

**BOARD CHARACTERISTICS AND FINANCIAL PERFORMANCE OF
MANUFACTURING FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE IN
KENYA**

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MASTER OF BUSINESS ADMINISTRATION (CORPORATE MANAGEMENT)

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NOVEMBER, 2024

DECLARATION

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

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ABSTRACT

Board characteristics are the structures, attributes and composition of a company's board of directors that can impact its governance, decision-making processes, and overall effectiveness of the firm activities. The manufacturing sector in Kenya plays a significant role in economic development. This study aimed at determine the effect of board characteristics on the financial performance of manufacturing firms listed at the Nairobi Securities Exchange in Kenya. The study had three objectives: to ascertain the effect of gender diversity, to determine the effect of board size, and to evaluate the effect of board independence on the financial performance of these firms. It focused on stewardship theory, upper echelon theory, and agency theory to explain corporate governance frameworks. A descriptive research design was adopted. The target population consisted of 233 respondents, categorized as Finance officers and Board Members from the 9 manufacturing firms listed at the NSE in Kenya. The study will use random sampling to select a sample size of 189 respondents. Primary data was collected using online Google Form structured questionnaires featuring closed-ended questions and a Likert Scale (1 strongly disagree to 5 strongly agree). The validity of the research instrument was determined by seeking expert opinions, including the researcher's supervisor and lecturers in the Business Administration department at KCAU. Reliability was enhanced through a pilot study conducted on Kenya Breweries. Data analysis was carried out using SPSS version 26, with data entered in Excel and imported to SPSS. The analysis included descriptive, correlation, and regression analyses. Descriptive analysis provided statistical values such as mean, standard deviation, and percentages. Diagnostic tests; namely Normality; Multicollinearity; Autocorrelation; Homoscedasticity; linearity was conducted to ascertain the direction and extent of associations among variables. This approach ensured adherence to research best practices as guided by KCAU University and licensed by the National Science, Technology, and Innovation Commission. The study found that independent directors are essential for ensuring transparency and accountability, which improve financial performance. While gender diversity showed a positive but non-significant relationship with financial performance (Pearson correlation of 0.061, p-value of 0.507), board size exhibited a significant positive correlation (Pearson correlation of 0.863, p-value of 0.000), and board independence showed a significant correlation (Pearson correlation of 0.404, p-value of 0.000). The model explains 75.5% of the variance in financial performance ($R^2 = 0.755$), with a robust adjusted R^2 of 0.749. Gender diversity ($p = 0.008$), board size ($p = 0.000$), and board independence ($p = 0.000$) are all statistically significant predictors.

Key words: Gender diversity: Board size: Board independence: Financial Performance

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TERMS AND DEFINITIONS

Board Characteristics refer	to the attributes, composition, structure, and practices of the board of directors within an organization (Tricker, 2021).
Gender diversity	Refers to the makeup and structure of the board of directors within an organization, including the diversity, skills, experience, and independence of its members (Hillman, & Dalziel, 2022).
Board independence	Refers to the degree to which a board of directors is free from conflicts of interest and undue influence from management, shareholders, or other stakeholders (Yermack, 2024).
Board size	Refers to the number of directors serving on a company's board. It is a crucial aspect of gender diversity and governance, influencing decision-making processes and board dynamics (Daily, & Dalton, 2023).
Financial performance	Is company's ability to generate profits and wealth over a specific period, reflecting its efficiency, profitability, and sustainability (Brigham, & Ehrhardt 2022).

ACRONYMS AND ABBREVIATIONS

BPD	Borderline Personality Disorder
B-SIZE	Between Board Size
CEO	Chief Executive Officer
EU	European Union
GDP	Gross Domestic Product
GMM	Generalized Technique for Minutes
KCAU	Kenya College of Accountancy University
KIRDI	Kenya Industrial Research and Development Institute
KNBS	Kenya National Bureau of Statistics
KPMG	Klynveld Peat Marwick Goerdeler
MAPI	Manufacturers Alliance for Productivity and Innovation
MCCG	Malaysian Code on Corporate Governance
MDGs	Millennium Development Goals
MERCO	Business Monitor of Corporate Reputation
MGI	McKinsey Global Institute
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Squares
ROA	Return on Assets
ROE	Return on Equity
SACCOs	Savings and Credit Cooperative Organizations
SMEs	Small and Medium-Sized Enterprises
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
UNIDO	United Nations Industrial Development Organization

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CHAPTER ONE

1.1 Introduction

This chapter presents the background of the study, the statement of the problem, the objectives of the study, the hypotheses of the study, the justification of the study, the significance of the study and the scope of the study.

1.2 Background of The Study

The impact of board features on financial success has been studied by academics worldwide. Chaudhary and Gakhar's (2018) study examined the impact of board size and meeting frequency on a company's financial ratio using Indian automakers as a case study. Their investigation leads them to the conclusion that there is no statistically significant relationship between board size and meeting frequency and all financial success metrics. Global manufacturing production, measured by gross value added, is showing steady growth tendencies, rising by around 2.7% in developed economies and 7.4% in big developing nations annually. The industry produces between 10 and 33 percent of value added, according to the United Nations Industrial Development Organization (UNIDO, 2019).

In the United Kingdom, research by Higgs (2018) and Cadbury (2021) has documented the evolution of board characteristics amidst changing corporate governance frameworks and cultural norms. Historically dominated by insider-driven boards, the UK has witnessed a transition towards greater board independence, diversity, and transparency, catalyzed by regulatory initiatives such as the Cadbury Code and subsequent revisions. These efforts have aimed to address concerns regarding board effectiveness, stakeholder accountability, and investor confidence, ultimately shaping the composition and dynamics of British corporate boards (Higgs, 2018).

China, India, and Indonesia have ascended to prominent positions within the global manufacturing landscape, securing positions among the world's fifteen largest manufacturing economies, as reported by the McKinsey Global Institute (MGI, 2019). Notably, China stands as the largest manufacturing economy globally, commanding a substantial 22 percent share of manufacturing activity. Following closely, the United States occupies the second position with a 17.4 percent share of manufacturing activity, as indicated by the Manufacturers Alliance for Productivity and Innovation (MAPI, 2019).

In Sub-Saharan Africa, studies by Amaeshi et al. (2019) and Aguilera and Haxhi (2020) focused on the unique challenges and opportunities influencing the evolution of board characteristics in the region. Characterized by diverse institutional contexts, cultural norms, and economic realities, corporate governance practices in Sub-Saharan Africa have been subject to both internal and external pressures for reform. Scholars have identified a growing emphasis on board independence, gender diversity, and professionalization, driven by regulatory interventions, globalization trends, and demands for improved transparency and accountability (Amaeshi et al., 2019; Aguilera & Haxhi, 2020). However, persistent issues such as weak enforcement mechanisms, political instability, and limited access to skilled directors continue to pose obstacles to the effective evolution of board characteristics in the region.

Studies conducted in Nigeria, including those by Sanda, Mukailu, and Garba (2019), Ehikioya (2019), Babatunde and Olaniran (2019), Kajola (2019), and Akhalumeh, Ohiokho, Ohiokha (2017), have investigated the relationship between corporate governance and firm performance. However, these studies have tended to overlook critical factors such as gender diversity, age, educational qualifications, board diligence, board experience, and board

independence. Consequently, this research endeavors to bridge this gap by examining these key corporate board characteristics, namely gender diversity, board size, and board independence, and their impact on firm performance.

In Kenya, manufacturing makes up 70 percent of the total industrial sector that contributes to the country's economy. Compared to other countries in Eastern Africa, Kenya is doing pretty well in manufacturing. In 2012, the value of what Kenya makes per person was \$61.8 in US dollars, adjusted for inflation. This is much less than what South Africa makes per person, which was \$910.9 in the same year, but it's a lot more than what other countries in the region like Tanzania, Uganda, and Rwanda make per person, which was \$41.4, \$30.5, and \$25.1 respectively (Cheruiyot, 2019).

This study aims to offer a comprehensive examination of the relationship between board characteristics and the performance of quoted manufacturing entities in Kenya. Focusing on these factors, the research intends to provide deeper insights into the dynamics influencing firm performance within this context. Recognizing the evolving nature of the market, management practices, and research methodologies, there is a pertinent need to reevaluate previous findings and contribute novel insights to the existing literature. Consequently, the primary objective of this study is to investigate the impact of board characteristics on the financial performance of quoted manufacturing firms listed on the Nairobi Securities Exchange.

1.2.1 Board Characteristics

Board qualities are defined by Fakile & Adigboke (2019) as the qualities of the executive team that may be utilized to enhance their efficacy and efficiency in overseeing the company's operations. Good board features, according to Fakile & Adigboke (2019), could

boost the likelihood that the board of directors would effectively oversee their money utilization, therefore safeguarding their money. Any company's ability to succeed or fail is closely tied to the role individuals in charge of administration and the business's governance policies, which are affected by its size, liberty, and makeup of the board of directors.

