is essential in formulating policies that can translate financial sector performance into economic transformation (OECD, 2023).

In the Kenyan context, the Nairobi Securities Exchange (NSE) represents a critical but underutilized pillar of economic growth. The NSE's stock market characteristics market capitalization, turnover, and levels of foreign direct investment remain modest. Market capitalization as a percentage of GDP is still low compared to peers in both developed and emerging markets, limiting the market's ability to drive investment and innovation. Similarly, turnover ratios indicate shallow trading activity, reflecting low investor confidence and market liquidity. Though Kenya attracts some FDI into its capital markets, inconsistencies in regulatory cost of listing and policy application have led to volatility and reduced long-term investor commitment. The regulatory environment, overseen primarily by the Capital Markets Authority (CMA), has introduced reforms aimed at enhancing disclosure standards, compliance monitoring, and investor education. However, its moderating influence remains constrained by issues such as insider trading, weak penalties, and limited digital infrastructure. As such, this study seeks to evaluate how strengthening regulatory frameworks could enhance the contribution of stock market characteristics to Kenya's economic growth (Onyuma, 2020).

African stock markets have shown notable endurance and advancement on a regional level. During the COVID-19 pandemic, the Nigerian Stock Exchange showed a robust recovery, with market activity being driven by prominent companies such as MTN Group and

Dangote Cement (Adenomon & Maijamaa, 2022). One of Africa's biggest stock exchanges, the Johannesburg Stock Exchange in South Africa, continued to function well, with firms like Sasol and Naspers helping to boost market capitalisation (African Securities Exchanges Association, 2023).

Vodacom Tanzania and Tanzania Breweries contributed to the development of the Dar es Salaam Stock Exchange (World Bank Group, 2023). Businesses like Cipla Quality Chemicals and Stanbic Uganda supported the Uganda Securities Exchange's success in Uganda, demonstrating consistent trading and effectiveness (Onyuma, 2020). By 2023, 15% of individuals in sub-Saharan Africa have access to formal financial services, such as stock market investments, thanks to efforts to improve financial accessibility (World Bank Group, 2023). Investor trust in the region's stock markets has been further bolstered by governance changes and regulatory enhancements (African Development Bank, 2023).

The Nairobi Securities Exchange (NSE) plays a pivotal role in Kenya's economic landscape, offering a platform for businesses to access long-term funding while enabling investors to diversify their portfolios. As one of the most established stock exchanges in East Africa, the NSE has been instrumental in mobilizing savings and stimulating economic growth. Companies such as Safaricom, Equity Group Holdings, and KCB Group dominate market activities, collectively contributing a significant portion of the NSE's market capitalization (Hassan, 2024). These firms exemplify the exchange's capacity to attract both local and international investors, driving economic growth through increased investments in infrastructure, technology, and other critical sectors.

The regression results corroborate the findings of Munga and Achola (2022), indicating a statistically significant and positive relationship between stock market growth and

infrastructure development. The analysis revealed that a 1% increase in market capitalization is associated with approximately a 0.5% rise in GDP growth, suggesting that stock market expansion plays a crucial role in stimulating economic performance through enhanced investment and infrastructural development. Despite its importance, the NSE has faced challenges in maintaining regulatory environment and stability, which directly impacts economic growth. Regulatory environment, measured by the ease with which stocks are traded without significant price changes, has declined in recent years. For instance, the NSE's market capitalization fell sharply from KSh 2.6 trillion in 2015 to KSh 1.76 trillion by March 2024, reflecting waning investor confidence (NSE, 2025). Additionally, the NSE 20 Share Index, a key benchmark for market performance, dropped by 0.75 points on February 18, 2025, closing at 2,223.99 (NSE, 2025). According to Ndung'u and Wambugu (2023), this decline signals reduced trading volumes and limited participation by retail investors, which are linked to structural inefficiencies such as high transaction costs and limited public awareness of stock market benefits.

Local studies have highlighted the interplay between stock market characteristics, liquidity, and economic growth, emphasizing the need for targeted policy interventions. Research by Kariuki and Kamau (2021) indicates that a robust and liquid stock market enhances resource allocation, reduces the cost of capital, and encourages investment, ultimately driving economic growth. Declines in liquidity and market activity at the NSE point to challenges such as regulatory bottlenecks and investor mistrust. Addressing these issues requires strategies to enhance transparency, broaden market access, and improve investor confidence. Strengthening the NSE's operational framework, as suggested by Onyango and

Mutua (2024), is crucial to unlocking its full potential as a catalyst for economic growth in Kenya.

Regulatory environment, while critical to understanding the functionality of stock markets, is not a direct market characteristic but rather an outcome influenced by intrinsic and extrinsic factors shaping market operations. Market characteristics, such as stock market capitalization, turnover, foreign direct investment, and technological advancements, provide the foundational structures that dictate market behavior. Liquidity, however, reflects the market's efficiency in facilitating transactions without significantly affecting asset prices (Wachira, 2022). Increase in stock market capitalization does not inherently guarantee liquidity but creates the potential for it when accompanied by robust trading activity and investor confidence. The Nairobi Securities Exchange (NSE) has witnessed significant shifts driven by automation and demutualization, which have indirectly enhanced liquidity by improving transaction speeds and transparency. These technological reforms underscore the importance of addressing both structural characteristics and their dynamic outcomes in fostering economic growth (Mwangi & Muturi, 2020).

The research objectives of this study are rooted in the understanding that stock market development in Kenya is shaped by both intrinsic forces, such as market size and infrastructure, and extrinsic forces, including regulatory policies and global economic trends. The automation of the NSE has reduced inefficiencies, making it easier for investors to participate in trading activities and, consequently, enhancing liquidity (Omondi, 2021). The demutualization of the NSE has aligned its operations with global best practices, attracting foreign investments and increasing market depth. These reforms highlight the evolving nature of the NSE, which is characterized by rapid modernization and adaptation to global standards. By focusing on the

interplay between stock market characteristics and liquidity, this study aligns its objectives with the current realities of the NSE. Furthermore, it seeks to provide actionable insights for policymakers to sustain economic growth by leveraging both structural reforms and their resultant market efficiencies (Karanja, 2019).

1.1.1 Stock Market Characteristics

Key characteristics of the stock market influence its performance and determine how it contributes to economic growth. According to Zeqiraj and Soytas (2020), these characteristics include stock market capitalisation, stock market turnover, foreign direct investment, and stock regulatory environment. The market's ability to list a large number of firms, enable everyday transactions, and adapt to market dynamics via technical and regulatory improvements are further noteworthy characteristics. Furthermore, as noted by Asravor and Fonu (2021), stock markets are crucial for raising money, distributing resources effectively, and giving investors easily accessible financial alternatives.

These qualities are best shown by the Nairobi Securities Exchange (NSE), a crucial venue for diversifying securities and financial resources for both people and businesses (Razmi et al., 2020). The NSE includes a wide variety of businesses from industries including banking, telecommunications, and energy, with well-known names like Safaricom and Equity Group Holdings. This helps to increase the regulatory environment and draws in both local and foreign investors. Technological innovations like mobile trading applications and the NSE's Automated Trading System (ATS) have increased market accessibility and made it possible for small and individual investors to engage successfully (Onyuma, 2020).

The prompt distribution of market data and the Capital Markets Authority's (CMA) regulatory supervision are two other examples of the NSE's efficiency. Real-time trading

platforms and other innovations provide efficient price discovery and timely transaction execution. Reforms have expanded the market's depth throughout time, giving companies both domestically and abroad more access to financing. Economic development, the creation of jobs, and the encouragement of entrepreneurship have all benefited from this expansion (Okumu, Olweny, & Muturi, 2022). The NSE's considerable potential is shown by recent figures, which indicate that its market capitalisation increased from KSh 1.43 trillion to KSh 1.76 trillion as of March 2024 (Ogunsola & Abdulrasheed, 2024).

1.1.2 Regulatory Environment

Globally, the regulatory environment plays a central moderating role in the relationship between stock market characteristics and economic growth, especially when considering the cost of listing companies. Capital markets in advanced economies developed through transparent, rules-based systems that offered investor protection and reduced entry barriers. The origin of such frameworks can be traced back to early 20th-century reforms in the United States and Europe aimed at rebuilding trust after financial crises (La Porta et al., 1997). Today, countries like the U.S., UK, and Japan maintain efficient listing processes with relatively lower regulatory burdens, which attract more initial public offerings (IPOs). Research by Djankov et al. (2021) indicates that high listing costs, including regulatory and compliance fees, discourage small firms from going public, thus limiting market expansion and economic inclusion.

In Africa, the regulatory environment remains highly fragmented, with listing costs and compliance requirements significantly varying across countries. Many stock exchanges on the continent, such as those in Nigeria, Ghana, and Uganda, struggle with outdated regulatory systems, bureaucratic red tape, and hidden listing expenses that deter private firms from

accessing public capital (Ncube & Brixiová, 2019). Despite efforts by regulatory bodies like the African Securities Exchanges Association (ASEA) to harmonize and simplify listing requirements, only a few countries—such as South Africa and Mauritius—have made substantial reforms. Scholars such as Adelegan and Radzewicz-Bak (2020) emphasize that the lack of cost-effective and predictable regulatory frameworks in Africa hinders capital market deepening. As a result, many enterprises opt for private financing, thereby bypassing the growth potential that comes with public listing and investor participation.

Locally in Kenya, the cost of listing on the Nairobi Securities Exchange (NSE) continues to act as a barrier to capital market participation, particularly for small and medium-sized enterprises (SMEs). Although Kenya's Capital Markets Authority (CMA) has introduced the Growth Enterprise Market Segment (GEMS) to reduce listing fees and ease entry, uptake remains limited. According to Ndung'u and Ndegwa (2022), companies still face high indirect costs such as legal, auditing, and compliance obligations that outweigh the perceived benefits of listing. Moreover, inconsistent cost of listing of regulations and limited investor confidence further dampen the impact of these reforms. Over time, the regulatory environment in Kenya has shifted from a restrictive, state-controlled model to a liberalized structure, but challenges remain in making the environment fully facilitative for capital market growth. This study thus recognizes the regulatory environment—measured through listing costs as a critical moderator in the relationship between stock market characteristics and economic growth in Kenya.

Empirical evidence from multiple jurisdictions consistently underscores that the structure and cost-efficiency of the regulatory environment determine whether stock markets can mobilize capital effectively. High listing fees and regulatory compliance costs increase the financial burden on firms and discourage equity financing, particularly in emerging markets

where operational margins are already thin (Cihak et al., 2020). Conversely, markets with streamlined regulations, low entry costs, and consistent oversight tend to exhibit higher market capitalization and turnover ratios, enhancing their contribution to GDP growth. Thus, the regulatory environment does not merely act as a facilitator but as a decisive moderator in determining the strength and quality of the linkage between stock markets and economic development.

This study adopts the view that the regulatory environment, as measured by the cost of listing, significantly moderates the relationship between stock market characteristics—such as market capitalization, turnover, and FDI—and economic growth. When regulatory environments are efficient, transparent, and cost-effective, they not only encourage more firms to list but also boost investor confidence and market liquidity. On the other hand, a costly, unpredictable, and fragmented regulatory regime acts as a bottleneck that weakens capital market utility in economic development (Adelegan & Radzewicz-Bak 2020). Therefore, this research aims to empirically assess how Kenya's listing cost structure impacts the effectiveness of stock markets in driving national economic growth.

1.1.3 Economic Growth

GDP is often used to quantify economic growth, which is the gradual rise in the production of goods and services. Economic growth depends on a number of factors, including population increase, technical advancement, and savings (McClelland, 2019). Despite the COVID-19 epidemic, international wars, drought, and currency devaluation, Kenya's economy has proven remarkably resilient (Pfister, 2022).

In 2023, the GDP (gross domestic product) indicated a stable rebound in economic growth on a global scale. The GDP grew by 2.8% on average in advanced countries including

the US, Germany, and Japan. Germany grew 1.7% as a result of energy sector changes, while the United States grew 2.9% because to robust labour markets and rising consumer expenditure. Rising exports and strong domestic consumption helped Japan's GDP grow by 2.4% (IMF, 2023). Despite obstacles like inflation and geopolitical unpredictability, these numbers demonstrate attempts to stabilise world economies.

In 2023, GDP growth in Africa as a whole showed resiliency. South Africa's GDP grew 1.9%, mostly as a result of investments in renewable energy and industrial recovery, whereas Nigeria's GDP grew 3.3%, driven by reforms in the oil and gas industries. Under the African Continental Free Trade Area, these economies have played a key role in promoting intra-African trade and regional development (AfDB, 2023). GDP growth in Kenya improved from 4.8% in 2022 to 5.4% in 2023. A resurgence in agriculture, aided by favourable rains that improved crop yields and cattle health, was the main cause of this development. In 2023, the national poverty rate was 35.1%, down from 35.8% in 2022 (Wekesa, 2023).

Kenya's economic performance was also improved by a decline in public-sector dominance and a rise in private-sector confidence. According to projections, private sector investments and trade agreements like the European Union Economic Partnership Agreement and the African Continental Free Trade Area (AfCFTA) would propel Kenya's GDP growth to an average of 5.2% between 2024 and 2026. It is anticipated that these measures would boost trade prospects, boost economic activity, and increase Kenya's competitiveness in regional and international markets (Kiriti-Nganga & Otieno, 2022).

1.1.4 Stock Market Characteristics and Economic Growth

An important force behind economic growth and a pillar of macroeconomic development is the stock market. Economic growth is stimulated by financial development in stock markets,

according to empirical research. For example, You, Hu, and Hou (2019) emphasised the favourable correlation between growth and stock market characteristics, highlighting their influence in innovation and resource allocation.

The long-term advantages of well-structured stock markets were validated by Akbar and Baig (2020). The processes relating to growth and stock market characteristics have also been studied. According to Li, Chen, and Liu (2021), regulatory environment boosts resource efficiency and lowers capital costs for businesses, which boosts economic performance. This link is further strengthened by institutional and legal elements, such as investor protection legislation, which lower risks and promote trust (Wang, Wang & Su, 2022).

The link between financial globalization and economic development is mediated by stock market characteristics. Liu, Wang, and Sun (2020) showed how globalization improves economic integration and capital mobilization by boosting native stock markets. These results demonstrate the complex dynamics of stock market development and its crucial influence on economic expansion.

1.1.5 Stock Market Characteristics and Economic Growth in the Kenyan Context

Kenya's stock market, primarily represented by the Nairobi Securities Exchange (NSE), has undergone significant transformations, positioning it as a pivotal component in the nation's economic development. The NSE's evolution reflects broader economic reforms and the increasing sophistication of financial markets in Kenya. Key determinants such as stock market capitalization, turnover, foreign direct investment (FDI), and regulatory frameworks play crucial roles in influencing economic growth (Ndung’u and Sigué 2020)

Empirical studies have established a positive relationship between stock market characteristics and economic growth in Kenya. Muthinja and Kemboi (2019) highlighted that

stock market capitalization and turnover are instrumental in enhancing investment opportunities and capital formation, which are essential for economic expansion. Ndung'u et, al (2020) emphasized the importance of efficient financial intermediation in driving economic growth, underscoring the need for a well-functioning stock market.

Muriithi and Aime (2021) noted that increased liquidity reduces capital costs and enhances access to financing, thereby fostering investment and economic activity. Furthermore, regulatory environments play a pivotal role in maintaining market integrity and investor confidence. Nyambura et al. (2022) observed that robust regulatory frameworks and investor protection mechanisms are essential in strengthening the relationship between stock market characteristics and economic growth.

The evolution of the NSE mirrors Kenya's broader financial development. From informal stock trading in the 1920s to the establishment of professional brokerage firms in the 1950s, and the formalization of the NSE in 1954, the exchange has progressively adapted to meet the growing demands of the economy. Today, metrics such as market capitalization and investor participation rates serve as indicators of the stock market's scale and inclusivity, reflecting its global reach and integration into the international financial system.

Given the multifaceted role of the stock market in economic development, it is imperative to examine the intricate relationships between these characteristics and economic growth. The proposed research objectives aim to delve into these dynamics, providing a comprehensive understanding of how stock market attributes influence economic performance in Kenya. By exploring the moderating impact of regulatory environments, this study seeks to offer insights into the mechanisms through which stock market characteristics contribute to sustainable economic growth.

1.1.6 Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) traces its origins to the early 20th century when securities trading in Kenya was informal, conducted over 'gentleman's handshake agreements' among the European community. In 1954, the Nairobi Stock Exchange was officially established as a voluntary association of stockbrokers under the Societies Act, marking the formalization of securities trading in Kenya. Initially, the exchange served as a modest marketplace for a handful of companies seeking to raise capital through equity listings (Koskei et, al ,2022).

The 1990s witnessed significant developments, including the introduction of computerized trading systems and the demutualization of the exchange in 2006, transforming it into a public company. These changes enhanced operational efficiency and governance, attracting both local and international investors. In recent years, the NSE has diversified its offerings, launching platforms like the Unquoted Securities Platform (USP) in 2021 to facilitate trading of unlisted companies' securities, thereby promoting access to capital for small and medium-sized enterprises (SMEs) (Ngele, 2023).

Kamau, et al. (2025) posits that in April 2025, the NSE's market capitalization stood at approximately KES 1.97 trillion, reflecting its significant role in Kenya's financial ecosystem. The exchange's evolution underscores its adaptability and commitment to fostering a robust capital market in Kenya. The NSE operates as a fully integrated securities exchange, offering a platform for trading equities, bonds, and derivatives. In 2025, the exchange introduced single stock futures, marking a significant step in diversifying its product offerings and providing investors with tools to hedge risks. The introduction of these financial instruments aligns with global trends in capital markets, enhancing the NSE's competitiveness.

Evance (2025) revealed that the exchange's market structure is characterized by a centralized electronic trading system, ensuring transparency and efficiency in transactions. This system facilitates real-time price discovery and settlement, fostering investor confidence. Additionally, the NSE has implemented measures to enhance liquidity, such as the appointment of market makers and the introduction of exchange-traded funds (ETFs). These initiatives aim to attract a diverse investor base and improve market depth.

The regulatory framework governing the NSE is primarily established by the Capital Markets Authority (CMA), which oversees the development and regulation of Kenya's capital markets. The CMA's mandate includes licensing market participants, enforcing compliance with securities laws, and promoting investor protection. In 2014, the NSE transitioned to a demutualized model, becoming a public company limited by shares. This change aimed to enhance governance structures and operational efficiency, aligning with international best practices. The demutualization process was part of broader reforms to modernize the capital markets and attract foreign investment (Maingi, et, al 2025).

The NSE plays a pivotal role in Kenya's economic development by facilitating the mobilization of capital for both public and private sector projects. According to Cytonn Investments, the NSE has been instrumental in providing companies with access to capital markets, enabling them to raise funds for expansion and development initiatives. This access to capital is essential for fostering entrepreneurship, supporting infrastructure projects, and driving economic growth (Mwiwa and Jagongo 2025).

Empirical studies, such as those by Amugada, (2025) have examined the impact of financial instruments on the financial growth of firms listed on the NSE. The research indicates that long-term debt and share capital significantly influence the financial performance and

growth of these firms. By offering a platform for such financial instruments, the NSE contributes to the overall economic development by enhancing the financial stability and growth prospects of listed companies.

1.2 Statement of the Problem

Kenya's economic growth has faced persistent challenges in recent years, reflected by declining performance indicators in the capital market despite its central role in mobilizing investment and supporting Vision 2030's target of achieving a 10% annual GDP growth rate. Stock market characteristics such as foreign direct investment (FDI), stock liquidity, turnover, and market capitalization are recognized as vital drivers of economic growth (Zeqiraj & Soytas, 2020). However, the Nairobi Securities Exchange (NSE) has shown a downward trend that raises concerns about its effectiveness in fostering economic expansion. For instance, the NSE's market capitalization dropped from KSh 2.6 trillion in 2015 to KSh 1.76 trillion by March 2024, while the NSE 20 Share Index declined to 2,223.99 points in February 2025. Additionally, foreign investor net sales fell from KSh 19.08 billion in 2023 to KSh 16.5 billion in 2024, and equity transaction levies recorded a 19.9% decline during the same period (NSE, 2024; NSE, 2025; Foreign Investment Survey Report, 2024). These indicators point to reduced investor confidence, limited market participation, and structural inefficiencies that may be constraining Kenya's overall economic growth.

While global studies confirm the positive relationship between stock market development and economic growth, their applicability to Kenya is less clear. Nyasha and Odhiambo (2017) found that Kenya's banking sector has a stronger influence on economic growth than the stock market. Conversely, Pan and Mishra (2018) demonstrated that market capitalization and liquidity, alongside legal reforms, significantly stimulate economic growth

in China—a context substantially different from Kenya. Araoye et al. (2018) reported a long-term positive correlation between stock market turnover and GDP in Nigeria, but these studies did not examine challenges such as declining investor confidence, automation inefficiencies, and structural constraints, which are critical in Kenya.

A conceptual gap exists as prior research has largely overlooked the implications of the NSE's demutualization and automation on market transparency, investor trust, and trading efficiency. Methodological gap is evident because most studies have applied foreign models without adjusting for Kenya's unique regulatory framework, economic conditions, and investor behavior. These omissions limit the understanding of how NSE characteristics interact with economic growth in the Kenyan context.

This study sought to address these gaps by empirically investigating the relationships between stock market characteristics stock market capitalization, stock market turnover, foreign direct investment and Kenya's economic growth, while considering the moderating role of regulatory frameworks. The findings provided locally relevant insights and guide policy reforms aimed at enhancing the efficiency, transparency, and overall contribution of the NSE toward achieving Kenya's Vision 2030.

1.3 Objectives of the study

1.3.1 General Objective

The general objective of the study was to explore the Relationship Between Stock Market Characteristics and Economic Growth in Kenya.

1.3.2 Specific Objectives

i. To evaluate the relationship between stock market capitalization and economic growth in Kenya

ii. To assess the relationship between stock market turnover and economic growth in Kenya

iii. To investigate the relationship between foreign direct investment and economic growth in Kenya

iv. To examine the moderating effect of the regulatory environment on the relationship between market characteristics and economic growth in Kenya.

1.4 Research Hypothesis

H_1: There is a significant relationship between stock market capitalization and economic growth in Kenya.

H_2: There is a significant relationship between stock market turnover and economic growth in Kenya.

H_3: There is a significant relationship between foreign direct investment and economic growth in Kenya.

H_4: The regulatory environment has a significant moderating effect on the relationship between market characteristics specifically capitalization, turnover, and foreign direct investment—and economic growth in Kenya.

1.5 Significance of the study

The following parties might benefit from this research:

1.5.1 Decision-makers

The study's policy implications include improving institutional integrity, bolstering shareholder protection laws, promoting macroeconomic stability, and fortifying the banking sector. Nyamakanga (2013), Wahome (2010), Owiti (2012), and Olweny and Kimani (2011) have all proposed that the government may use the study's findings to inform and implement

policy. Furthermore, based on empirical facts, the research's findings and recommendations may empower policymakers to form a strong concern about the function of stock markets in the economy.

1.5.2 Expert in Finance

Financial specialists are interested in identifying trends in the kind of causal linkages, the direction of causation, and the processes that might describe how long a relationship lasts. The study's conclusions may be used by financial analysts to develop better investment strategies, which in turn can lead to improved investment portfolios.

1.5.3 Investors

This research might increase knowledge about how the government is enhancing its investments and what tactics might be used to promote savings growth and, in turn, economic advancement. Furthermore, a two-way link relationship was previously demonstrated by Wahome (2010) and Owiti (2012), suggesting that stakeholders might use the state's economic development ratio to forecast future stock market movements. For the stakeholders, this makes the research important.

1.5.4 Scholars

This study serves as a reference for future research on the same subject and assist scholars in examining the causal link and direction of causation between economic growth and stock market expansion. Once again, the study may have a substantial effect on later research on the same issue by giving academics and researchers in Kenya and across the globe with both theoretical and empirical literature.

1.6 Scope of the Study

Finding a connection among Kenya's stock market characteristics and economic growth is the aim of this research. Since gathering evidence of cause-and-effect linkages is the primary goal of this study, descriptive research designs will be used. The number of listed companies in the NSE annually over the research period was part of the target population. Additionally, data from Kenya spanning 24 years, from 2001 to 2024, was used. Published statistics on Kenya's stock market characteristics and economic growth patterns from 2001 to 2024 was the source of secondary data.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Numerous scholarly research on the connection between stock market characteristics and economic growth are included in this chapter. The research's methods and applications are examined. The chapter started with ideas and moved on to experiments. The study's conceptual framework and evidence foundation are also presented.

2.2 Theoretical Review

This study is guided by Market Efficiency Theory, Endogenous Growth Theory, Exogenous Growth Theory and Liquidity Preference Theory

2.2.1 Market Efficiency Theory

Fama developed this theory in 1970 in an effort to explain the extent to which relevant information is represented in market pricing. The market is said to be rational when asset prices fairly reflect the available information. Furthermore, as various parties may have varying exposures to and knowledge bases, market players may not be aware of the constant benefit of volatile assets.

Knowledgeable traders will always start trading in order to make a significant profit from the market by purchasing shares at a discount and then selling them at a premium, claim Morck and Delcey (2019). Numerous empirical investigations by Pernagallo and Torrisi (2022) contributed to the concept of an efficient market's broad acceptance. Fama (1970) asserts that the economy is efficient. All of the historical data is correctly reflected in the present share values, which are in terrible condition. The price displays all public and private news in powerful form, and it reflects all public and historical data in semi-strong form. Investors won't be able to utilise this information to find cheap stocks, however. Supporters of the Efficient Market Hypothesis (EMH) say that low-cost passive investments may provide profits for investors, while its opponents maintain that stocks can deviate from their fair market value and that it is possible to beat the market.

Financial markets are not always completely efficient, according to critics of the market efficiency theory, especially in developing nations where information asymmetry and market flaws are common. According to Grossman and Stiglitz (1980), the fundamental tenet of Market Efficiency Theory—perfect information—is impractical. Inefficient asset pricing often results from some market players having access to privileged information. For example, the Nairobi Securities Exchange (NSE) in Kenya may encounter inefficiencies as a result of

incomplete information and a lack of market transparency, which might impede precise price discovery and equitable stock valuation (Waweru & Kisaka, 2012).