Fakile et. al. (2019) affirmed that gender diversity refers to the diverse mix of demographic, experiential, and skill-based attributes embodied by the members of a company's board of directors. According to Smith and Harris (2023), gender diversity significantly influences organizational performance and decision-making processes. They argue that a board composed of individuals with varied backgrounds and perspectives can enhance strategic discussions, improve risk management, and foster innovation, ultimately contributing to better firm outcomes.

Board size denotes the number of individuals serving on a company's board of directors. Recent research by Anderson and Zhang (2022) suggests that board size plays a pivotal role in shaping organizational effectiveness and performance. They contend that smaller boards tend to be more agile and efficient in decision-making, as they facilitate better communication and coordination among members. However, the optimal board size may vary depending on the organization's complexity and industry context, highlighting the importance of strategic considerations in determining board size.

Board independence refers to the extent to which a company's board of directors is free from conflicts of interest and undue influence from management. It encompasses the presence of independent directors who can provide impartial oversight and hold management accountable. According to Roberts and Stiles (2021), board independence is a critical component of effective corporate governance, particularly in mitigating agency conflicts and

enhancing shareholder value. They emphasize the importance of having a majority of independent directors on the board to ensure robust oversight and decision-making processes.

1.2.2 Financial Performance

Abdullah and Hay (2023) define financial performance as the ability of a firm to generate profits and create value for its stakeholders over a specific period. They emphasize that financial performance encompasses various metrics, including profitability, liquidity, efficiency, and solvency, which collectively reflect the organization's overall health and sustainability. The authors argue that analyzing financial performance is crucial for investors, managers, and other stakeholders to assess the company's past performance, predict future prospects, and make informed decisions regarding investment and resource allocation.

Liu and Wang (2022) define financial performance as the outcome of a firm's financial activities and operations, measured through quantitative indicators such as revenue growth, profit margins, return on investment, and cash flow generation. They argue that assessing financial performance provides insights into the effectiveness of managerial decisions, the efficiency of resource utilization, and the company's competitive position within the industry. Liu et al. (2022) highlights the importance of continuous monitoring and benchmarking of financial performance metrics to identify areas for improvement and enhance long-term sustainability.

Park and Lee (2021) define financial performance as the outcome of a firm's financial activities, reflecting its ability to achieve its strategic objectives and create value for shareholders. They emphasize that financial performance indicators, such as profitability, liquidity, and leverage ratios, provide quantitative measures of the company's operational efficiency, risk management practices, and overall competitiveness in the market. The

authors highlight the role of financial performance analysis in guiding investment decisions, evaluating management effectiveness, and assessing the company's resilience to external economic shocks and market fluctuations.

1.2.3 Board Characteristics and Financial Performance

The relationship between board characteristics and financial performance is a critical area of study in corporate governance research. Board characteristics, such as board size, board independence, diversity, and experience, play a significant role in shaping a company's financial performance. Research suggests that a larger board size may lead to more diverse perspectives but can also be associated with higher administrative costs, potentially impacting financial performance (Cheruiyot, et al. 2017).

Board independence, measured by the proportion of independent directors, is often positively correlated with financial performance as it enhances oversight and reduces agency costs. Board diversity, including gender and expertise diversity, has been linked to improved decision-making processes, innovation, and ultimately, financial performance. Experience of board members, particularly in relevant industries and strategic management, can contribute to better-informed decisions and enhanced firm performance. Overall, understanding and optimizing board characteristics are crucial for firms aiming to achieve sustainable financial success (Pan, Huang, & Gopal, 2018).

The relationship between board characteristics and financial performance has been widely studied, highlighting the critical role of governance structures. Board size, for example, is often associated with better financial outcomes due to enhanced diversity in skills and experience (Rashid, 2018). Board independence ensures more objective oversight, positively impacting firm performance (Tricker, 2021). Gender diversity on boards has also

been shown to improve decision-making and drive financial success (Wambua, 2019). Therefore, well-structured boards contribute significantly to a firm's financial health, particularly in sectors like manufacturing (Wambua, 2019).

1.2.4 Manufacturing Firms in Kenya

In the context of economic development, Kenya's manufacturing sector demonstrates robust performance compared to countries at similar developmental stages. Kenya is one of the top producers of finished goods in Sub-Saharan Africa, according to KPMG (2014). This success is attributable to the aspirational development goals that the Kenyan government set out to promote revenue growth in the manufacturing field. The aggressive Vision 2030 plan, which the Kenyan government unveiled in October 2007, proposed a 10.0% yearly rise in revenue, with the manufacturing sector accounting for the majority of that growth (Republic of Kenya, 2017).

The government then unveiled the Second Medium-Term framework, which aims to establish Kenya by 2030 as a newly industrialized middle-income nation (Kenya Industrial Research and Development Institute (KIRDI, 2019). Additionally, the Kenyan government established the Millennium Development Goals (MDGs) with the objective of accelerating the country's transformation into a rapidly industrializing, middle-income nation by 2030 (Purhonen & Mburu, 2018).

Despite the Kenyan government's implementation of policies aimed at enhancing the manufacturing sector, which is integral to achieving Vision 2030, the sector has experienced stagnation, as noted by the World Bank (2021). Between 2021 and 2023, Kenya experienced fluctuations in its Gross Domestic Product (GDP). In 2021, Kenya's GDP growth was

recorded at approximately 7.5%, driven by a rebound from the pandemic and increased agricultural output. In 2022, the growth rate declined to around 5.0%, influenced by factors such as inflation and adverse weather conditions affecting agriculture (KNBS, Economic Survey 2023). Consequently, to accelerate growth within Kenya's manufacturing sector, significant investments are deemed necessary, as suggested by (Bigsten, Peter, and Mans 2019).

1.3 Statement of the Problem

The manufacturing sector in Kenya plays a pivotal role in the country's economic development and is essential for achieving the goals outlined in Kenya Vision 2030. However, the financial performance of manufacturing firms listed on the Nairobi Securities Exchange (NSE) in Kenya is significantly influenced by several board characteristics, including gender diversity, size, and independence. Research indicates that firms with diverse boards tend to perform better financially, yet only 15% of these firms have achieved gender balance. Additionally, an optimal board size of 7-9 members has been correlated with a higher Return on Assets (ROA) of 8%. On the other hand, firms with low board independence where less than 30% of the directors are independent—experience a lower Return on Equity (ROE) of 6%, compared to firms with higher independence, which achieve a ROE of 10%. These findings suggest that improving governance practices could enhance financial outcomes (Moyo & Jeke, 2019).

Despite the sector's importance, the contribution of manufacturing to Kenya's GDP has shown signs of stagnation. In the third quarter of 2023, the sector's contribution to GDP decreased to 7.9%, down from 8.0% in the second quarter. Historically, the manufacturing sector contributed an average of 6.6% to GDP from 2009 until 2023, with a peak of 8.3% in

the fourth quarter of 2022 and a low of 5.5% in the first quarter of 2009. Despite the Kenya Vision 2030 industrial strategy's goal to double the share of manufacturing output to 20%, the sector's growth has remained sluggish (World Bank, 2023).

Research from various regions offers mixed results regarding the impact of board characteristics on financial performance. In Nigeria, Abu and Bamidele (2022) found that board characteristics such as board size, independence, gender diversity, and board meetings had a negative, non-significant relationship with financial performance in healthcare firms. Similarly, Abubakar and Joshua (2023) reported that board meetings, gender diversity, and independence had insignificant effects on financial performance in Asian firms. Contrarily, Assenga and Hussainey (2018) discovered that gender diversity positively impacted financial performance in Tanzanian firms, while García and Herrero (2020) found that gender diversity and the presence of a corporate social responsibility committee were positively associated with environmental performance in EU firms. Other studies, like those by Ujunwa (2012) and Müller and Filip (2014), highlighted the complexity of the relationship between board characteristics and firm performance, revealing both negative and positive associations.

In the Kenyan context, there is limited research specifically addressing the impact of board characteristics on the financial performance of the manufacturing sector. For instance, Meme (2017) explored the financial health of Kenyan manufacturing companies and found that board qualities significantly influenced monetary achievement. Similarly, Abdi (2018) examined the financial performance of small-scale lenders in Kenya and noted a positive correlation with board autonomy. However, most of the existing studies have focused on other sectors or regions, and many were conducted before the COVID-19 pandemic.

This study seeks to fill the research gap by examining the relationship between board characteristics such as size, independence, and gender diversity and the financial performance of manufacturing firms listed on the Nairobi Securities Exchange. By drawing on existing research, this study aims to provide insights into how these variables interact within the specific context of Kenya's manufacturing sector.

1.4 Objectives of the Study

1.4.1 General Objective

To determine the effect of board characteristics on financial performance of manufacturing firms listed at the Nairobi Securities Exchange in Kenya.