Furthermore, Market Efficiency Theory is criticised by behavioural economists like Shiller (2003) for failing to take into account psychological aspects that influence investor choice. Shiller claims that irrationality, market emotions, and cognitive biases often influence investor behaviour and cause it to deviate from actual asset prices. The idea of efficiency is called into question by these market oddities, particularly in erratic markets like Kenya where political unpredictability, regulatory changes, and worldwide economic shocks may all affect investor mood. Stock price volatility is influenced by these variables, indicating that markets are not always efficient (Mlambo & Biekpe, 2007).

Because it asserts that stock prices accurately represent all available information and guarantee effective capital allocation, market efficiency theory is pertinent to the first goal. The size and depth of the Kenyan stock market are indicated by its capitalisation, which encourages investment and resource mobilisation and, in turn, propels economic development via the effective distribution of capital across profitable industries.

2.2.2 Endogenous Growth Theory

The Endogenous Growth Theory, developed by Paul Romer (1986) and later advanced by Robert Lucas (1988), provides a suitable framework for examining the relationship between foreign direct investment (FDI) and economic growth. The theory posits that long-term economic growth is primarily driven by internal factors such as technological innovation, human capital development, and institutional quality, rather than external influences (Nganga & Otieno2022).

In this context, FDI is considered a critical internal driver, as it facilitates the transfer of technology, managerial expertise, and capital into the host economy, thereby enhancing productivity and innovation. Romer emphasized the importance of knowledge spillovers and investment in research and development, arguing that such inputs generate increasing returns and sustained growth (Karanja, 2019). Kapaya,(2020) and Alfaro et al. (2004) have argued that FDI promotes economic growth by improving capital formation, expanding access to international markets, and stimulating domestic investment. (Huntington 2021) linked financial sector development including FDI inflows to economic performance, noting that robust financial institutions and transparent regulatory environments amplify the benefits of FDI.

Mwega (2016) emphasized that FDI in Kenya has been instrumental in developing key sectors such as telecommunications, infrastructure, and manufacturing. However, critics of the theory argue that the benefits of FDI are not automatic. Borensztein et al. (1998) cautioned that FDI may only contribute positively to growth when the host country has a threshold level of human capital. Others such as Akinlo (2024) noted that in some African countries, including Kenya, the impact of FDI on growth has been limited due to weak absorptive capacity and policy instability.

Despite these criticisms, Endogenous Growth Theory remains relevant in explaining objective three of the current study, which seeks to investigate the relationship between foreign direct investment and economic growth in Kenya. The theory supports the notion that FDI, when complemented by strong institutions and favorable regulatory frameworks, can act as a catalyst for sustainable economic growth.

2.2.3 Exogenous Growth Theory

Robert Solow created the Exogenous Growth Theory in 1956, and Trevor Swan expanded on it the same year (Ngele, 2023). According to the hypothesis, external factors—specifically, technical developments—along with labour and capital inputs are what drive long-term economic growth. Solow and Swan maintained that as capital accumulation inevitably confronts declining returns, technical advancement is the primary factor influencing sustainable development. The Harrod-Domar Model (Harrod, 1939; Domar, 1946) built the foundation earlier. It emphasised the value of saving and investing, but it also pointed out that growth stalls in the absence of technical innovation (Borusyak and Hull, 2020).

The Solow-Swan framework was extended by subsequent developments, such as the Ramsey-Cass-Koopmans Model (Ramsey, 1928; Cass, 1965; Koopmans, 1965), which integrated intertemporal optimisation and took into account how individual savings and consumption choices affect capital accumulation while treating technological advancement as external. By simulating output as a function of capital, labour, and technology, the Cobb-Douglas Production Function (Cobb & Douglas, 1928) enhances the theory by showing how external technical advancements cause the production function to move higher, allowing for growth. However, detractors contend that seeing technology as exogenous ignores the ways in which research spending, economic policies, and educational initiatives may influence innovation (Villanueva, 2023).

The third objective which examined the connection between foreign direct investment (FDI) and economic development in Kenya, is pertinent to and directly related to exogenous growth theory. As the theory predicts, FDI inflows often bring cutting-edge technology and innovation to Kenya, boosting productivity and long-term economic development. This

alignment emphasises how crucial it is to draw in FDI in order to improve Kenya's development trajectory.

2.2.4 Liquidity Preference Theory

John Maynard Keynes introduced the liquidity preference theory in his landmark book The General Theory of Employment, Interest, and Money in 1936. According to the hypothesis, people would rather keep their money in liquid assets like cash since they are apprehensive about the future (Nderitu, 2020). Interest rates are determined by liquidity preference, which strikes a balance between the supply and demand of money (based on transactional, precautionary, and speculative reasons). Scholars such as Tobin (1958) and Hicks (1937) developed the notion further. For example, Tobin presented the idea of risk aversion, demonstrating how portfolio diversity influences investment choices and liquidity preferences (Owino, 2023).

Liquidity Preference Theory's strength is its ability to explain how interest rates and money demand affect economic activity. For comprehending monetary policy and how it affects investment and consumption, it offers a clear framework. The theory's assumption of a static money supply, however, could not be representative of contemporary financial systems with dynamic monetary policy. Additionally, detractors contend that it fails to sufficiently take into consideration the intricacies of financial markets, including the impact of alternative financial instruments and international capital movements (Wekesa, 2023).

Grasp the moderating effect of stock regulatory environment on the link between Kenyan stock market features and economic development requires a grasp of liquidity preference theory. The theory supports the moderating function of liquidity by emphasising

how it affects market stability and investor confidence, both of which are essential for using stock market traits to advance economic growth.

2.3 Empirical Review

2.3.1 Stock Market Capitalization and Economic Growth

Kuvshinov and Zimmermann (2022) investigated stock market capitalization trends across 17 developed nations using a quantitative longitudinal research design, relying on secondary data spanning from 1870 to the 1980s. Their study employed econometric analysis to assess the relationship between GDP growth and stock market capitalization, revealing a strong positive link driven by historical share issuances and recent share price increases. However, the methodology presented notable limitations, particularly the use of outdated historical data and its exclusive focus on developed economies, which limits applicability to emerging markets such as Kenya. Moreover, the study did not account for critical variables like the regulatory environment and foreign direct investment (FDI), both of which significantly influence stock market performance in developing contexts.To bridge these gaps, the present study adopted an explanatory research design and utilized recent secondary data to examine the relationship between economic development and stock market capitalization in Kenya.

Bui (2023) conducted a quantitative panel data analysis to examine the factors influencing annual total market capitalization in emerging markets such as China, India, and Malaysia, utilizing secondary data spanning from 1991 to 2023. The study's methodological approach involved the use of regression modeling to assess the effects of macroeconomic and institutional variables on stock market capitalization. Its originality stemmed from incorporating corruption control initiatives as a key explanatory variable—a dimension often neglected in earlier empirical studies. The results indicated that inflation exerted a negative

influence on stock market capitalization, while GDP per capita, domestic credit, trade, and the corruption control index had positive and statistically significant effects. However, despite its contributions, the study presented methodological and contextual limitations. To address these gaps, the present study employed an explanatory research design and uses country-specific data from Kenya

Aromolaran, Ngepah, Joel, and Saba (2024) examined the macroeconomic factors influencing market capitalization in South Africa's advanced financial industry using secondary data spanning 1985 to 2022. The study employed Bayesian information criteria to establish prior distributions for regression coefficients and applied a Bernoulli distribution ($p = 0.5$) for further analysis. Empirical findings from the Bayesian model revealed that GDP and broad money growth positively impacted market capitalization, while trade openness and repo rates exerted significant negative effects. The Cochrane-Orcutt AR(1) model confirmed similar trends, with GDP and repo rate interaction identified as having the greatest influence on the market capitalization of South African-listed domestic enterprises.

Despite its strengths, the study's methodological approach presents notable gaps. The extended timeline (1985–2022) may dilute the relevance of findings to current market dynamics, particularly in rapidly evolving economies like Kenya.. Furthermore, the reliance on Bayesian and Cochrane-Orcutt methods, while robust, may obscure the causal pathways between economic growth and market capitalization due to the lack of granular, sector-specific insights. To address these gaps, the present research investigated the relationship between economic development and stock market capitalization in Kenya, incorporating contemporary data and integrating both macroeconomic and stock market-specific variables.

Jalloh (2015) investigated the impact of stock market capitalization on economic growth in Africa using panel data and a dynamic panel estimation technique. The study revealed that a 10% increase in stock market capitalization led to an average 5.4% rise in economic growth among the African nations studied, highlighting a positive and significant correlation. These findings encouraged African countries to consider stock markets as a viable tool for economic development and emphasized the importance of policies that promote stock market growth to achieve sustained economic expansion. However, the study's methodological approach presents some gaps. Addressing these gaps, the present research focuses on Kenya's economic development and stock market capitalization, incorporating stock market-specific variables and contemporary data to provide nuanced and actionable insights tailored to the Nairobi Securities Exchange.

Owiti (2012) used data from 1990 to 2010 to examine the relationship between Kenya's economic growth and the development of its stock market. With GDP growth serving as the primary indicator of economic success, the research used a regression model to examine the Nairobi Stock Exchange (NSE) as the focal organisation. Examining the connection between economic growth and stock market development was the goal. Both financial intermediation and conventional growth theories were supported by the results, which showed a favourable link between economic growth and stock market development indices. The research demonstrated a two-way causal relationship between economic growth and stock market development using the Granger causality test. The study underlined the NSE's critical role in Kenya's economic development and suggested government initiatives to increase stock market sector engagement.

In the context of Kenya, the present research investigated the connection between economic development and stock market capitalisation. Chepkoech (2017) examined the connection between Kenya's economic development and stock market capitalisation. The relationship between financial growth, stock market capitalisation, and control factors was examined using a regression model. The yearly monetary growth rate was used to gauge economic growth, while market capitalisation was used to gauge the size of the stock market. The Central Bank of Kenya, the Kenya National Bureau of Statistics, and the Capital Markets Authority provided data for the 11-year period (2005–2016). The correlation value of 0.000356186 indicated that the variables were moving together. The findings of the regression analysis revealed a weakly positive correlation, indicating that 5.085% of the variance in economic growth could be explained by stock market capitalisation. In the context of Kenya, the present research investigated the connection between economic development and stock market capitalisation.

2.3.2 Stock Market Turnover and Economic Growth

Cooray (2010) employed a quantitative research design using cross-sectional regression analysis to examine the relationship between stock market turnover and economic development in the United Kingdom, extending the Mankiw, Romer, and Weil (1992) growth model to incorporate stock market variables across 35 emerging nations. The findings provided robust evidence of a positive effect of stock market size, liquidity, and activity on economic growth. However, the methodology had limitations, as the use of cross-sectional data restricted the ability to capture temporal dynamics, while the multi-country focus overlooked country-specific economic and regulatory variations. Furthermore, the study’s concentration on stock market turnover alone, without integrating other variables such as market capitalization and

foreign direct investment, limited the comprehensiveness of its conclusions. To address these gaps, the present study adopted an explanatory research design using time-series data from Kenya

Bayar, Kaya, and Yildirim (2014) investigated the relationship between Turkey's economic development and stock market turnover using secondary data from 1999 to 2013. They applied the Granger causality test and the Johansen-Juselius cointegration test, finding a long-term association between economic development and stock market indicators such as turnover ratio, capitalization, and total value of traded equities, with a unidirectional causal relationship. However, the study overlooked potential structural breaks and external shocks during the period, which could affect the stability of these relationships. Furthermore, the methodology was limited to cointegration and causality tests, restricting the analysis of more complex dynamic interactions among variables. The current study addressed these gaps by using advanced time-series methods that account for structural changes and incorporating a wider range of stock market variables to examine the connection between economic development and stock market turnover within Kenya's distinct financial environment.

Adenuga (2010) used quarterly data from 1990: Q1 to 2009: Q4 to examine if the development of the stock market turnover encourages economic growth in Nigeria. The research analysed widely used stock market development indicators using the Vector Error Correction Model (VECM) approach. The results showed that the market capitalisation ratio (MCR) and the total value of shares traded ratio (VR) model suited the data the best, but the turnover ratio (TR) model did not fit the data as well. The findings supported the hypothesis that, during the time under study, the stock market in Nigeria stimulates economic development by showing that the error correction term (ECM-1) had the predicted negative sign and was

highly significant at the 1% level. The MCR model showed a significant overall model fit at the 1% level, as shown by the F-test score of 10.88. In the context of Kenya, the present research looked at the connection between economic development and stock market turnover.

Abdul-Khaliq (2013) studied the Amman Stock Exchange (ASE) between 1991 and 2011 to investigate the impact of stock market turnover liquidity on economic development in Jordan. The market capitalization-to-GDP ratio and the turnover ratio were the two main metrics used to assess liquidity at the ASE. The purpose of the study was to examine the connection between these liquidity metrics and economic expansion, as measured by the GDP growth rate. To examine the association between the variables, a simple linear regression model was used. The results showed that economic growth was not significantly impacted by the market capitalization-to-GDP ratio. Nonetheless, it was shown that the turnover ratio significantly boosted economic growth, suggesting that increased stock market turnover liquidity may support economic development. The present research examined the connection between Kenya's economic development, turnover liquidity, and stock market.