1.4.2 Specific Objectives

- i.** To ascertain the effect of gender diversity on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.
- ii.** To determine the effect of board size on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.
- iii.** To evaluate the effect of board independence on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

1.5 Hypotheses of the Study

H₀₁ Gender diversity has no effect on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

H₀₂ Board size has no affect financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

H₀₃ Board independence has no effect on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

1.6 Justification of the Study

The study was justified by the pressing need to understand the relationship between board characteristics and financial performance in Kenyan manufacturing firms. As corporate governance gained prominence, it became evident that board dynamics significantly impacted organizational outcomes. Despite previous studies highlighting the importance of board composition, there was a notable lack of empirical research focusing on the specific context of Kenya, particularly in the manufacturing sector.

Additionally, the increasing calls for gender diversity and independent oversight in corporate governance underscored the relevance of this investigation. Through exploring how factors such as board size, independence, and gender diversity influenced financial performance, the study aimed to fill this critical gap in the literature. Furthermore, the findings could provide valuable insights for policymakers and business leaders, enabling them to implement strategies that enhance board effectiveness and, ultimately, improve financial outcomes in the dynamic Kenyan market.

1.7 Significance of the Study

1.7.1 Policy Makers

Understanding how board characteristics may influence financial performance will inform policymakers in developing effective regulations and guidelines to enhance corporate governance practices within the manufacturing sector. For example, insights from the study

will guide the formulation of policies aimed at promoting board diversity, independence, and transparency, ultimately fostering sustainable economic growth and stability.

1.7.2 Management of Manufacturing Firms

The findings of this study can offer valuable insights to the management teams of manufacturing firms, empowering them to make informed decisions regarding gender diversity, size, and independence. Understanding the optimal board structure and composition conducive to improving financial performance guided management in selecting and appointing board members with relevant expertise and skills.

1.7.3 Investors

Investors can benefit significantly from the insights provided by this study when making investment decisions in manufacturing firms listed on the Nairobi Securities Exchange. Understanding the relationship between board characteristics and financial performance, investors can assess the governance quality and risk profile of potential investment opportunities more accurately. Firms with strong board structures and practices may be perceived as more attractive investment options, leading to increased investor confidence and capital inflows.

1.7.4 Academicians

The study can contribute to academic literature by providing empirical evidence on the relationship between board characteristics and financial performance within the specific context of Kenya's manufacturing sector. Academicians can use the findings to further theoretical frameworks and develop new models to explain the dynamics of corporate

governance and its impact on firm performance. Additionally, the study can inspire further research inquiries and studies exploring related topics and dimensions of corporate governance in emerging markets.

1.8 Scope of the Study

The study's scope was delimited to manufacturing firms listed exclusively on the Nairobi Securities Exchange (NSE). Data from the Kenya Bureau of Statistics Manufacturing Sector for the year 2023 was chosen due to its significance in capturing the declining trend in the financial performance of Kenyan manufacturing firms (World Bank, 2023). Financial performance assessment incorporated one market-based measure, Tobin's Q, an economic ratio used to compare a company or index's market value to its book or replacement value. The formula was expressed as $Q = \frac{\text{Return on Equity (ROE)}}{\text{Return on Assets (ROA)}}$. The study was conducted from February 2024 to April 2024.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the theoretical review, empirical review, conceptual framework, and operationalization of variables.

2.2 Theoretical Review

This study focused on the ideas put out to explain board characteristics on financial performance frameworks namely, stewardship theory, upper echelon theory, agency theory and Structural Inertia theory.

2.2.1 Stewardship Theory

Donaldson and Davis (1989) were the ones who initially proposed this concept. This concept, based on agency theory, aims to reduce disputes among investors and management. Donaldson and Davis (1991) made the case that a highly positioned representative of a corporation would be driven to accomplish a task and exhibit exemplary stewardship of the company's assets. Likewise, they assert that a bigger percentage of insider directors is ideal for achieving higher effectiveness. This point of view says that the CEO and board chairman positions ought to be maintained by different people in order to ensure making decisions capability (Chrisman, 2019).

Stewardship Theory emerged as a counterpoint to the traditional agency perspective, highlighting the positive motivations and behaviors of managers in organizations. It draws from psychology and sociology to understand the factors that promote stewardship behavior. Stewardship Theory focuses on the inherent desire of managers to act responsibly and pursue the long-term success of the organization, fostering a positive managerial mindset (Zogning,2017).

The theory underscores the importance of empowering managers and granting them autonomy, which can enhance motivation, commitment, and decision-making effectiveness. Stewardship Theory emphasizes the significance of trust-based relationships and collaboration between managers and stakeholders, fostering a conducive work environment (Feldermann, 2022). The theory places less emphasis on monitoring mechanisms, potentially overlooking the need for oversight and accountability within organizations. Stewardship Theory assumes that managers are inherently motivated by the organization's well-being, which may not always hold true, as individual self-interest can still influence managerial behavior. The theory provides broad concepts and principles but lacks specific guidelines on how to effectively implement and measure stewardship behaviors, limiting its practical application (Feldermann, et. al.2022)

Stewardship connections, according to Davis, Schoorman, and Donaldson (1997), emerge when management is motivated by achieving the company's stated goals rather than by maximizing personal benefit. It was said that the management was more content when the company's objectives were met than when they pursued their personal interests, although this is usually inaccurate. The management acts as a captain and takes into account non-financial

reasons, claim Muth and Donaldson 1998. The manager is driven to succeed by the need for recognition, admiration, and moral authority (Chrisman, 2019).

Donaldson and Davis in 1991 argue that Stewardship Theory may overlook the complexities of managerial behavior and the potential for self-serving actions. While they acknowledge that stewardship can enhance organizational performance when managers act in the best interests of the shareholders, they criticize the theory for its assumption that all managers will act as stewards. They highlight that without proper checks and balances, such as those provided by a strong and independent board, the risk of managerial opportunism remains high. Their critique emphasizes the need for rigorous corporate governance structures to ensure alignment between managers' and shareholders' interests (Chrisman, 2019).

In their later work, Davis, Schoorman, and Donaldson in 1997 revisit the assumptions of Stewardship Theory, acknowledging that it contrasts significantly with Agency Theory, which assumes that managers are prone to self-interest and thus require monitoring. They critique Stewardship Theory for its overly optimistic view of human nature and argue that the effectiveness of stewardship is highly contingent upon the psychological and situational contexts. They contribute to the debate by suggesting that a hybrid model incorporating elements of both Agency and Stewardship Theories may be more effective, particularly in diverse organizational settings where managerial behavior can vary widely.

Zhang and Zhu, (2018) provide a broader critique by examining the philosophical underpinnings of Stewardship Theory. They argue that the theory relies too heavily on the assumption of inherent managerial altruism and fails to account for the dynamic and complex nature of corporate governance. Their contribution lies in highlighting the need for a more

nuanced approach that considers the variability in managerial behavior and the influence of external factors such as market conditions and regulatory environments. They suggest that relying solely on stewardship principles could lead to inadequate oversight and potential governance failures.

Kavadis, and Thomsen (2023) delved into the paradoxes of corporate governance, critiquing Stewardship Theory for its potential to create a false sense of security among stakeholders. They argue that an over-reliance on the goodwill of managers can result in complacency and reduced vigilance in monitoring activities, which may adversely impact financial performance. Their work emphasizes the importance of balancing trust with control mechanisms to ensure sustainable financial performance and mitigate risks associated with unchecked managerial power.

Kimani and Akhtar (2021) address the implications of Stewardship Theory on board dynamics and performance. They criticize the theory for underestimating the importance of board diversity and independence in enhancing corporate governance. Their research shows that diverse and independent boards are more likely to challenge management decisions and provide effective oversight, which can lead to better financial outcomes. They contribute to the discussion by advocating for a balanced gender diversity that combines stewardship with rigorous monitoring to optimize both governance and financial performance.

Stewardship Theory's is anchored on objective one of the studies that examining the correlation between gender diversity and financial performance within Nairobi Securities Exchange-listed manufacturing firms in Kenya. This focus aligns with the theory's emphasis on managerial accountability and governance practices aimed at optimizing shareholder value and organizational sustainability.

2.2.2 Upper Echelon Theory

According to the Upper Echelon Theory, which Hambrick and Mason first proposed in 1984, the traits and qualities of business leaders have a considerable impact on organizational results and ways to make decisions. According to this idea, senior executives' beliefs, life's events, personality traits, and social status influence the company's results and strategic decisions (Frankl and Robert, 2018). The Upper Echelon Theory is applicable when taking into account how corporate oversight structures affect the profitability of medical facilities in Nairobi County (Tipurić, & Čalopa,2021).

The idea places a strong emphasis on the value of comprehending the histories and personality traits of significant managers inside companies, in this example, hospital executives and trustees (Obino, 2022). The Upper Echelon Theory was created in response to the growing realization the person managers are vital in setting the company plan. It utilizes the fields of psychology and sociology to examine how executive characteristics influence decision-making and tactical choices (Tipurić, & Čalopa,2021).

The Upper Echelon Theory provides a comprehensive viewpoint by highlighting the influence of managers and accounting for external and internal variables that affect organizations (Neely et al. 2020).It underlines how crucial it is to comprehend the backgrounds, experiences, and prejudices of executives in order to gain insightful knowledge on how they make decisions. According to the notion, businesses with diverse executive teams may create plans that are more creative and adaptive, giving them a competitive advantage (Robert et al. 2018).