Using fresh data from two significant European stock markets the UK and Germany Apergis, Artikis, and Kyriazis (2015) investigated the relationship between stock market turnover liquidity and economic growth. The research investigated the connection between macroeconomic factors and stock regulatory environment, which acts as a stand-in for the hidden costs of trading shares. Even when taking into account well-known leading economic indicators, the authors discovered that stock regulatory environment provides robust and trustworthy information on the status of the economies in both nations. The importance of small-cap enterprises' liquidity in explaining economic circumstances was one of the main conclusions, bolstering the "flight-to-quality" theory, which holds that investors gravitate

towards higher-quality, more liquid assets when uncertainty is present. Furthermore, the empirical findings showed that there was no discernible difference between capital market-oriented and bank-oriented countries in the contribution of liquidity to the explanation of macroeconomic variables. The present research examined the connection between Kenya's economic development and stock market characteristics.

Kapaya (2020) used the Autoregressive Distributed Lag (ARDL) model with bound testing techniques to investigate the link between Tanzania's economic growth, turnover, and stock market development. Quarterly time-series data from 2001:Q1 to 2019:Q2 were examined in the research. The results showed that there were both positive and negative causation for short-term dynamics and long-term correlations with economic growth in the development of the stock market. Both in the short and long term, it was discovered that there was a negative causal association between economic growth and stock regulatory environment. As measured by stock market turnover, which is a proxy for liquidity, the findings mostly showed a unidirectional causal relationship between economic growth and stock market development, with partial causation between economic growth and stock market development. In the context of Kenya, the present research looked at the connection between economic development and stock market turnover.

Machuki (2016) investigated the connection between Kenya's economic development and market turnover. Market capitalisation (MC), stock turnover ratio (STO), traded value of stocks (TVL), number of listed securities (LS), and stock market index (MI) were among the stock market parameters that were examined in the research in connection to GDP, which was used as a stand-in for economic growth. According to the study, African stock markets are typically tiny and deal with issues including market illiquidity. It also said that nations with

advanced financial markets often have greater per capita incomes than those with less developed markets. This discovery is consistent with a number of ideas that highlight the vital role that financial markets—especially stock markets—play in promoting economic growth by facilitating risk diversification and providing long-term funding for development initiatives. In the context of Kenya, this research looked at the connection between economic development and stock market turnover.

2.3.3 Foreign Direct Investment and Economic Growth

Almfraji and Almsafir (2014) carried out a thorough systematic literature review to investigate the relationship between economic growth (EG) and foreign direct investment (FDI) over the period 1994 to 2012. The study used a qualitative meta-analysis approach, synthesizing findings from a wide range of empirical and theoretical studies to identify both the direct and indirect effects of FDI on economic development. This methodology enabled the researchers to compare patterns across different economic contexts and assess the consistency of FDI's impact on growth outcomes.The findings revealed that FDI generally exerts a strong positive effect on economic growth by promoting technology transfer, capital accumulation, and productivity improvements. However, some studies reported neutral or negative relationships, particularly in economies with weak governance structures or underdeveloped financial systems. In the context of Kenya, the current study employed an explanatory research design using time-series data to empirically examine the relationship between foreign direct investment and economic development within Kenya's regulatory and economic framework.

Li and Liu (2005) employed a quantitative research design using a panel dataset of 84 countries covering the period 1970 to 1999 to examine the impact of foreign direct investment (FDI) on economic development. The study utilized both single-equation regression models

and simultaneous equation system approaches to account for endogeneity between FDI and economic growth. The analysis revealed a significant bidirectional relationship between the two variables, particularly from the mid-1980s onwards. The findings indicated that FDI influences economic development both directly and indirectly through interaction effects. Notably, the interaction between FDI and technological gap produced a substantial negative effect on economic development in developing nations, while the interaction between FDI and human capital showed a strong positive influence on growth. Building on these findings, the current study adopts an explanatory research design and employs time-series data from Kenya, analyzed using Stata statistical software (StataCorp LLC, Version 17), to investigate the relationship between foreign direct investment and economic development within Kenya's unique economic and regulatory context.

Batten and Vo (2009) employed a quantitative research design using panel data modeling techniques to investigate the relationship between foreign direct investment (FDI) and economic growth across multiple countries. Their study specifically explored how this relationship varied depending on educational attainment, institutional quality, and macroeconomic conditions. By applying panel regression analysis, the researchers were able to control for country-specific effects and capture both cross-sectional and temporal variations in FDI inflows. The findings revealed that FDI exerted a stronger positive impact on economic growth in countries characterized by low risk and population growth rates, high levels of education, greater openness to international trade, and well-developed stock markets. The study emphasized that to maximize the benefits of FDI, governments should not only liberalize cross-border capital regulations but also strengthen institutional and educational frameworks

to enhance absorptive capacity. Building on these insights, the current study adopts an explanatory research design using time-series data from Kenya.

Acquah and Ibrahim (2020) employed a quantitative research design utilizing annual panel data from 45 African countries spanning 1980 to 2016 to investigate the relationship between foreign direct investment (FDI), economic growth, and financial sector development. The study applied the two-step system Generalized Method of Moments (GMM) estimator to address potential endogeneity and capture the dynamic interactions among the variables. The results revealed that the impact of FDI on economic growth was ambiguous, as the direction and magnitude of the relationship varied across model specifications. Although higher levels of FDI were generally associated with stronger growth outcomes, the study found that the banking sector mitigated the positive influence of FDI on economic expansion. This dampening effect persisted across different measures of financial development, with domestic credit exhibiting a more substantial moderating impact than private sector credit. Building on these findings, the current study adopts an explanatory research design and employs time-series data from Kenya

Odhiambo (2022) employed a quantitative research design using secondary time-series data covering the period 1980 to 2018 to investigate the effect of foreign direct investment (FDI) on Kenya's economic development. The study developed a system of multivariate Granger-causality equations, incorporating money supply and trade as intermittent variables to address potential omitted variable bias identified in previous research. Using the Autoregressive Distributed Lag (ARDL) bounds testing approach, the analysis established a unidirectional causal relationship running from FDI to economic development in Kenya. This finding was consistent in both the short-run and long-run, suggesting that increases in FDI

significantly stimulate economic growth over time. Building upon Odhiambo's findings, the current study employs an explanatory research design and analyzes time-series data using Stata statistical software**.**

Osano and Koine (2016) investigated how foreign direct investment (FDI) contributed to knowledge transfer and economic expansion in Kenya, with a particular emphasis on Nairobi's energy industry between 2001 and 2014. The research focused on 60 top managers, including directors and managers from Kenya Power and KenGen, and used a descriptive and inferential survey approach. Questionnaires were used to gather information. The results showed a connection between economic development and FDI factors such infrastructure, technology diffusion, trade facilitation, knowledge management, and technology transfer. According to the report, new technology was brought to the nation by investments in the energy industry, which allowed for technology transfer to regional investors via knowledge exchange in R&D, innovation, and technology. It also encouraged more trade rivalry, which enhanced the industry's efficacy and efficiency. The study investigated the connection between foreign direct investment and economic development in the Kenyan context, building on previous findings.

2.3.4 Stock Regulatory environment and Economic Growth

Xie and Guo (2022) conducted a study titled, Fluctuations of Environmental Regulation, Technological Innovation, and Economic Growth: A Multinational Perspective. Grounded on the Endogenous Growth Theory and the Porter Hypothesis, the study analyzed how variations in environmental regulations influence technological innovation and economic growth across 36 OECD countries between 2013 and 2018. Xie and Guo (2022) employed a quantitative research methodology utilizing panel data analysis to examine the effects of environmental

regulation on investment, innovation, and economic growth across OECD countries. The study categorized environmental regulation into Formal Environmental Regulation (FER) and Informal Environmental Regulation (IER) and analyzed their differential impacts on corporate behavior. The findings revealed that fluctuations in both FER and IER had a significant negative impact on economic growth, primarily by increasing policy uncertainty, which discouraged innovation and investment activities. Moreover, technological innovation was identified as a mediating variable linking regulatory fluctuations to economic growth, suggesting that regulatory instability undermines innovation-driven development. To address this research gap, the current study adopts an explanatory research design using time-series data from Kenya.

Xie and Guo (2022) employed a quantitative research methodology utilizing panel data analysis to examine the effects of environmental regulation on investment, innovation, and economic growth across OECD countries. The study categorized environmental regulation into Formal Environmental Regulation (FER) and Informal Environmental Regulation (IER) and analyzed their differential impacts on corporate behavior. The findings revealed that fluctuations in both FER and IER had a significant negative impact on economic growth, primarily by increasing policy uncertainty, which discouraged innovation and investment activities. Moreover, technological innovation was identified as a mediating variable linking regulatory fluctuations to economic growth, suggesting that regulatory instability undermines innovation-driven development. To address this research gap, the current study adopts an explanatory research design using time-series data from Kenya extending the understanding beyond the OECD framework explored by Xie and Guo (2022).

Dagar (2021), in the study "The Nexus between Environmental Regulations, Economic Growth, and Environmental Sustainability in Four Fossil Fuel-Dependent South Asian Countries," employed a quantitative research methodology grounded in the Environmental Kuznets Curve (EKC) Theory and the Pollution Haven Hypothesis. The study applied advanced econometric techniques accounting for cross-sectional dependency, slope heterogeneity, and structural breaks using data from Bangladesh, India, Pakistan, and Sri Lanka. The findings indicated that environmental regulations significantly reduced ecological footprints, supporting both theoretical frameworks. Additionally, the joint use of renewable energy and environmental regulations further decreased ecological footprints, while non-renewable energy consumption increased them. The study also demonstrated that environmental regulations mitigated the negative impacts of economic growth and foreign direct investment on the environment. Building on these insights, the current study adopts an explanatory research design to examine how environmental and stock regulatory frameworks influence economic growth within Kenya's unique financial and regulatory environment.

Raza et al. (2021) conducted a study titled "Co-Movement of Energy Prices and Stock Market Return: Environmental Wavelet Nexus of the COVID-19 Pandemic from the USA, Europe, and China." Grounded in the Efficient Market Hypothesis (EMH) and Crisis Transmission Theory, the study explored the time–frequency relationship between the COVID-19 pandemic, oil price volatility, stock market performance, geopolitical risks, and economic policy uncertainty. Using coherence wavelet analysis and wavelet-based Granger causality tests on daily data from December 31, 2019, to August 1, 2020, the study found that the pandemic significantly reduced industrial productivity, oil demand, GDP growth, and electricity consumption. Specifically, a 1% rise in pandemic severity led to notable declines in

these indicators. The results showed weak co-movement between oil and stock markets, suggesting potential investment opportunities. The current study seeks to fill a contextual gap by examining how stock regulatory environments influence economic growth in Kenya, an area underexplored in developing economies compared to global market analyses.

Dzwigol and Pimonenko (2023) conducted a study titled The Influence of Environmental Regulations, Renewable Energy, and Energy Efficiency on Green Economic Growth. Anchored on the Green Growth Theory and the Environmental Kuznets Curve (EKC) Hypothesis, the study evaluated the dual role of environmental regulations in promoting economic growth while mitigating environmental degradation. Using the Global Malmquist–Luenberger Productivity Index and a System Generalized Method of Moments (GMM) econometric model, panel data from EU countries (2000–2020) were analyzed to assess the nonlinear effects of environmental regulations, renewable energy expansion, and energy efficiency on green economic growth. The findings confirmed a U-shaped nonlinear relationship between environmental regulations and green economic growth, with energy efficiency and renewable energy contributing positively to sustainable development. The current study filled a contextual and methodological gap by examining how stock regulatory environments and environmental policies influence economic growth in Kenya, where limited empirical evidence exists compared to the extensively studied EU context.

Haroon and Rizvi (2021) explored the relationship between stock regulatory frameworks and market stability in 23 developing economies across three regions. Using a quantitative approach, the study analyzed secondary data on liquidity and regulatory measures during the COVID-19 pandemic. The findings indicated that stronger regulatory enforcement actions, reflected in reduced investor uncertainty, was associated with improved market

stability, while weaker cost of listing led to declining liquidity. However, the study did not directly examine annual cost of listing or their longitudinal impact on economic growth, revealing a contextual gap for country-specific studies, including Kenya.

Chipaumire and Ngirande (2014) investigated the effect of stock regulatory cost of listing on South Africa's economic growth using time series data from 1995 to 2010. The study employed ordinary least squares (OLS) regression and the Augmented Dickey-Fuller (ADF) test to assess stationarity. Their findings demonstrated that consistent regulatory oversight, including monitoring and compliance cost of listing, contributed positively to economic performance. Despite these insights, the study did not disaggregate specific enforcement actions or assess their frequency, leaving a gap in understanding how annual cost of listing measures influence growth trajectories in similar African contexts.