The idea disregards intricate relationships and contextual elements in favor of a direct and linear link between executive characteristics and achieving its objectives. Considering

the direct influence of executive traits on organizational success, some scientific studies have offered conflicting or contradictory findings. The approach could reduce the multifaceted nature of tactical decision-making by placing less attention on environmental factors that may have an impact on organizational results (Obino, 2022).

Corporate oversight mechanisms, which include the make-up of the governing board of governors and the level of managerial competence, are significant in the context of private hospitals in Nairobi County for impacting choices and, eventually, hospital performance. According to the Upper Echelon Theory, these senior executives' backgrounds, experiences, and cognitive biases may affect the way they make strategic decisions and choices about things like patient security, operational expenses, healthcare quality, and competitiveness (Ayah, 2018).

A group of experts with diverse expertise and experience in healthcare administration, financing, and government may bring broader perspectives to the decision-making process. This could lead to improved management and increased institutional efficacy. In the other hand, the board and management may be less able to handle the unique issues encountered by private hospitals in Nairobi County if there is a lack of diversity or inadequate experience in certain areas (Regge and Eeckloo, 2020).

According to Dimba (2021), academics may examine how the traits and qualities of upper management and board members affect choices and performance results by tying the Upper Echelon Theory to the examination of corporate governance frameworks in private hospitals. This research can provide light on how corporate governance affects hospital performance and point out areas that can benefit from improved governance procedures.

Amankwah-Amoah (2014) critiques Upper Echelon Theory by highlighting the contextual differences in African corporate environments compared to Western settings where the theory was initially developed. He argues that in many African organizations, the influence of top executives on financial performance is often moderated by external factors such as political instability, regulatory challenges, and socio-economic conditions. Amankwah-Amoah's contribution emphasizes that the board's characteristics, such as diversity and local knowledge, are crucial in navigating these external challenges and enhancing financial performance. He calls for a broader framework that integrates these external factors with the attributes of top executives to better understand corporate outcomes in Africa.

Ntim (2015) provides a detailed examination of the applicability of Upper Echelon Theory in the African context, particularly focusing on corporate governance practices. He criticizes the theory for its limited consideration of the unique governance structures prevalent in African firms, such as family ownership and government involvement. Ntim argues that these structures significantly influence board dynamics and, consequently, financial performance. He contributes to the literature by suggesting that board characteristics, including independence and the presence of non-executive directors, play a critical role in mitigating the potential negative impacts of concentrated ownership and political interference. His research underscores the need for tailored governance reforms that consider these specificities to improve financial outcomes.

Ogbechie and Koufopoulos (2010) critique Upper Echelon Theory by exploring the role of board diversity in Nigerian firms. They argue that the theory's focus on the demographic characteristics of top executives, such as age, education, and tenure, is

insufficient to explain the complex dynamics of board effectiveness and financial performance in Nigeria. Ogbechie and Koufopoulos highlight that ethnic, gender, and professional diversity on boards are critical factors that enhance strategic decision-making and financial performance. Their contribution lies in advocating for policies that promote greater board diversity to leverage the varied perspectives and experiences that are essential in the Nigerian corporate context.

Abor and Biekpe (2007) critique Upper Echelon Theory from the perspective of small and medium-sized enterprises (SMEs) in Ghana. They argue that the theory's emphasis on the characteristics of top executives does not fully capture the governance challenges faced by SMEs, which often lack formalized board structures. Abor and Biekpe emphasize that for SMEs, the financial performance is more closely linked to the entrepreneurial skills and social networks of the executives rather than their formal demographic attributes. They contribute to the discussion by recommending the incorporation of mentorship and capacity-building programs for SME executives to enhance their governance capabilities and financial performance.

Adebite (2015) critically examines Upper Echelon Theory in the context of corporate governance reforms in Nigeria. He argues that the theory's assumptions about the positive impact of executive characteristics on performance may not hold true in environments with weak institutional frameworks and pervasive corruption. Adebite points out that in such contexts, the personal values and ethical standards of top executives are more critical determinants of financial performance. He contributes to the literature by advocating for stronger regulatory frameworks and ethical training for executives to foster a culture of

integrity and accountability, which are essential for improving financial outcomes in Nigerian firms.

The Upper Echelon Theory is linked to the second objective, investigating the impact of board size on non-financial performance in Nairobi Securities Exchange-listed manufacturing firms in Kenya reflects this theory's focus. It aims to discern how diverse gender diversity s shape strategic decisions and organizational behavior, aligning with Upper Echelon Theory's core principles.

2.2.3 Agency Theory

In 1976, Jensen and Meckling developed the idea of agency. Researchers put out a hypothesis outlining how the administration of a corporation is influenced by conflicts of interest amongst its owners (Kallmuenzer, 2015). According to Kallmuenzer (2015), the idea of an agency relationship encompassed shareholders and management. During their inquiry, they found that there were conflicting managerial and the interests of shareholders. They noticed that the relationship was brought about by the distribution of share ownership among different investors. Dispersed ownership has replaced the single ownership of corporations, which was the situation in the majority of firms.

A group of experts with diverse backgrounds and skills in medical management, financing, and government may bring broader perspectives to the decision-making process. This could lead to improved management and increased institutional efficacy. It seeks to align the interests of principals and agents and reduce agency costs. According to agency

theory, it is crucial to create incentive structures that balance the goals of both actors in order to encourage efficient choices and achievement. The theory emphasizes the need for monitoring and control mechanisms to reduce information asymmetry and agency costs, thereby enhancing accountability. Agency Theory provides a framework for designing contracts and governance structures that can help manage the principal-agent relationship effectively (Zogning, 2017).

The theory assumes that individuals act rationally and, in their self-interest, which may oversimplify human behavior and neglect other psychological, social, and ethical aspects. Implementing monitoring mechanisms can be costly and may create additional bureaucratic burdens, reducing flexibility and innovation within organizations. Theory tends to focus excessively on formal contracts and may overlook the importance of trust, relational factors, and shared values in fostering effective principal-agent relationships (Zogning, 2017).

They expanded the scope of the agency arrangement to include lenders and creditors in addition for leadership and owners. The effects of management and shareholder separation were not discussed by Berle and Means. Furthermore, they neglected to address the requirement for effective monitoring following the separation of ownership from control. Farag, Mallin, and Ow-Yong (2018) identified the agency relationship in a business as a group of contracts. In this case, contracts were made among the company and different stakeholders, including the stockholders, lenders, vendors, and creditors. These individuals signed contracts with the business; hence, they served as its agents. The stockholders might sell any quantity of shares they wanted. They argued that the requirement to keep management and shareholders apart necessitated the existence of relationships with agencies.

Grossman and Hart (1982) enlarged the fundamental connection in terms of utility function. They held the opinion that managers, who function as agents for investors, can go against the interests of their shareholders. This is accomplished by prioritizing one's own interests over those of the investors. They considered this to be an agency matter. To find a solution, the stockholders had to pay agency fees. The agency's costs were incurred through the hiring of directors, accountants, and costs associated with the control procedure.

The administration, they said, had received rewards to align their priorities with the desires of the stockholders. The incentives came in the form of compensation, benefits, and stock options. Modern firms have not usually embraced the share option recommendations presented by Jensen and Meckling. The agency problem was further developed by Fama and Jensen (1983) in terms of the costs connected with shareholder supervision. Further distinctions were made between charitable agency ties, both financial and non-f company agency ties, and private collaboration agency relationships. In order to oversee management, they said that it would be critical to have more outside directors.

Agency Theory, a fundamental concept in corporate governance, addresses the relationship between principals (shareholders) and agents (executives or managers) hired to manage the company on behalf of the principals. While it has significantly contributed to understanding corporate governance dynamics, various critiques have emerged. Pande and Ansari (2020) argue that the theory oversimplifies complex organizational relationships by focusing predominantly on the principal-agent dynamic, neglecting multiple stakeholders like employees, customers, suppliers, and the community whose interests might not be adequately represented. Furthermore, the theory assumes that agents are inherently self-interested and will act opportunistically at the expense of the principals, a view criticized by Wright et al.

(2019) for overlooking intrinsic motivation, ethical considerations, and professional integrity that can guide managerial behavior. This perspective also fails to account for the influence of corporate culture and leadership on ethical decision-making.

Agency Theory emphasizes aligning agent incentives with shareholder value, often leading to a focus on short-term financial performance metrics. This can encourage behaviors that boost short-term results at the expense of long-term sustainability and strategic growth, such as cost-cutting measures that undermine innovation or excessive risk-taking (Hill and Jones, 2018). Moreover, the theory inadequately considers the complexities of collective decision-making within boards of directors or management teams, a critique highlighted by Glinkowska and Kaczmarek (2021). These group dynamics significantly influence corporate governance and decision-making but are not fully captured by the principal-agent framework.