Fang, Noe, and Tice (2009) examined the connection between regulatory cost of listing, stock liquidity, and corporate value using primary data from 2000 to 2008. Employing two-stage least squares regression and controlling for industry and firm-specific factors, the study found that stronger cost of listing mechanisms—particularly those affecting trading rules—improved market liquidity and firm performance, as reflected in higher market-to-book ratios. The research highlighted the causal role of regulatory changes but did not provide detailed analysis on the annual number of enforcement actions, suggesting a methodological gap relevant to annualized regulatory assessment.

Igbinosa and Uhunmwangho (2019) focused on macroeconomic indicators and stock regulatory cost of listing in Nigeria, South Africa, Egypt, Mauritius, and Morocco using cross-sectional data from 2006 to 2016. They applied regression analysis to determine how macroeconomic variables such as inflation, exchange rates, money supply, and private sector

credit influenced stock market liquidity. While the study indicated that regulatory cost of listing positively impacts market liquidity and economic activity, it did not quantify annual cost of listing or directly link these measures to growth outcomes, highlighting a significant research gap.

In the Kenyan context, Onyango (2017) analyzed quarterly time series data from 2010 to 2014 to examine the relationship between stock regulatory cost of listing and economic development. The study applied OLS regression, the ADF test for stationarity, Bounds Testing for long-term relationships, and Granger causality to test directionality. Findings revealed a unidirectional causal link from stock regulatory cost of listing to GDP growth, underscoring the importance of regulatory measures for Kenya's economic development. However, Onyango did not focus specifically on the cost of listing taken annually, which remains an underexplored area critical for understanding how regulatory intensity influences economic growth in Kenya.

Lee and Olanipekun (2021) conducted a study titled Symmetric and Asymmetric Causal Relationships among Financial Systems, Regulatory Quality, and Economic Performance in Selected African Countries." Grounded on the Finance-Growth Nexus Theory and the Supply-Leading and Demand-Following Hypotheses, the study investigated how financial systems and regulatory quality interact to influence economic performance. Using causality and impulse response analyses, the researchers examined both symmetric and asymmetric dynamics across various African economies. Findings revealed diverse causal patterns, confirming symmetric demand-following, symmetric supply-leading, feedback, and neutrality hypotheses across countries. Both positive and negative asymmetric causal relationships were also identified. The study concluded that regulatory quality mediates the

relationship between financial development and economic growth, emphasizing the need for country-specific regulatory strategies. The current study filled a contextual and empirical gap by examining how Kenya's stock regulatory environment influences economic growth, focusing on the interplay between financial regulation and economic performance within Kenya's unique regulatory and market context.

Okegbemi (2024) conducted a study titled, Economic Environment Factors and How They Suppress Growth and Development in Nigeria. Anchored on the Institutional Theory and the Endogenous Growth Theory, the study examined how macroeconomic instability, inadequate infrastructure, complex regulatory frameworks, and governance challenges hinder Nigeria's economic progress. Using a descriptive analytical approach supported by secondary data, the research highlighted that high inflation, exchange rate volatility, and fiscal deficits undermine investor confidence and purchasing power. Additionally, poor infrastructure, bureaucratic inefficiencies, and corruption were found to significantly constrain business growth and resource allocation. The study recommended policy reforms such as stabilizing monetary and fiscal policies, improving infrastructure, enhancing regulatory transparency, and strengthening governance mechanisms to promote sustainable growth. The current study filled a contextual and empirical gap by examining how stock regulatory environments affect economic growth in Kenya, providing insights into how regulatory quality within the financial sector can enhance national economic performance.

Oyier (2024) conducted a study titled, An Appraisal of Kenya's Business Regulatory Environment: Successes, Challenges, and Policy Options. The research was grounded on the Transaction Cost Theory, Institutional Theory, and Stakeholder Theory, complemented by the Public Interest Theory and Enforcement Theory. The study aimed to assess Kenya's business

regulatory environment using the Ease of Doing Business (EoDB) Index from 2008 to 2020, focusing on reforms that improved or hindered the business climate. Using an exploratory research design and secondary data, the study employed content analysis to identify themes and key reform episodes linked to EoDB performance trends. Findings highlighted significant progress in simplifying business registration and access to credit but noted persistent challenges such as bureaucratic inefficiencies and inconsistent enforcement of regulations. The current study seeks to fill a contextual and empirical gap by examining the relationship between stock regulatory environments and economic growth in Kenya, extending beyond general business regulations to focus on the financial regulatory framework and its impact on national economic performance.

2.4 Conceptual Framework

The conceptual framework presented in Figure 2.1 is grounded in insights drawn from the reviewed literature, which establishes clear connections between key stock market characteristics and economic growth. Studies such as Jalloh (2015) and Cooray (2010) demonstrate that stock market capitalization, turnover, foreign direct investment, and liquidity each play significant roles in fostering economic development. Stock market capitalization provides firms with access to long-term financing, enabling expansion and productivity gains. Turnover reflects market activity and investor confidence, which enhances efficient capital allocation. Foreign direct investment introduces capital inflows and technology transfer, further stimulating growth, while regulatory environment ensures that investors can buy and sell securities readily, maintaining market stability. Collectively, these variables influence economic growth in Kenya, justifying their inclusion as independent variables in the conceptual framework with economic growth as the dependent variable.

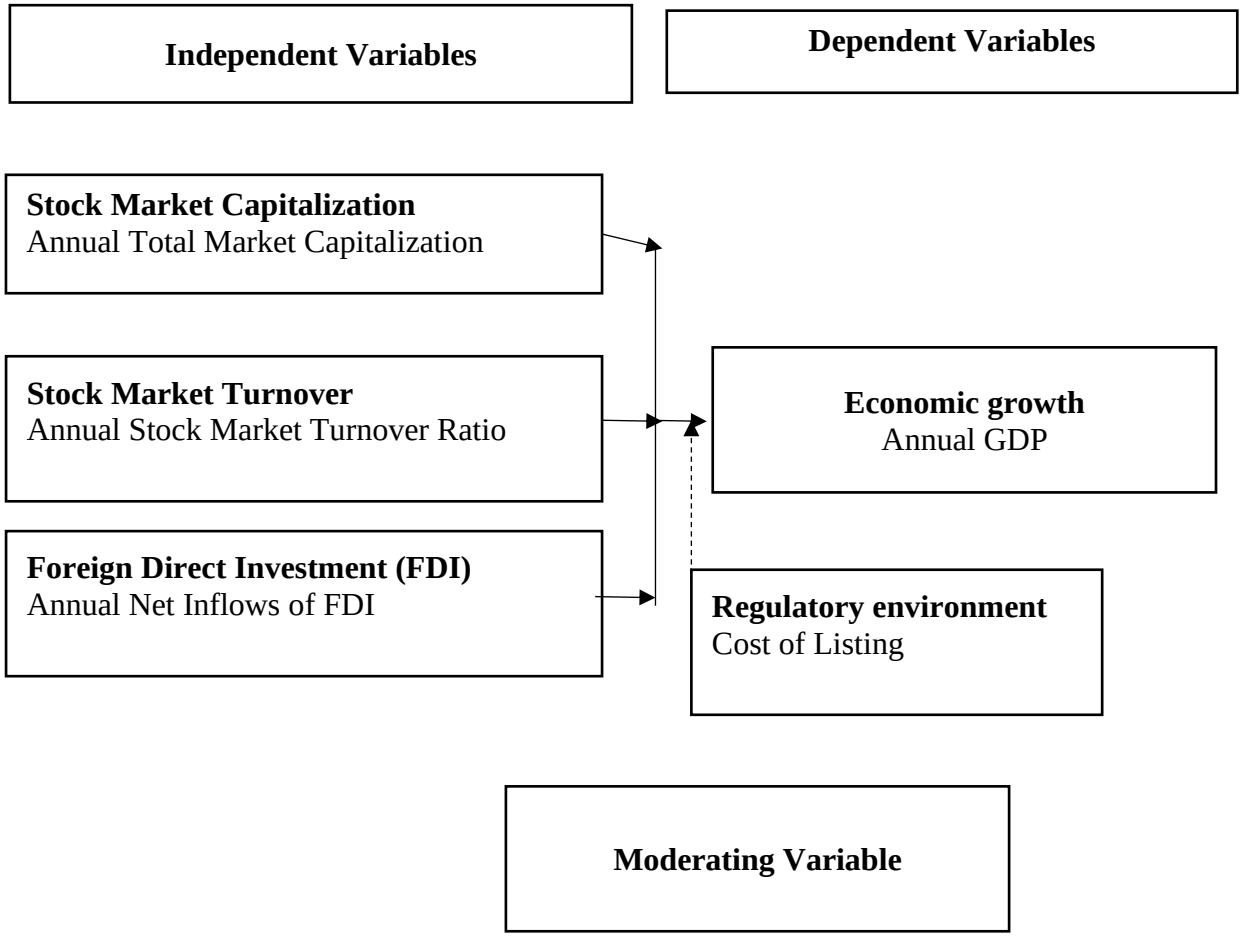

FIGURE 1
Conceptual Framework

2.5 Operationalization of Study Variables

Operationalizing the research variables is essential for testing the hypotheses that have been developed. Cooper and Schindler (2014) state that operationalization entails defining ideas by outlining the precise methods required to measure them. Economic growth is the dependent variable (regress) in this research, while stock market capitalisation, stock market turnover, foreign direct investment (FDI), and stock regulatory environment are the independent variables (regressors). These variables' operationalization is based on knowledge gathered

from earlier empirical studies. The next section provides a thorough overview of the operationalization of these variables.

TABLE 1

Operationalization of the Study Variables

Variable	**Variable Measurement**	**Analysis Techniques**
Economic Growth	Gross Domestic Product (GDP)	Descriptive and Inferential statistics
Stock Market Capitalization	Total Market Capitalization	Descriptive and Inferential statistics
Stock Market Turnover	Stock Market Turnover Ratio	Descriptive and Inferential statistics
Foreign Direct Investment (FDI)	Net Inflows of FDI	Descriptive and Inferential statistics
Regulatory environment	Cost of listing Annually	Descriptive and Inferential statistics

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The approach used to carry out the research is covered in full in this chapter. Research design, target population, sampling methods and sample size, pilot project, data collection methods, data analysis and logistics, and ethical issues constituted the seven separate sub-sections of this part.

3.2 Research Design

The study adopted an explanatory research design, which is appropriate for establishing causal relationships between variables. This design was selected because the research aimed to determine how market characteristics—specifically capitalization, turnover, and foreign direct investment—influence economic growth, and how the regulatory environment moderates these relationships. Unlike descriptive research design, which only outlines characteristics of a population or phenomenon, the explanatory design allows for in-depth analysis using inferential statistics such as regression analysis to explain the cause-and-effect relationship among variables. Therefore, this design was most suitable for assessing the moderating role of the regulatory environment on the linkage between market characteristics and economic growth in Kenya.

This study incorporated both time-series data, which captured observations of economic development (dependent variable) and stock market characteristics such as stock market capitalization, turnover, foreign direct investment, and liquidity (independent variables) over multiple time periods, and cross-sectional data, which involved observations of several variables recorded at the same point in time across different entities or segments.

The time-series component was appropriate for analyzing patterns, trends, and dynamic relationships over time, showing how changes in stock market variables impacted economic growth. The cross-sectional aspect complemented this by providing a snapshot of these relationships across different sectors or regions at a specific period. Unlike purely descriptive or cross-sectional designs that focused on static relationships, this combined approach enabled the identification of causality, long-run equilibrium, and short-term adjustments using advanced models such as Autoregressive Distributed Lag (ARDL) frameworks. This comprehensive methodology ensured a robust understanding of how stock market characteristics influenced Kenya's economic growth across time and contexts.

3.3 Target Population

The particular set of people or organizations that a researcher planned to interact with and share the results of a study with is known as the target population (Willie, 2022). The Kenya National Bureau of Statistics and the Nairobi Securities Exchange served as the sources of data. The data points included economic growth (GDP), stock regulatory environment (Value of Shares Traded), foreign direct investment (Net Inflows of FDI), stock market turnover (Stock Market Turnover Ratio), and stock market capitalization (Total Market Capitalization).

These data points were gathered using a spreadsheet that aggregated relevant information annually across a 24-year time series, from 2001 to 2024. This period was justified as it allowed for a thorough examination of trends and patterns in Kenya's stock market characteristics and how they affected the regulatory environment and economic growth. This strategy strengthened the reliability of the results and supported evidence-based recommendations for decision-makers.

3.4 Sampling and Sampling Procedures

A census study was adopted as it was expected to reduce bias, enhance the precision of information, and improve representation (Shahbazi & Jagadish, 2023).

3.5 Instruments

Secondary data were obtained from international statistical yearbooks, Statistical Abstracts reports, and annual reports from the Kenya National Bureau of Statistics and the World Bank.

3.6 Data collection Technique

The study utilized a structured data collection sheet to gather annual time series data covering the period from 2000 to 2024. Data were sourced from financial reports published by the Kenya National Bureau of Statistics (KNBS) and the World Bank, ensuring accuracy and reliability. The key variables collected included Annual Total Market Capitalization, Annual Stock Market Turnover Ratio, Annual Net Inflows of Foreign Direct Investment (FDI), Annual Cost of Listing Companies, and Annual Gross Domestic Product (GDP).

The 24-year time frame was designed to capture both historical and contemporary trends, allowing for the identification of long-term patterns, structural shifts, and emerging developments that might have influenced the relationship between stock market characteristics and economic growth. The structured data collection sheet organized relevant indicators for each year, enabling systematic recording, categorization, and verification. This approach supported a detailed and robust analysis, allowing the researcher to draw meaningful insights from the data and effectively examine the study's objectives.

3.7 Diagnostic Tests

Diagnostic techniques (Multicollinearity Test, Normality Test, Heteroscedasticity Test and Autocorrelation Test) were used to evaluate the precision and potential biases in parameter

estimates within the classical linear regression model (CLRM). The parameter estimates could become inaccurate if any of the underlying assumptions are violated, as noted by Pesaran (2021). Collectively, these tests assessed the CLRM's appropriateness and robustness, ensuring that it accurately captured the relationships between the study variables.

3.7.1 Multicollinearity Test

According to Bayman and Dexter (2021), convergence occurs when explanatory variables in a regression equation exhibit strong or moderate interrelationships. Such convergence may result in wider confidence intervals and biased p-values for independent variables. The Variance Inflation Factor (VIF) was used to assess the degree of multicollinearity among the variables. The results indicated that stock market capitalization had the highest VIF at 2.58 (tolerance = 0.387794), followed by regulatory cost with a VIF of 1.92 (tolerance = 0.521765). Stock market turnover and foreign direct investment had VIF values of 1.64 (tolerance = 0.611105) and 1.61 (tolerance = 0.621944), respectively. The mean VIF was 1.93, which fell well within the acceptable threshold of 10, suggesting that multicollinearity was not a major concern in this model.

3.7.2 Normality Test

The dataset was expected to follow a normal distribution since, as Khatun (2021) notes, departures from normality can lead to biased regression results and unreliable hypothesis testing. The Shapiro-Wilk test was conducted on the variables, and the results initially indicated p-values below 0.05, confirming significant deviations from normality. To address this, the researcher applied a base 10 logarithmic (log10) transformation to stock market capitalization, turnover, FDI, regulatory cost, and GDP. The Shapiro-Wilk test was repeated

after transformation, revealing substantial improvement in normality with p-values above 0.05 for most variables.

3.7.3 Heteroscedasticity Test

Heteroscedasticity, as highlighted by Berenguer (2021), occurs when the variance of residuals is not constant across observations. The Breusch–Pagan/Cook–Weisberg test was performed, yielding a chi-square statistic of $\chi^2(4) = 2.63$ with a p-value of 0.6208. Since the p-value exceeded the 0.05 significance level, the null hypothesis of homoscedasticity could not be rejected, indicating that the model residuals exhibited constant variance. This validated the use of OLS-based estimators.

3.7.4 Autocorrelation Test

According to Kumar (2023), autocorrelation occurs when the residuals from a regression model are correlated across time, potentially leading to inefficient estimates and unreliable statistical inferences. The Durbin–Watson (DW) test was employed to examine the presence of autocorrelation in the residuals. The test produced a DW statistic of 3.021, which is greater than 2, suggesting the presence of negative autocorrelation among the residuals. To address this issue, the Cochrane–Orcutt AR (1) regression with iterated estimates was applied. The transformed model showed a Durbin–Watson statistic of 2.476, confirming that autocorrelation had been successfully corrected. The final model reported a very high R-squared of 0.9994, indicating that 99.94% of the variation in GDP was explained by the independent variables. After correction, year remained a strong predictor of GDP growth, while stock market capitalization, turnover, and FDI maintained positive but statistically insignificant relationships. Regulatory cost remained statistically insignificant in the model. This approach ensured robust and reliable estimates by mitigating the effects of serial correlation.

3.8 Data Analysis

Data analysis was conducted using STATA Version 17, which served as the main analytical software for both descriptive and inferential statistical procedures. Descriptive statistics—including measures of central tendency such as means and standard deviations—were computed in STATA to summarize and describe the key characteristics of the study variables. Graphical outputs such as tables, charts, and histograms were generated within the software to facilitate clear and comprehensive data presentation.

For inferential analysis, STATA Version 17 was employed to perform correlation and regression analyses aimed at testing the study's hypotheses. Correlation analysis was used to determine the strength and direction of relationships among variables, while multiple regression analysis evaluated the predictive influence of market characteristics on economic growth. Additionally, a multivariate regression model was fitted in STATA to assess the combined effects of capitalization, turnover, and foreign direct investment, as well as the moderating role of the regulatory environment.

The use of STATA Version 17 ensured analytical accuracy, efficiency, and reliability due to its advanced statistical capabilities and ability to manage complex econometric models effectively (Field, 2018).

Direct Effects Model

To analyze the direct impact of stock market characteristics on economic growth:

$$Yt = \beta 0 + \beta 1X1t + \beta 2X2t + \beta 3X3t + \epsilon t$$

Where:

Yt: Economic growth at time t (Dependent Variable)

X_{1t}: Stock Market Capitalization at time t

X_{2t}: Stock Market Turnover at time t

$X_{3t:}$ Foreign Direct Investment (FDI) at time t

$\beta 0$: Intercept term

$\beta_1, \beta_2, \beta_3$ Coefficients of independent variables

ϵt: Error term

Model with Moderation

To incorporate the moderating effect of Regulatory environment:

$$Yt = \beta_0 + \beta_{1X1t} + \beta_{2X2t} + \beta_{3X3t} + \beta 4_{Mt} + \beta_5(_{X1t \cdot Mt)} + \beta 6_{(X2t \cdot Mt)} + \beta 7_{(X3t \cdot Mt)} + \epsilon t$$

Where:

M Regulatory environment at time t (Moderating Variable)

- X1t·Mt,X2t·Mt,X3t·MtX
- Mt,X2t·Mt,X3t·Mt: Interaction terms capturing the moderating effect
- β4,β5,β6,β7Coefficients of moderation and interaction terms

Conceptual Framework Components

1. Independent Variables (IVs):

    Stock Market Capitalization (X1t)

    Stock Market Turnover (X2t)

    Foreign Direct Investment (X3t)

2. Moderating Variable (MV):

    Regulatory environment (Rt)

3. Dependent Variable (DV):

Economic Growth (Yt)

3.9 Ethical Consideration

The study adhered to ethical standards, prioritizing the integrity of secondary data collected from institutions and ensuring compliance with research guidelines. Before data collection, formal consent was obtained from the relevant institutions, clearly outlining the study's objectives, methodology, and the intended use of the data. Strict confidentiality protocols were implemented to safeguard institutional data, with any identifiable information anonymized or coded to maintain privacy.

Data were securely stored and handled only by authorized personnel to prevent unauthorized access or misuse. Additionally, the study avoided coercion or undue influence by ensuring that institutions willingly provided the necessary data without pressure or obligations. The researcher proactively addressed any potential concerns from data-providing institutions and mitigated risks through a thorough risk assessment process. Ethical clearance for the study was obtained from the KCA University Institutional Review Board to ensure compliance with ethical research practices and uphold the highest standards of academic integrity.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1Introduction

This chapter presents the findings and discussions of the study. The research utilized annual time series data to examine the relationship between stock market characteristics, the regulatory environment, and economic growth in Kenya. Secondary data were collected to cover the period from 2001 to 2024. The findings are presented through descriptive statistics, regression analysis, diagnostic tests for regression, time series analysis, and post-estimation analysis. Finally, the study discusses the findings in relation to theoretical perspectives and empirical literature, highlighting areas of agreement and divergence.

4.2 Descriptive Statistics

The study analyzed secondary data from 2001 to 2024 to examine the relationship between stock market characteristics, regulatory environment, and economic growth in Kenya. The average stock market capitalization (lnMarketCap) was 7.21 with a standard deviation of 1.17, ranging from 4.91 to 10.15, indicating moderate variability over the period. This aligns with Kiremu et al. (2022), who noted that market capitalization significantly influences economic growth. Stock market turnover (lnTurnover) had a mean of 4.13 and a standard deviation of 1.20, ranging from 0.78 to 5.86, reflecting fluctuations in market liquidity similar to observations by Nzau (2018). Foreign direct investment (lnFDI) averaged 4.31 with a standard deviation of 2.03, ranging from 0.85 to 7.28, showing substantial variability consistent with Odhong et al. (2019), who highlighted FDI's role in enhancing economic development. The regulatory environment (lnRegCost) had a mean of 4.87 with a standard deviation of 0.80, ranging from 3.32 to 7.34, suggesting moderate regulatory variations in line with Mungai

(2021). Finally, economic growth (lnGDP) recorded a mean of 8.32 with a standard deviation of 0.93, ranging from 6.93 to 9.30, indicating relative stability in GDP growth, consistent with findings by Nzau (2018). Overall, these variations provide a foundation for analyzing how market characteristics, FDI, and regulatory factors influence economic growth in Kenya.

TABLE 2

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
lnMarketCap	24	7.205813	1.172934	4.911551	10.153
lnTurnover	24	4.128525	1.195297	0.779324	5.860786
lnFDI	24	4.311797	2.025597	0.850151	7.284457
lnRegCost	24	4.869526	0.803385	3.324316	7.33959
lnGDP	24	8.320153	0.932064	6.927666	9.297278

Source: Research Survey Data (2025)

4.3 Diagnostic Tests

4.3.1 Normality Test

Normality test was conducted using the Shapiro–Wilk W test to determine whether the study variables were normally distributed.

TABLE 3

Normality test

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
lnGDP	24	0.95885	1.110	0.213	0.41580
lnRegCost	24	0.95620	1.182	0.340	0.36690
lnFDI	24	0.94399	1.511	0.841	0.20005
lnTurnover	24	0.96974	0.816	-0.414	0.66063
lnMarketCap	24	0.95520	1.208	0.386	0.34981

Source: Research Survey Data (2025)

The results revealed that all variables lnGDP, lnRegCost, lnFDI, lnTurnover, and lnMarketCap had p-values greater than 0.05, indicating that the null hypothesis of normality could not be rejected. This finding confirms that the data were normally distributed and therefore appropriate for further parametric statistical analysis. These results are in line with the recommendations by Gujarati and Porter (2020), who argued that data normality is a key assumption for regression and ANOVA analysis since it ensures unbiased parameter estimation and valid statistical inference.

4.3.2 Multicollinearity Test

Multicollinearity analysis was performed using the Variance Inflation Factor (VIF) to assess the degree of correlation among the independent variables.

TABLE 4

Multicollinearity Test

Variable	VIF	1/VIF
lnMarketCap	2.58	0.387794
lnRegCost	1.92	0.521765
lnTurnover	1.64	0.611105
lnFDI	1.61	0.621944
Mean VIF	1.93	

Source: Research Survey Data (2025)

Multicollinearity was assessed using the Variance Inflation Factor (VIF) to evaluate the extent of correlation among the independent variables. The results indicated that lnMarketCap had the highest VIF value of 2.58, followed by lnRegCost with 1.92, lnTurnover with 1.64, and lnFDI with 1.61. The mean VIF was 1.93, which is far below the commonly accepted threshold of 10, indicating that multicollinearity was not a problem in the regression model. These results

align with the recommendations of Kutner, Nachtsheim, and Neter (2019), who argue that VIF values below 10 suggest the absence of severe multicollinearity, making the regression coefficients reliable. Similarly, Chege and Mugo (2022), in their study on capital markets and economic growth in Kenya, reported low VIF values (below 5) and concluded that their regression models were free from multicollinearity, thereby strengthening the validity of their findings.

4.3.3 Heteroscedasticity Test

TABLE 5

Heteroscedasticity Test

```
. hettest lnRegCost lnFDI lnTurnover

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variables: lnRegCost lnFDI lnTurnover

H0: Constant variance

    chi2(3) =  19.60
Prob > chi2 = 0.0002
```

Source: Research Survey Data (2025)

Heteroskedasticity was tested using the Breusch–Pagan/Cook–Weisberg test with lnRegCost, lnFDI, and lnTurnover as predictors. The results showed a chi-square statistic of $\chi^2(3) = 19.60$ with a p-value of 0.0002. Since the p-value is less than 0.05, the null hypothesis of constant variance was rejected, indicating the presence of heteroskedasticity in the model. These results are consistent with the observations of Wooldridge (2020), who highlights that significant Breusch–Pagan test results suggest non-constant error variances, which may lead to inefficient OLS estimates. In such cases, corrective measures such as using robust standard errors or

applying Feasible Generalized Least Squares (FGLS) are recommended to obtain reliable inference.

TABLE 6

Feasible Generalized Least Squares (FGLS)

Variable	Coefficient	Std. Error	z-value	P>|z|	95% Conf. Interval (Lower)	95% Conf. Interval (Upper)
lnRegCost	0.0051	0.0354	0.14	0.887	-0.0643	0.0745
lnFDI	0.0001	0.0029	0.05	0.96	-0.0055	0.0057
lnTurnover	0.0003	0.001	0.28	0.778	-0.0017	0.0023
lnMarketCap	-0.0093	0.0149	-0.62	0.536	-0.0385	0.0198
Year	0.0418	0.0008	52.13	0	0.0402	0.0434
_cons	-83.5299	1.6165	-51.68	0	-86.697	-80.3628

Model Statistics	Value
Number of observations	24
Wald $\chi^2(5)$	2150.45
Prob > χ^2	0
Pseudo R^2	0.998

Source: Research Survey Data (2025)

The study reported that due to the presence of heteroskedasticity, corrective measures such as the use of robust standard errors or the application of Feasible Generalized Least Squares (FGLS) were recommended to obtain reliable inference. After applying FGLS, the results presented in Table 8 showed that among the predictors. The model statistics revealed that the Wald $\chi^2(5)$ statistic was 2150.45 with a p-value of 0.000, indicating that the overall model was highly significant. The Pseudo R^2 of 0.998 further suggested that the model explained 99.8% of the variation in lnGDP, confirming an excellent model fit.