Additionally, Agency Theory largely ignores non-financial goals and the broader purpose of the firm, such as social responsibility, environmental impact, and ethical standards, which are gaining importance in contemporary business contexts (Aguilera et al., 2018). This narrow focus is increasingly seen as a limitation, especially as stakeholder capitalism and corporate social responsibility become more prominent. In practice, measuring performance accurately and establishing effective monitoring systems can be challenging and costly, given the complexity of modern business operations (Roberts and Van den Steen, 2018). The theory's static view of governance structures, without adequately addressing how these structures evolve over time in response to changing environments, further limits its applicability (Tirole, 2020).

Through focusing heavily on conflicts of interest between principals and agents, Agency Theory might promote adversarial relationships rather than collaborative and trust-

based interactions, potentially creating an atmosphere of suspicion and control (Shleifer and Vishny, 2017). This approach overlooks informal mechanisms of control, such as organizational culture, reputation, and professional norms, which can be equally or more effective in ensuring alignment between principals and agents (Dalton et al., 2019).

Agency Theory underpins the exploration of board independence's influence on the financial performance of manufacturing firms listed at the Nairobi Securities Exchange in Kenya. This alignment underscores Agency Theory's concern with mitigating conflicts of interest between principals (shareholders) and agents (management), ensuring effective oversight to optimize firm performance and shareholder wealth.

2.2.4 Structural Inertia Theory

The theory was proposed by Hannan and Freeman in 1977, emphasizing how organizations develop structural inertia that makes them resistant to change. The strength is the emphasis on the role of organizational stability in facilitating efficient operations and decision-making. Through developing routines and processes, organizations can enhance coordination and reduce uncertainty in their environments, which can lead to improved performance and competitive advantage (Kimani & Mwangi, 2020).

Weakness of Structural Inertia Theory is its tendency to overlook the potential benefits of flexibility and adaptability in organizations. While the theory emphasizes stability, it may not adequately account for the dynamic nature of business environments, where rapid changes can necessitate swift organizational responses. Besides, the theory assumes that all organizations will experience inertia uniformly, ignoring the differences in

industry contexts and organizational cultures that can impact how and when inertia occurs. This limitation suggests that while structural inertia can provide insights into organizational stability, it may not fully capture the complexities of organizational change. (Wambua, 2019).

Structural Inertia Theory is relevant to this study in explaining the dependent variable, financial performance of manufacturing firms listed at the Nairobi Securities Exchange in Kenya. By emphasizing how established structures and routines can lead to stability within organizations, the theory provides insights into how these characteristics may affect financial performance. As manufacturing firms develop formal processes and governance structures, they can enhance operational efficiency and decision-making, which are critical factors in achieving better financial outcomes.

2.3 Empirical Review

2.3.1 Effect of Gender Diversity on Financial Performance

The gender diversity on financial performance were researched by Garanina and Muravyev (2021) using a unique longitudinal dataset of publicly listed Russian companies from 1998 to 2014. The study found a little proof that firms with female-diverse directors have more valuable assets and greater profitability using a variety of identification methodologies, different measures of gender diversity, and a number of performance metrics. According to the critical mass hypothesis, these impacts are more obvious when businesses choose multiple female directors. In hard economic times, the consequences seem to be more pronounced. The study discovered some evidence in favor of "the business case" for including more women on company boards.

This study focused on firms in foreign country, the current study examined effect of gender diversity on financial performance of firms in Kenya.

Lauring and Villesèche (2019) investigated how well gender diverse teams performed. The research study found that team effectiveness is substantially correlated with openness to diversity, according to survey responses from 1,085 academic team leaders. The research discovered that the level of gender diversity had a mitigating impact, meaning that the effect of openness to diversity as well as favorable team level diversity attitudes is larger as the gender makeup of the team moves closer to numerical balance. These results confirm the combined impact of component and context-specific factors on the success for gender diverse teams, bridging critical mass theory and diversity and performance study.

The current study shifts its focus from firms in a foreign country to examining the impact of gender diversity on the financial performance of firms in Kenya.

Fenwick (2001) evaluated how gender makeup affected group output, the study found that Group size and individual achievement in prior course assessments had little impact for efficiency and report grades. There was a favorable correlation between the number of women in each group (numbers, percentage, and gender ratio) and simulation performance, with few women-dominated groups placing lower than first or second in any industry. Very few all-men groups achieved first or second rankings. The findings suggest that groups may be better when women outnumber or equalize men, particularly in complicated managerial tasks requiring extensive handling of data and manufacturing, preparation, and taking decisions over prolonged phases. However, generalizing from student-based studies to the workplace is problematic.

This study aims to address a research gap by investigating the correlation between the presence of women in various groups (quantitative, percentage-based, and gender ratio) and its impact on the financial performance of firms in Kenya. Bobbitt-Zeher (2011) conducted previous research on the topic of "Gender harassment at work: Integrating organizational rules, societal norms, and occupational ethnic variation." The data show how gender stereotypes, the sex mix of offices, and organizational norms interact predictably to cause bias, often through the employment of voluntary policies. The results indicated how crucial interactional, structural, and cultural factors are in shaping gender bias. Through examining the connection amongst the involvement of women in several categories (quantitative, percentage-based, and gender ratio) and its impact on Kenyan enterprises' financial success, this study aims to close a research gap.

The effect of board size and composition more especially, the percentage of non-executive directors on the net worth of Indian corporations was studied by Agrawal and Lakshmi (2020). They utilized a panel regression approach to investigate the associations between these characteristics using panel data collected over a five-year period from 145 organizations. According to their research, there is no discernible link between a company's financial performance and the size of its board. Nonetheless, they came to the conclusion that financial success and the existence of non-exec directors are positively correlated. The organization benefits significantly from the experience, connections, and assets that board members provide, as they are essential to the firm's success and expansion. The aim of this study is to close a research gap by examining the connection between gender diversity and its impact on the financial performance of companies in Kenya.

Pathak and Chandani (2023) investigated the connection among India's financial success and the makeup of the board. A sample of 319 non-financial companies from the BSE-500 Index, covering the years 2010–11–2019–20, was used by the authors. In order to eliminate any unpredictability that would affect the firms' financial performance, this period was specifically chosen to avoid the consequences of the worldwide economic meltdown in 2007–2008. They employed OLS regression techniques with firm fixed and time effects to test their hypotheses. They employed regression models with one-year lagged values for all predicted variables in order to address concerns with reverse causation and endogeneity. The results were also validated using the GMM approach. The findings demonstrated that, with the exception of gender diversity, CEO salary and gender diversity factors are completely mediated by financial success.

Research was undertaken in Nigeria by Onyekwere, S. C., Wesiah, S., & Danbatta, S. N. (2019) to examine the connection among financial results and board makeup. They used extra information from bank fiscal year reports covering the years 2006 to 2017 to run a Fixed Effects Panel Data Regression model to investigate the nature of the connection among board diversity characteristics and indicators of fiscal performance. According to the data, gender diversity improves banks' financial performance in a way that is statistically noteworthy. But the study also discovered that the size of the board and the presence of non-executive members had no appreciable impact on the success of banks.

Based on these findings, the study recommended that quoted deposit money banks in Nigeria should increase the proportion of females in their boardrooms to enhance financial performance.

Locally, Kirui and Onyuma (2019) looked on how group formation and involvement affected the financial stability of shareholder organizations in Kenya. The results show that the formation and enrolment of groups have a favorable and significant impact on financial groups' profitability. The research suggests developing policies that support gender parity among capitalists and the identification of investment organizations with members from different racial and professional backgrounds. The implementation of educational programmes and the provision of appropriate management approaches to members of these organizations are critical to increasing their financial success. Sang and Ngure (2018) investigated the moral issues surrounding public college hiring, selection, and management practices. The study's findings demonstrated that moral considerations in recruiting and firing had a positive and significant influence on employee performance, with discrimination being a particularly unethical hiring and firing procedure.

The influence of gender equality measures on Kenyan rural transport infrastructure was investigated by Nyangueso and Sheba (2020). With 310 individuals in the focus group, the study used a mixed-methods research design that used qualitative and quantitative techniques. Data was gathered using questionnaires, analysis of documents, and interviews as data gathering methods. For qualitative data, thematic analysis was employed, while for statistical information, descriptive and inferential statistics were utilized. The results showed that efforts to promote gender equality have had a substantial impact on recruiting policies, HRM practices, funding distribution, and the execution of gender-responsive transportation projects in rural transportation organizations. Nevertheless, it is still difficult to meet the legal two-thirds affirmative opportunity requirement in hiring, particularly for technical and decision-making positions, despite initiatives to advance gender equality. This points to a

continuous study need regarding the complete implementation of gender equality in Kenya's rural transport systems.