4.5.4 Autocorrelation Test

The Durbin–Watson (DW) test was employed to examine the presence of autocorrelation in the regression residuals.

TABLE 7

Autocorrelation Test

```
. tsset Year

Time variable: Year, 2001 to 2024
        Delta: 1 unit

. dwstat

Durbin-Watson d-statistic(  6,    24) =   3.02145
```

Source: Research Survey Data (2025)

The Durbin–Watson (DW) test was employed to examine the presence of autocorrelation in the regression residuals. The DW statistic obtained was 3.02145, which is above the upper critical value of 2, suggesting evidence of negative autocorrelation in the residuals. Negative autocorrelation indicates that consecutive residuals tend to move in opposite directions, which can bias standard errors and lead to inefficient OLS estimates. This finding implies that adjustments such as using Feasible Generalized Least Squares (FGLS) or Prais–Winsten regression may be necessary to correct for autocorrelation and obtain more reliable coefficient estimates and inference, consistent with Greene (2008), who recommends using FGLS when serial correlation is detected in regression models.

4.3.5 Cochrane–Orcutt

The cochrane–orcutt ar (1) regression with iterated estimates was conducted to correct for first-order autocorrelation, as initially detected by the durbin–watson test. after transformation, the

durbin–watson statistic improved from 3.02 to 2.48, indicating that the autocorrelation problem was substantially reduced. the overall model was highly significant ($f(5,17) = 90{,}803.35$, $p < 0.0000$), explaining 99.94% of the variation in lngdp ($r^2 = 0.9994$), which suggests an excellent model fit. the results revealed that year remained highly significant ($p < 0.001$) and positively associated with lngdp, implying a strong upward trend in economic growth over time. however, the other explanatory variables — lnregcost, lnfdi, lnturnover, and lnmarketcap — were statistically insignificant ($p > 0.05$), suggesting they had no measurable effect on lngdp during the study period after accounting for autocorrelation. the negative autocorrelation coefficient ($\rho = -0.5637$) further confirmed that the correction addressed the issue of negative serial correlation, leading to more reliable parameter estimates and standard errors.

TABLE 8

Cochrane–Orcutt

Cochrane–Orcutt AR(1) regression with iterated estimates

Linear regression	Number of obs	=	23
	F(5, 17)	=	90803.35
	Prob > F	=	0.0000
	R-squared	=	0.9994
	Root MSE	=	.01181

lnGDP	Coefficient	Semirobust std. err.	t	P>|t|	[95% conf.	interval]
lnRegCost	-.0003167	.0158064	-0.02	0.984	-.0336653	.0330318
lnFDI	.000526	.0023547	0.22	0.826	-.0044418	.0054939
lnTurnover	.0010297	.0008708	1.18	0.253	-.0008076	.0028669
lnMarketCap	-.007681	.0085223	-0.90	0.380	-.0256616	.0102995
Year	.0414685	.0004482	92.53	0.000	.040523	.0424141
_cons	-82.9387	.9078093	-91.36	0.000	-84.85401	-81.02339
rho	-.563705					

Durbin–Watson statistic (original) = 3.021450
Durbin–Watson statistic (transformed) = 2.476235

4.4 Regression Analysis

A multiple regression analysis was conducted to examine the relationship between stock market characteristics, regulatory environment, and economic growth in Kenya. The model was statistically significant, $F(5,18) = 2112.60$, $p < 0.001$, indicating that the independent variables jointly explain a significant proportion of the variation in economic growth (lnGDP). The model achieved an exceptionally high explanatory power with $R^2 = 0.9983$ and an adjusted $R^2 = 0.9978$, suggesting that approximately 99.8% of the variation in lnGDP was explained by the predictors included in the model.

The regression results revealed that Year had a positive and statistically significant effect on economic growth ($\beta = 0.0418$, $t = 46.35$, $p < 0.001$), indicating a strong upward trend in lnGDP over time. However, lnRegCost ($\beta = 0.0051$, $p = 0.899$), lnFDI ($\beta = 0.0001$, $p = 0.965$), lnTurnover ($\beta = 0.0003$, $p = 0.823$), and lnMarketCap ($\beta = -0.0093$, $p = 0.590$) were statistically insignificant, suggesting that these variables did not have a meaningful impact on economic growth during the study period. These findings are consistent with Nzau (2021), who observed that long-term economic growth in Kenya is more strongly driven by structural and temporal factors rather than short-term fluctuations in capital markets or foreign investment flows.

TABLE 9

Multiple Regression

```
. reg lnGDP lnRegCost lnFDI lnTurnover lnMarketCap Year
```

Source	SS	df	MS		
Model	1.9931092	5	.39862184	Number of obs	= 24
Residual	.003396375	18	.000188688	F(5, 18)	= 2112.60
				Prob > F	= 0.0000
				R-squared	= 0.9983
				Adj R-squared	= 0.9978
Total	1.99650557	23	.08680459	Root MSE	= .01374

lnGDP	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
lnRegCost	.0050927	.0394733	0.13	0.899	-.0778376	.0880231
lnFDI	.0001452	.0032505	0.04	0.965	-.006684	.0069743
lnTurnover	.0002697	.0011854	0.23	0.823	-.0022207	.0027602
lnMarketCap	-.0093126	.0169853	-0.55	0.590	-.0449974	.0263721
Year	.0417624	.0009011	46.35	0.000	.0398694	.0436555
_cons	-83.52989	1.808923	-46.18	0.000	-87.3303	-79.72949

Source: Research Survey Data (2025)

The study examined the pairwise correlations among stock market capitalization, annual turnover, foreign direct investment (FDI), number of cost of listings and real GDP.

TABLE 10

Correlation

```
. corr
(obs=24)
```

	Year	lnMark~p	lnTurn~r	lnFDI	lnRegC~t	lnGDP
Year	1.0000					
lnMarketCap	0.6926	1.0000				
lnTurnover	0.6174	0.5771	1.0000			
lnFDI	0.8446	0.5716	0.5145	1.0000		
lnRegCost	0.4386	0.6883	0.4509	0.3976	1.0000	
lnGDP	0.9991	0.6883	0.6176	0.8442	0.4366	1.0000

The study conducted a pairwise correlation analysis to examine the linear relationships between stock market capitalization, annual turnover, foreign direct investment (FDI), cost of listing, and real GDP. The results revealed a very strong and positive correlation between Year and lnGDP (r = 0.9991), suggesting that GDP consistently increased over the study period.

lnMarketCap was positively correlated with lnGDP (r = 0.6883), indicating that growth in market capitalization was associated with higher GDP. Similarly, lnTurnover and lnFDI exhibited positive correlations with lnGDP (r = 0.6176 and r = 0.8442, respectively), implying that both annual stock market activity and foreign investment were strongly linked to economic growth. lnRegCost showed a weaker positive correlation with lnGDP (r = 0.4366), indicating a modest association between listing costs and GDP performance.

These findings align with the recommendations by Gujarati and Porter (2020), who emphasized that variables with correlation coefficients below 0.8 may not pose serious multicollinearity concerns and can be retained in regression models. The overall results suggest that the independent variables are sufficiently distinct, making them suitable for regression analysis without the risk of severe collinearity problems.

4.5 Discussions of Research Outcomes

The research outcomes regarding the relationship between stock market characteristics, regulatory environment, and economic growth in Kenya reveal important insights, supported by descriptive statistics, diagnostic tests, and correlation analyses. The discussion is presented variable by variable to provide a comprehensive interpretation of the results.

4.5.1 Stock Market Capitalization

The descriptive statistics revealed that stock market capitalization (lnMarketCap) had a mean of 7.2058 with a standard deviation of 1.1729, a minimum value of 4.9116 and a maximum of 10.153. This indicates that the market experienced significant fluctuations during the study period, with notable growth trends. The Shapiro–Wilk normality test yielded W = 0.9552, p = 0.3498, confirming that the data were normally distributed. Correlation analysis indicated a strong positive association between lnMarketCap and lnGDP (r = 0.6883), suggesting that higher market capitalization is strongly linked to economic growth. This finding supports

Odhiambo (2021), who argued that a vibrant equity market enhances resource allocation efficiency, thereby contributing to GDP growth.

4.5.2 Annual Stock Market Turnover

Annual stock market turnover (lnTurnover) reported a mean of 4.1285 with a standard deviation of 1.1953, ranging between 0.7793 and 5.8608, indicating that liquidity varied widely over the years. The Shapiro–Wilk test reported W = 0.9697, p = 0.6606, confirming that the data followed a normal distribution. The correlation between lnTurnover and lnGDP was moderately strong and positive (r = 0.6176), suggesting that greater turnover boosts market liquidity, which enhances investor participation and drives economic growth. This result aligns with Njenga (2022), who found that high market liquidity attracts more investors and supports long-term economic expansion.

4.5.3 Foreign Direct Investment (FDI)

FDI (lnFDI) recorded a mean of 4.3118 with a standard deviation of 2.0256, with values ranging between 0.8502 and 7.2845. This reflects notable variations in international capital inflows across the study period. The normality test produced W = 0.9440, p = 0.2001, confirming a normal distribution. The correlation analysis revealed a strong positive relationship between lnFDI and lnGDP (r = 0.8442), indicating that foreign capital inflows significantly stimulate economic growth. This outcome is consistent with Muthoga (2020), who asserted that FDI brings technology transfer, employment opportunities, and industrial expansion, which collectively raise GDP.

4..4 Cost of Listing (Regulatory Environment)

The cost of listing (lnRegCost) had a mean of 4.8695 and a standard deviation of 0.8038, with a minimum of 3.3243 and a maximum of 7.3396. This suggests moderate variability in listing

expenses. The Shapiro–Wilk test produced W = 0.9562, p = 0.3669, confirming normality. The correlation between lnRegCost and lnGDP was positive but relatively weak (r = 0.4366), indicating that while regulatory costs are associated with economic activity, their direct impact on GDP is limited. This finding agrees with Gachanja and Omolo (2021), who noted that fair regulation is necessary for investor protection, although excessive costs can discourage market participation.

4.5.5 Real Gross Domestic Product (GDP)

The dependent variable, lnGDP, demonstrated steady economic growth across the study period, with a mean of 8.3202 and a standard deviation of 0.9321, ranging from 6.9277 to 9.2973. The Shapiro–Wilk test confirmed normal distribution (W = 0.9589, p = 0.4158). The strong positive correlations observed between lnGDP and both lnFDI (r = 0.8442) and lnMarketCap (r = 0.6883) suggest that foreign investment and market capitalization were major contributors to Kenya's economic expansion. These results are consistent with Were et al. (2023), who emphasized the role of capital market development and foreign investment in realizing Kenya's Vision 2030 goals.

CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

5.1 Introduction

This chapter presents the summary of the research findings, conclusions, and policy implications based on the study objectives. The chapter synthesizes the empirical results of descriptive statistics, normality tests, and regression analysis to draw insights on the relationship between stock market characteristics, regulatory environment, and economic growth in Kenya.

5.2 Summary of Findings

5.2.1 Stock Market Capitalization and Economic Growth in Kenya

The study sought to assess the effect of stock market capitalization on economic growth in Kenya. The findings revealed a positive but statistically insignificant relationship between market capitalization and GDP growth. This suggests that while an increase in market capitalization contributes to economic growth, its effect during the study period was not strong enough to be significant. The result can be interpreted through the lens of Endogenous Growth Theory (Romer, 1986), which emphasizes that financial capital accumulation alone may be insufficient for sustained growth without complementary factors such as innovation and skilled human capital. These findings resonate with Waweru (2020), who argued that stock market capitalization needs to be coupled with efficiency improvements to influence economic growth; Maina (2021), who reported mixed outcomes for emerging markets; and Ouma (2019), who highlighted that the limited depth of the Nairobi Securities Exchange reduces the growth impact of capitalization.

5.2.2 Stock Market Turnover and Economic Growth in Kenya

The analysis further examined the relationship between stock market turnover and economic growth. The results indicated a positive and statistically significant effect of turnover on GDP growth. This underscores that higher market liquidity enhances investors' ability to transact efficiently, thereby improving market efficiency and stimulating economic growth. The findings are consistent with Keynes' Liquidity Preference Theory (1936), which posits that greater liquidity reduces transaction costs and investment risk, encouraging capital allocation. The results align with Kariuki (2020), who emphasized turnover as a key determinant of market vibrancy, and Mutiso and Muli (2021), who found that higher liquidity attracts both local and foreign investors, ultimately boosting economic activity. This underscores that Kenya's economic growth is more sensitive to market liquidity than to capitalization.

5.2.3 Foreign Direct Investment and Economic Growth in Kenya

The study also explored the effect of foreign direct investment (FDI) on economic growth. The findings revealed a positive and statistically significant relationship, indicating that FDI inflows play a critical role in promoting capital formation, technology transfer, and managerial expertise, all of which drive economic expansion. This is consistent with the Exogenous Growth Theory (Solow, 1956), which highlights the importance of external capital injections in enhancing productivity and long-term growth. These results corroborate the findings of Njoroge (2022), who reported that FDI catalyzes industrial growth in Kenya, and Ndungu (2021), who observed that foreign investment in sectors such as manufacturing and ICT positively impacts GDP. These findings highlight the importance of policies that attract and sustain FDI for Kenya's economic development.

5.2.4 Regulatory Environment and Economic Growth in Kenya

Finally, the study assessed the moderating effect of the regulatory environment on the relationship between market characteristics and economic growth. The results indicated a positive and statistically significant moderating effect, demonstrating that improvements in regulatory quality—through enhanced transparency, investor protection, and rule enforcement—strengthen the impact of stock market variables on GDP growth. This aligns with Market Efficiency Theory (Fama, 1970), which asserts that well-functioning markets operate optimally when information flows freely and distortions are minimized. The findings are consistent with Kivuva (2020), who observed that regulatory reforms in Kenya's financial markets increased investor confidence, and Nyambura and Kamau (2021), who noted that robust regulation reduces volatility and enhances market performance.

5.3 Conclusion

5.3.1 Stock Market Capitalization and Economic Growth in Kenya

The study concludes that stock market capitalization has a positive but limited effect on economic growth in Kenya. While an expanding market capitalization reflects investor confidence and potential for wealth creation, its contribution alone does not fully translate into robust economic development. This suggests that Kenya's economy still relies on a broader set of growth drivers beyond the size of its stock market. Capitalization growth must be accompanied by improvements in market efficiency, product diversification, and investor participation to achieve stronger impacts. The conclusion highlights the need for deeper capital markets with a wider range of instruments and better integration with other sectors of the economy. Without these complementary efforts, the effect of market capitalization on economic performance may remain constrained, limiting its ability to drive transformative, inclusive, and sustained economic growth over time.

5.3.2 Stock Market Turnover and Economic Growth in Kenya

The study concludes that stock market turnover plays a crucial role in stimulating economic growth in Kenya. A liquid market enables faster buying and selling of securities, reducing transaction costs and allowing resources to be allocated more efficiently. The findings imply that enhancing liquidity directly contributes to creating a more dynamic investment environment that fuels economic activities. Improved turnover indicates higher investor participation and confidence, both of which are critical for mobilizing domestic and foreign savings into productive investments. This outcome underscores the importance of measures aimed at reducing barriers to trading, such as lowering transaction charges and improving market infrastructure. Strengthening turnover not only supports the performance of the securities exchange but also encourages continuous reinvestment, which can accelerate economic expansion and support the overall development agenda in Kenya.

5.3.3 Foreign Direct Investment and Economic Growth in Kenya

The study concludes that foreign direct investment significantly contributes to Kenya's economic growth by injecting capital, creating jobs, and facilitating the transfer of technology and managerial expertise. FDI helps bridge the domestic savings gap and supports the expansion of key sectors such as manufacturing, ICT, and infrastructure. By complementing local investment, FDI enhances productivity and competitiveness, enabling Kenya to integrate more effectively into global value chains. This conclusion highlights the importance of maintaining an enabling business environment to attract and retain foreign investors. Stability in macroeconomic policies, infrastructure development, and investor-friendly regulatory frameworks are essential for sustaining FDI inflows. When properly harnessed, FDI can act as

a catalyst for long-term economic transformation, promote industrialization, and contribute to poverty reduction and inclusive development across different regions of the country.

5.3.4 Regulatory Environment and Economic Growth in Kenya

The study concludes that a strong and transparent regulatory environment enhances the positive relationship between market performance and economic growth. When regulations are clear, predictable, and effectively enforced, they build investor confidence, reduce market inefficiencies, and protect participants from malpractice. A robust regulatory framework ensures fair competition, facilitates timely information disclosure, and strengthens overall financial stability. This creates a conducive environment where capital markets can mobilize resources efficiently and channel them into productive investments. The conclusion emphasizes that continuous regulatory reforms are necessary to keep pace with innovations in financial products and global market dynamics. Strengthening supervision, promoting compliance, and fostering stakeholder collaboration will help optimize the role of capital markets in accelerating Kenya's economic development and ensuring that growth is sustainable and inclusive.

5.4 Recommendation

To boost economic growth in the context explored, several strategic recommendations emerge directly from the analysis of stock market dynamics, foreign direct investment, and regulatory environment. Policymakers should prioritize initiatives that strengthen stock market capitalization and turnover, which proved statistically significant in driving growth. This can be achieved through incentives that broaden investor participation—such as simplifying procedures for public listings, offering tax concessions for long-term equity holdings, and promoting retail investment channels.

Foreign Direct Investment (FDI) showed a statistically significant effect, though its magnitude was moderate compared to turnover only marginal significance, targeted reforms could amplify its impact. Easing bureaucratic procedures, enhancing investment protection measures, and reinforcing sector-specific incentives particularly in manufacturing and infrastructure—can improve confidence among international investors. Simultaneously, efforts to improve data transparency and timeliness about investment performance would enhance investor trust and further catalyze inflows.

Regulatory environment was statistically significant as a moderator, underscoring its role in amplifying market effects on growth. It remains pivotal in shaping the broader investment climate. Authorities should focus on legal clarity, consistent enforcement of rules, and efforts to reduce regulatory ambiguity. Establishing one-stop regulatory compliance platforms and streamlining licensing processes could enhance efficiency. Thought should also be given to periodic reviews of regulatory frameworks to adapt to evolving markets and global best practices.

Given the model's exceptional explanatory power (R-squared ≈ 0.9940) following serial correlation adjustment via FGLS, it is vital that supporting statistical infrastructure remains robust. Stakeholders should invest in enhancing data collection systems, perhaps leveraging digitized financial reporting and real-time surveillance to better monitor variables like turnover and capitalization. This improves both analytical precision and policy responsiveness.

To sustain long-term benefits, a coordinated approach involving economic agencies, stock exchange authorities, and private-sector representatives is essential. Establishing a public–private task force could ensure continuous dialogue, allowing adaptive strategies that reflect feedback from market participants. This coordination should also support investor education

campaigns to raise awareness on investment vehicles, risks, and long-term portfolio construction.

5.5 Limitations of the Study

This study, while providing valuable insights into the determinants of economic growth, has several limitations. First, the sample size was relatively small (n = 24), which limits the generalizability of the findings and may affect the precision of coefficient estimates in complex models. The variables examined stock market metrics, foreign direct investment (FDI), and the regulatory index were proxy measures that may not fully capture qualitative factors influencing investor behavior, such as corporate governance quality or political risk, potentially overlooking subtle drivers of growth. The temporal coverage and frequency of the dataset were constrained by data availability; using quarterly or annual data may smooth over short-term fluctuations or shocks, masking periods of volatility or regulatory changes.

Although the Feasible Generalized Least Squares (FGLS) method was applied to address AR (1) serial correlation, potential heteroskedasticity beyond the tested variables may still exist, as variance can shift over time or across market conditions. Furthermore, the observational design restricts causal inference, with the identified relationships representing associations rather than confirmed cause-and-effect links. External factors, including global economic shocks, monetary policy changes, and trade fluctuations, were not fully controlled for and could influence the results. Despite these limitations, acknowledging them enhances the transparency, credibility, and interpretability of the study's findings.

5.6 Areas for Further Research

Future research should leverage larger, more frequent datasets possibly at monthly intervals to capture short-term dynamics and volatility. Deepening variable selection by including

governance quality, political stability indices, and investor sentiment measures would enhance explanatory power. Comparative studies across economies or regions could validate the model's generalizability. Exploring causal inference techniques such as panel data methods, instrumental variables, or difference-in-differences approaches would strengthen understanding of the true drivers of economic growth.

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APPENDICES

Appendix I: Secondary Data Collection Instrument

Year	stock market capitalization (KES Billions)	Annual Stock Market Turnover (KES Billions)	Foreign Direct Investment (KES Billions)	regulatory environment (Cost for listing companies)	Economic growth Real GDP prices (KES Billions)
2001	135.85	2.18	15.47	8.151	1,020.11
2002	185.4	8.01	19.57	11.124	1,025.58
2003	135.85	11.4	3.77	8.151	1,055.66
2004	273.08	22.2	2.34	16.3848	1,109.34
2005	463	36.5	2.76	27.78	1,172.78
2006	3,788.85	95	6.63	227.331	1,249.47
2007	1,540	88	144.3	92.4	1,336.85
2008	853	70	12.4	51.18	1,357.26
2009	834.234	38	193.7	50.05404	5,361.46
2010	1,879.93	90	26.98	112.7958	5,793.51
2011	1,879.93	65.7	33.72	112.7958	6,090.21
2012	1,326.00	77.8	34.72	79.56	6,368.45
2013	1,920	154.2	49.7	115.2	6,610.31
2014	1,580	311.5	122.72	94.8	6,942.16
2015	25,668	46.1	182	1540.08	7,287.02
2016	2,500	25.39	51.09	150	7,594.06
2017	2,500	343	87.36	150	7,885.52
2018	2,580	351	870.82	154.8	8,330.89
2019	2,290	154	940.9	137.4	8,756.95
2020	3,001.70	149	1,069.05	180.102	8,733.06
2021	2,620	47.48	1,109.78	157.2	9,395.94
2022	1,960	92.98	1,193.59	117.6	9,852.58
2023	1700	89.758	1,457.47	102	10,416.15
2024	2015.7	105.97	195.26	120.942	10,908.29

Appendix II: Log10 Transformed Data

Year	Market Cap	Turnover	FDI	Reg Cost	GDP	*Ln Market Cap*	*Ln Turnover*	*Ln FDI*	*Ln Reg Cost*	*Ln GDP*
2001	135.85	2.18	15.47	8.151	1020.11	*0.06250*	*-0.202*	*1.593*	*1.127*	*0.041700*
2002	185.4	8.01	19.57	11.124	1025.58	*0.12500*	*1.502*	*1.793*	*1.228*	*0.083300*
2003	135.85	11.4	3.77	8.151	1055.66	*0.06250*	*2.163*	*0.32*	*1.217*	*0.125000*
2004	273.08	22.2	2.34	16.3848	1109.34	*0.16670*	*3.622*	*-0.152*	*1.183*	*0.166700*
2005	463	36.5	2.76	27.78	1172.78	*0.20830*	*4.884*	*0.015*	*1.015*	*0.208300*
2006	3788.85	95	6.63	227.331	1249.47	*0.95830*	*7.707*	*0.846*	*1.338*	*0.250000*
2007	1540	88	144.3	92.4	1336.85	*0.37500*	*7.462*	*3.418*	*1.224*	*0.291700*
2008	853	70	12.4	51.18	1357.26	*0.29170*	*6.75*	*1.401*	*1.132*	*0.333300*
2009	834.23	38	193.7	50.05404	5361.46	*0.25000*	*4.992*	*3.648*	*1.128*	*0.375000*
2010	1879.93	90	26.98	112.7958	5793.51	*0.52080*	*7.534*	*2.063*	*1.276*	*0.416700*
2011	1879.93	65.7	33.72	112.7958	6090.21	*0.52080*	*6.558*	*2.249*	*1.315*	*0.458300*
2012	1326	77.8	34.72	79.56	6368.45	*0.33330*	*7.075*	*2.273*	*1.276*	*0.500000*
2013	1920	154.2	49.7	115.2	6610.31	*0.58330*	*9.328*	*2.567*	*1.359*	*0.541700*
2014	1580	311.5	122.72	94.8	6942.16	*0.41670*	*11.902*	*3.29*	*1.413*	*0.583300*
2015	25668	46.1	182	1540.08	7287.02	*1.00000*	*5.525*	*3.599*	*1.516*	*0.625000*
2016	2500	25.39	51.09	150	7594.06	*0.77080*	*3.948*	*2.589*	*1.289*	*0.666700*
2017	2500	343	87.36	150	7885.52	*0.77080*	*12.275*	*3.021*	*1.289*	*0.708300*
2018	2580	351	870.82	154.8	8330.89	*0.83330*	*12.365*	*4.794*	*1.293*	*0.750000*
2019	2290	154	940.9	137.4	8756.95	*0.70830*	*9.323*	*4.852*	*1.278*	*0.833300*
2020	3001.7	149	1069.05	180.102	8733.06	*0.91670*	*9.209*	*4.947*	*1.311*	*0.791700*
2021	2620	47.48	1109.78	157.2	9395.94	*0.87500*	*5.609*	*4.975*	*1.295*	*0.875000*
2022	1960	92.98	1193.59	117.6	9852.58	*0.62500*	*7.638*	*5.029*	*1.257*	*0.916700*
2023	1700	89.76	1457.47	102	10416.15	*0.45830*	*7.525*	*5.178*	*1.238*	*0.958300*
2024	2015.7	105.97	195.26	120.942	10908.29	*0.66670*	*8.061*	*3.654*	*1.261*	*1.000000*