In order to investigate how gender balance affects Kenyan commercial bank efficiency, Ekadah and Kiweu (2012) carried out an ongoing study using the logistic regression technique. They used SPSS software for data analysis and used secondary data that covered the years 2000 to 2009. According to their research, there is often just one female director out of every eight members on Kenyan banking boards, which are dominated by men. They also discovered that CEO diversity had no effect on Kenyan bank profits. This study attempts to close the knowledge gap created by Ekadah and Kiweu's work by offering new perspectives on the connection amongst gender diversity on Kenyan financial boards and the success of banks. This study aims to provide a greater comprehension of how diversity among genders effects the performance of banking institutions in Kenya by using current data and maybe improving the research methods. As a result, it will add to the body of information already available on the subject.

Waithaka and Wanjau (2013) investigated how board characteristics affected Kenyan lending organizations' cultural efficacy. They used surveys as their major technique of gathering information and a descriptive study design. A method of randomization was used in the study to choose volunteers. With SPSS version 20, Analysing the data was done. The main conclusions of this investigation indicate that there is a significant negative correlation between social consequences and board dimension, director salary, and participant authority. On the other hand, the practice of having many directorships and the creation of board committees have a positive correlation with social consequences. These findings highlight

the significance of particular board attributes in determining the cultural efficacy of Kenyan lending institutions.

2.3.2 Effect of Board Size on Financial Performance

In research published in 2018, Orozco, Vargas, and Galindo investigated the relationship between top Colombian corporations as determined by the Business Monitor of Corporate Reputation (MERCOR) and board size (B-SIZE) and economic and social business results. 84 big Colombian enterprises from 2008 to 2012 were included in a sectional sample for the study, which used cluster analysis and correlations to classify organizations based on their operational and managerial characteristics.

Their research showed that, in line with the resource dependency hypothesis, big boards are connected to good performance in terms of corporate reputation, but, contrary to what the agency theory anticipated, they are linked to worse financial performance. The study did find no evidence of a substantial correlation between reputational performance and financial performance, though. The forthcoming study aims to investigate the impact of board size on the financial performance of listed manufacturing firms at the Nairobi Securities Exchange (NSE) in Kenya.

The impact of the non-linear connection between board autonomy and size on the monetary results of traded non-monetary companies in India was examined in Potharla and Amirishetty's (2021) study. Throughout 2011 to 2018, the study's focus was on listed companies in the Indian market. Panel least squares regression was used on a quadratic equation model, with as well as with industrial fixed effects. Quantile regression was also used to evaluate how robust the results were. One market-driven metric (Tobin's Q) and one accountancy metric (return on assets [ROA]) were used to assess financial performance.

According to the investigation, there is a non-linear inverted U-shape correlation among a board's size, autonomy, and earnings. Even when industry fixed impacts were taken into account, these results remained similar for both ROA and Tobin's Q. The current research project will examine the effect of the gender diversity on financial results of listed corporations at the Nairobi Securities Exchange (NSE) in Kenya.

Rwakihembo and Nsambu Kijjambu (2020) researched the size of boardrooms and the fiscal health of private limited firms in Uganda. The study used a cross-sectional approach and embraced a positive outlook. 394 businesses in Western and Central Uganda provided quantifiable data for the researchers to gather. Board members and executives from these firms were given a survey with open answers to complete. For data analysis, basic regression procedures and Pearson correlation were used.

The results showed that, amongst individuals, board size and company performance had a strong positive association. The research offers a clear and concise explanation of the connection between board size and performance, which makes it a distinctive addition to practice and policy. Practically speaking, the research advises private businesses should appoint a sizable number of volunteers to their boards since these individuals have a variety of affiliations and skill sets that might boost the overall worth of the company. The purpose of the planned study is to investigate how board size affects manufacturing companies listed on Kenya's Nairobi Securities Exchange (NSE) in terms of their financial health.

In southern Saudi Arabia, Tulung and Ramdani (2018) looked at the independence, scope, and efficiency of the board in regional development banks. Their investigation sought

to define the governance procedures of these banks and to determine the connections between board size, autonomy, and regional development banks' (BPDs') effectiveness. Primary data were gathered for the study using archival studies and questionnaires, utilizing a method of quantitative analysis. The data was analyzed using statistical methods including regression analysis and correlation analysis. The study's conclusions showed a favorable relationship between board performance, size, and autonomy.

This current study will bridge the gap by establish the existing literature on the relationship between board-size and corporate performance with the evaluation of financial and reputational results for the case of private Hospitals in Kenya.

Bhatt (2017) investigated Singapore's corporate governance and business success. The goal of the study was to evaluate how the Malaysian Code on Corporate Governance (MCCG, 2007 and 2012) affected the results of Singapore's listed corporations. According to the agency theory and resource dependence theories, businesses with effective corporate governance surpass those with poor leadership. In an emerging nation like Singapore with a different institutional climate than Western nations, the study examined this link. The findings of the authors demonstrate an advantageous and substantial relationship between corporate governance as evaluated by the MCGI and the business's success. Second, when MCCG 2012 is implemented, sample companies' corporate governance significantly improves as compared to MCCG 2007. Through finding the association between board size along with efficiency in private medical facilities in Kenya which was not observed in the previous study the new study will close a research gap and make the case for government departments to impose strict business conduct standards. This current study will address the gap in the existing literature by examining the relationship between board size and corporate

performance, specifically focusing on the evaluation of financial and reputational outcomes within the context of private hospitals in Kenya.

Rehman (2020) investigated the effects of board size and composition on financial results using data from the listed banking sectors in both China and Pakistan. This study's primary goal was to determine how board size and makeup affected the profitability of banks. China and Pakistan, two nations with listed banks, made up the study's population. The purpose of this research was determined using annual data from 2009 to 2018. The findings of this study verified that board size value coefficients were positive for ROA and negative for ROE, but they also showed inconsequential performance for the Pakistani banking industry, whereas board size coefficient values were positive for ROA and ROE at 10% levels in the Chinese banking sector.

The current study, however, will close the research gap by identifying the industry where the correlation coefficient of board makeup is negligible for both ROA and ROE.

Evaluating the clinical leadership and hospital performance in the UK was examined by Sart and Veronesi in (2016). In the study, English-language scientific publications that were published in international journals and proceedings of a conference were the main subject. Nineteen publications were found to fulfill the research requirements, and they were then categorized based on six different factors. After doing a theme mapping, three major research sub-streams have been identified based on the sorts of results from performances examined. Only a few research highlighted a detrimental influence on financial and social performance, and the data demonstrate a beneficial impact of clinical leadership on several outcome indicators. Consequently, this analysis supports the widespread change in health structures.

On a local level Mandala (2018) looked into the connection between Kenyan banking sector effectiveness and board structure. The findings demonstrate that the board structure has a considerable autonomous impact on the banking sector's efficiency. The number of board meetings each year, implemented as board activity, had the highest independent impact on achievement, subsequent to board type. The agency theory and the convergence-of-interests hypothesis are supported by the findings. The findings suggest that there is an ideal quantity of board conferences that significantly affect productivity. It was shown that 11 to 15 board meetings per year are necessary to achieve the best results for the company.

Mutuku (2012) investigated the structures for corporate governance and accountability as well as the difficulties faced by the private hospitals in Kiambu County. The study concluded that corporate governance and accountability mechanisms were used in private medical centers because there, directors were selected for fixed terms of three years with owner representatives' authorization, the executive officer of the medical facility was distinct from the CEO, and there was a distinct division of duties between the CEO and chairman in the direction of the hospital settings. The study also showed that private healthcare facilities had difficulties in adopting corporate governance and accountability procedures due to their organizational makeup, culture, management practices, and regulatory frameworks. According to the report, all private hospitals should incorporate comprehensive corporate governance and accountability structures to guarantee improved administration of hospitals in Kiambu County.

Abeysekera (2010) investigated the effect of board size on the publication of property rights by Kenyan listed companies. This study used to analyze content to generate data and

uses the mean across all businesses for each disclosure result to categorize firms into those who disclose more and those that disclose less.

Rajula (2016) conducted study on the impact of board diversity on Kenyan commercial banks' financial performance. The results of this study made it abundantly clear that, in addition to executive offices, different industries may also consider heterogeneity to be an essential component of corporate governance. Every action may be taken to improve the persons chosen as directors in terms of their age, average years of expertise, sexual orientation, and degree of schooling may have a favorable impact on how well commercial banking institutions function.

2.3.3 Board Independence and Financial Performance

Al Farooque et al (2020) explored board independence and financial performance emerging trends from Thailand. This study looked at how ownership arrangements, corporate gender diversity , and committee of auditor's composition affected listed Thai companies' market-based earnings. On an array of 452 companies listed on the Thai Stock Exchange between 2000 and 2016, it used system GMM (generalized technique for moments) as the foundation estimator methodology, as well as conventional least squares and fixed effects for robustness tests. The findings from empirical studies, which mostly rely on the system GMM estimator, point to some new tendencies in the Thai economy.

The current study is on Board independence and their impact of financial performance firms listed at the Nairobi Securities Exchange in Kenya.

Rashid (2018) carried research to find out if board impartiality affects the financial results of Bangladeshi listed companies. In order to handle any endogeneity concerns, the study used an additive equation technique with data from 135 listed businesses on the Dhaka

Stock Exchange and accountancy and market outcome measurements. The results showed that there is no beneficial relationship between board impartiality and company economic success. The study also discovered that board size significantly improves business efficiency and board autonomy. Notwithstanding fundamental structural disparities, the mandate for outside directors on corporate boards was imposed in Bangladesh in order to improve board independence and accountability.

The current study focuses on board independence and its impact on the financial performance of firms listed on the Nairobi Securities Exchange in Kenya.

According to Yeh et al. (2011), the audit committee's strength grows with its independence, which also lessens the agency issue and the potential for insider expropriation. An impartial committee lowers the agency issue that exists between CEOs and other shareholders by allowing the committee to be more objective in assessing the financial reporting's openness. The success of the company was found to be positively correlated with the audit committee's independence by Chan and Li (2008). In a similar vein, Kallamu and Saat (2015) and Naimah (2017) discovered a favorable correlation between the independence of audit committee members and profitability, a proxy for firms performance.

The current study is on Board independence and their impact of Financial Performance of financial performance firms listed at the Nairobi Securities Exchange in Kenya.

Alabdullah and Ahmed, (2020) studies Impact of the audit committee on corporate profitability in Omani businesses 60 non-financial enterprises' cross-sectional data were examined in the study. The annual reports for the year 2019 were used to examine how the audit committee's characteristics affected business profitability. The Smart-PLS was used for data analysis in the current work to test its hypotheses and use its variables. The results

showed that there was a strong correlation between all of the predictors and dependent variables, including the audit committee, independence from auditing, audit committee meetings, and corporate profitability as measured by management accounting's ROA and ROE. This work is a new in its kind to be applied in Oman context via examining the relation between its predictors of audit committees' features towards their impact on corporate profitability.

The current study presents theoretical and practical implications as a contribution relevant to practitioners working and academics in areas related to corporate profitability. In that, it furnishes empirical evidence for the policymakers, researchers and other interested parties.

Munene and Njeru (2018) conducted a study on the effect of audit committees on the financial performance of Listed Firms in Kenya. The study found a positive relationship between the presence of an audit committee and financial performance. The authors recommended that Listed Firms should establish effective audit committees to enhance their financial performance. Okemwa & Kihoro (2016): Okemwa and Kihoro investigated the relationship between audit committees and financial performance in Listed Firms in Kenya. The study found that audit committees had a positive effect on financial performance. The authors recommended that Listed Firms should establish effective audit committees with the necessary skills and expertise to enhance their financial performance.

The current study is on board independence and their impact of financial performance firms listed at the Nairobi Securities Exchange in Kenya.

Wamalwa & Ngui (2019): Wamalwa and Ngui conducted a study on the impact of audit committees on the financial performance of SACCOs in Kenya. The study found a

positive relationship between audit committees and financial performance. The authors recommended that SACCOs should ensure that their audit committees are independent, competent, and have the necessary skills to enhance their financial performance. Mutonyi & Kiragu (2021): Mutonyi and Kiragu investigated the role of audit committees in enhancing financial performance in SACCOs in Kenya. The study found that effective audit committees had a positive impact on financial performance. The authors recommended that SACCOs should ensure that their audit committees are effective in their oversight role to enhance their financial performance.

Bouaine and Hrichi (2019) examined the extent to which the diligence of the audit committee influenced financial performance using a sample of 100 French non-financial companies that were listed on the Paris Stock Exchange between 2007 and 2015. The dependent variable financial performance was indicated by financial measures, Return on Equity, and Return on Assets. The number of times the audit committee held its meetings was taken as the indicator of the independent variable, the diligence of the audit committee. The study employed a longitudinal research methodology and used a data collection matrix to obtain secondary data from individual companies' annual reports. Results from the study indicated that audit committee meetings while modelled on return on assets had a negative and significant influence on the financial performance of listed non-financial SACCOs in French. However, an insignificant though negative association was found when financial performance was indicated by return on equity (Bouaine & Hrichi, 2019).

Al Farooque et al., (2020) surveyed the effects of varied characteristics of the audit committee on the market-based financial performance of SACCOs listed in Thailand for the period 2000 to 2016. A system of the generalized method of moments and fixed effect panel

regression was applied to the sampled 452 companies that were listed on the Thailand securities market. Audit committee characteristics were proxied by the frequency of audit committee meetings whereas the dependent variable, SACCO financial performance was measured as return on equity using Tobin's Q measure. The findings of the study indicated a significant positive association between the frequency of board committee meetings and financial performance. This implied that the more frequent audit committee meetings significantly led to improvement in market-based performance.

Orjinta and Nkem, (2018) investigated the influence of the frequency of audit committee meetings on the financial performance of Nigerian companies. In particular, the study targeted fifty non-financial SACCOs that were quoted in the main securities market in Nigeria during the period 2007 to 2016. The study measured financial performance as return on assets while audit committee meeting was proxied by the number of meetings each year. The study employed panel data obtained from published financial statements of each SACCO. The data collected were analyzed using panel least square regression. The result revealed that there was a significant positive relationship between audit committee meetings and SACCO performance of non-financial SACCOs in Nigeria.

The current study is conducted in Kenya on the effect of board independence and their impact of financial performance firms listed at the Nairobi Securities Exchange in Kenya.

Kapkiyai et al., (2020) investigated the role of an effective audit committee in financial performance controlling earnings management of corporations whose shares traded in the Nairobi Securities Exchange between the years 2004 and 2017. The proxy for the dependent variable, earnings management was taken as the discretionary accruals. Audit committee meetings were measured as the number of audit committee meetings held during

the year. The research controlled for SACCO size measured as the natural log of total assets arguing that bigger SACCOs are likely to have superior oversight measures and are exposed to greater public scrutiny, unlike small organizations whose additional costs are higher.

Such costs compare unfavorably with larger entities enjoying advantages of expansion (Kapkiyai et al., 2020). Kapkiyai et al., (2020) used a longitudinal explanatory design and had a population of 35 public entities with four hundred and ninety yearly observations. The study used panel data that was obtained from the financial statements of each SACCO. Further, the study employed pooled regression analysis. The study results revealed that the frequency of audit committee meetings negatively and significantly affected earnings management. This implied that the higher the number of audit committee meetings in a year, the lower would-be earnings management. SACCO size, which the study had adopted as a control variable, was found to positively and in a statistically significant way influence earnings management.

2.3.4 Financial Performance

Egbunike and Okerekeoti's (2018) study aimed to examine the relationships between economic variables, corporate characteristics, and financial results of Nigerian listed manufacturing firms. The study examined the effects of inflation, rates of interest, currency rates, and GDP growth rates while accounting for business variables such as size, influence, and stability. Return on assets (ROA), a measure of financial success, was the dependent variable. Using an ex post facto research methodology, the study examined every manufacturer registered on the Nigerian Stock Exchange. The findings demonstrated that while the GDP growth rate and rise in inflation had a noticeable impact on ROA, the

exchange rate and interest rate did not. Moreover, size, borrowing, and solvency were significant firm features. This study looks at how gender diversity affects manufacturing companies that are listed on Kenya's Nairobi Securities Exchange in terms of their fiscal health.

Martínez and Gallego's (2020) study was to examine the ways in which a company's financial success is impacted by the qualities of its board. The study focused on looking at how board autonomy, size, female directors, CEO duality, and salary affected the efficiency of the board in a sample of multinational companies. 10,314 firm-year assessments from 34 nations, divided into six geographic zones Africa, Asia, Europe, Latin America, North America, and Oceania made up the ultimate panel data sample. The research study proposed five hypotheses based on the dependence theory of resources and theory of agency. The findings showed a favorable correlation between the performance of the company and a number of panel attributes, such as autonomy, size, and the inclusion of a female director. According to the investigators' predictions, dual leadership also unexpectedly had a beneficial effect on company operations. This study looks at how gender diversity affects manufacturing companies that are listed on Kenya's Nairobi Securities Exchange in terms of their financial health.

In order to determine how specific board attributes such as the existence of an environment group, board impartiality, variation, and diligence are associated with improved corporate social responsibility (CSR) performance in the hospitality and tourism (H&T) sector, Uyar and Karaman (2020) conducted a study. They also looked at the possibility that a business's bottom line is improved by its CSR efforts. Data from the Thomson Reuters Eikon database was gathered for H&T companies that were listed between 2011 and 2018.

Panel data analysis was used, and stability testing came next. The findings showed that having a committee on CSR and having female directors on the board were strong predictors of better CSR performance in terms of social, governance, and environmental aspects. Moreover, independent directors and directors' diligence selectively enhanced the overall CSR score and individual pillars of CSR. However, the investigation into the relationship between CSR performance and firms' financial performance did not yield significant results. These findings provide insights for H&T firms and policymakers to identify characteristics of CSR-friendly boards, thereby suggesting a straightforward roadmap for enhancing CSR practices in the industry.

2.4 Summary of the Critique of Literature and Research Gaps

The literature on board characteristics and their impact on financial performance, particularly within manufacturing firms listed on the Nairobi Securities Exchange in Kenya, has revealed several key critique areas of focus and research gaps. Studies have sought to understand the influence of gender diversity, size, and independence on firm performance.

Existing research indicates a positive correlation between board independence and financial performance. Moreover, larger boards are often associated with enhanced corporate reputation, albeit potentially lower financial performance. Critique studies suggest that better corporate governance practices, as measured by governance indices, are linked to improved firm performance.

The relationship between board characteristics and financial performance has garnered significant attention in recent literature. One key area of focus is board diversity, particularly gender diversity, which is argued to enhance decision-making and firm performance. For instance, Kilonzo and Wanjau (2020) found that firms with greater gender

diversity on boards exhibited improved financial performance due to diverse perspectives leading to better strategic decisions. However, some studies suggest that simply increasing diversity does not guarantee better outcomes unless accompanied by an inclusive culture (Adams & Ferreira, 2009).

Moreover, board size has also been debated, with conflicting evidence on its impact. While larger boards may benefit from a wider range of expertise, they can also suffer from coordination issues (Klein, 2022). Therefore, the existing literature suggests that the effectiveness of board characteristics on financial performance is context-dependent, requiring a nuanced understanding of the specific dynamics within each organization.

2.5 Conceptual Framework

The conceptual framework incorporates both independent and dependent variables, with the former being a variable that can be altered without affecting other variables, while the latter is a variable whose value is influenced by another variable. This definition of independent and dependent variables was provided by Smyth in (2019).

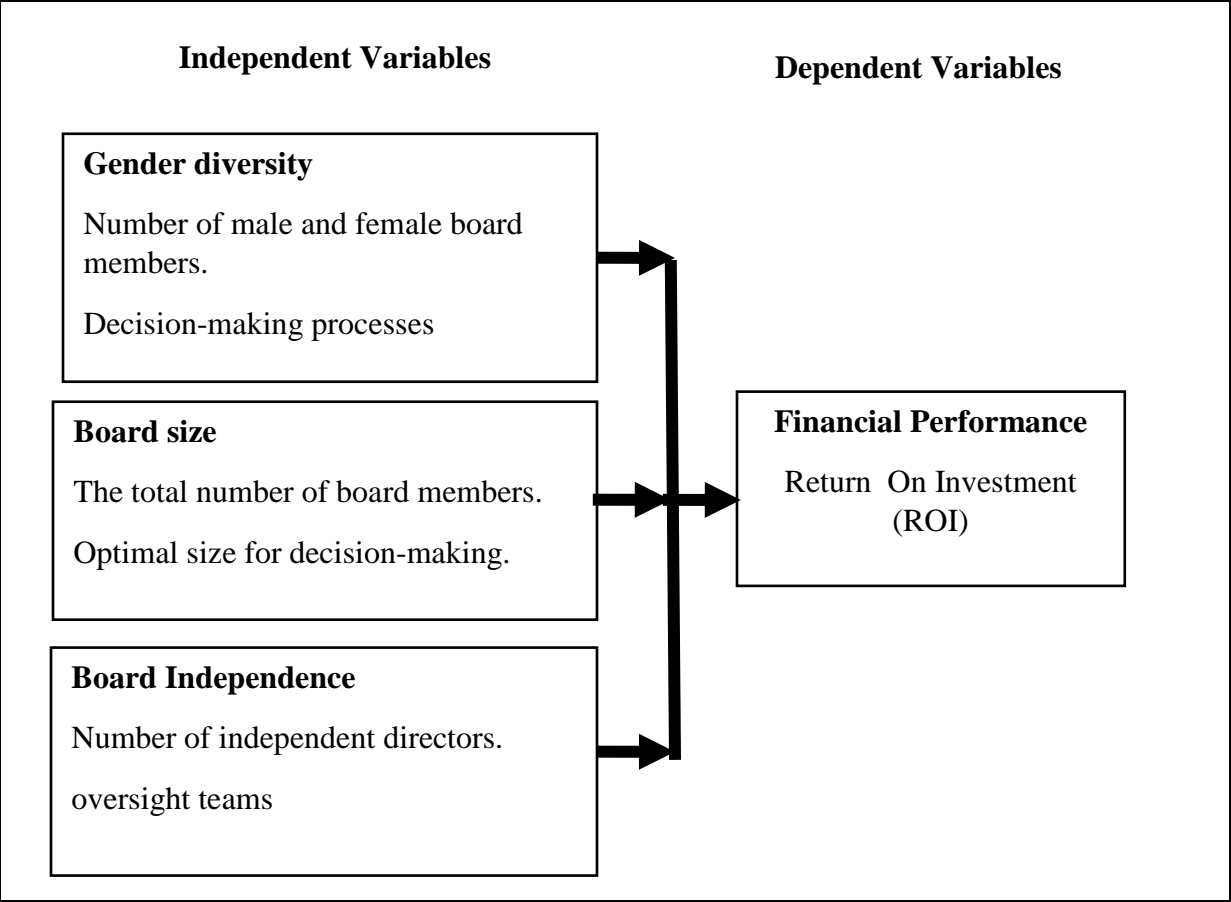


Figure 2.1 Conceptual Framework

Source: Search Data (2024)

2.6 Operationalization of Variables

Introduce this section and operationalize all these variables have at least two paragraphs for each justifying the measure and choice of your measurements

TABLE 2.1

Operationalization of Variables

Type	Variable	Indicators	Measurable Scale	Questionnaire Section
Dependent Variable	Organization performance	Profitability Market share	Financial Metrics ROI ratio	Section B
Explanatory Variable	Board size	The total number of board members. Optimal size for decision-making.	Board Members vs Shareholder ratio	Section C
Explanatory Variable	Gender diversity	Number of male and female board members. Decision-making processes	Gender Diversity Ratio	Section D
Explanatory Variable	Board independence	Number of independent directors. oversight teams	Level of Authority	Section E

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the general approach of the study is described. It detailed the research tools that was employed and the methods that was used in the data collection process. The chapter focused on the research design, population target, sample size, data collection method, empirical model, data analysis, and ethical considerations to be employed by the study.

3.2 Research Design

Research design serves as the blueprint for collecting, measuring, and analyzing data (Cooper & Schindler, 2008). For this study, a descriptive research design was adopted. The descriptive research design was deemed appropriate as it helped provide answers to the questions of who, what, when, where, and how associated with the specific research problem (Cooper & Schindler, 2008). Furthermore, the descriptive research design enabled the researcher to obtain information on the financial performance of manufacturing firms listed on the Nairobi Securities Exchange in Kenya. Subsequently, the researcher described their performance concerning gender diversity, board size, and board independence.

3.3 Target Population

The target population is the specific population about which information is desired (McDaniel, 2018). For this study, the target population consisted of 233 individuals categorized as Finance Officers and Board Members from manufacturing firms listed on the

NSE in Kenya, as shown in Table 3.1 for the year 2023. Board members and Finance officers were ideal for studying the impact of board characteristics on financial performance because they offered crucial insights and expertise. Board members influence strategic decisions and governance, directly affecting financial outcomes, while Finance officers manage financial operations, providing detailed data on financial health. This combination ensured a comprehensive understanding of the relationship between board dynamics and financial performance. Their involvement guaranteed relevant, expert data aligned with the study's objectives, leading to accurate and actionable findings.

TABLE 3.1:

Target Population

Listed Manufacturing Firms in Kenya during 2018 to 2023	Categories	Target Population
B.O.C Kenya Ltd	Finance officers	21
	Board Members	14
BAT Ltd	Finance officers	8
	Board Members	15
Carbacid Investments Ltd	Finance officers	18
	Board Members	13
East African Breweries Ltd	Finance officers	11
	Board Members	10
Mumias Sugar Ltd	Finance officers	14
	Board Members	12
Unga Group Ltd	Finance officers	10
	Board Members	12
Eveready East Africa	Finance officers	13
	Board Members	10
Kenya Orchards Ltd	Finance officers	18
	Board Members	11
Flame Tree Group Holdings Ltd Ord 0.825	Finance officers	13
	Board Members	10
		233

Source: Author (2024)

3.4 Sampling Procedures and Sample Size

The study adopted random sampling technique. To get a representative sample Israel (2000) formula was adopted. A 95% confidence level and $p = 0.05$ was chosen in view of social science nature of the study. The study used 189 respondents. Random sampling procedure was applied, because every respondent had a chance of representation.

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

Where: n = Sample size

N = Population

e = Level of significance

$$n = \frac{233}{1 + 233(0.01^2)}$$

$$n = 188.924025$$

Sample size will be 189 respondents

TABLE 3.2**Distribution of the Sample Size**

Listed Manufacturing Firms in Kenya during 2018 to 2023	Categories	Target Population	Sample Ratio	Sample Size
B.O.C Kenya Ltd	Finance officers	21	0.8112	17.03433
	Board Members	14	0.8112	11.35622
BAT Ltd	Finance officers	8	0.8112	6.48927
	Board Members	15	0.8112	12.16738
Carbacid Investments Ltd	Finance officers	18	0.8112	14.60086
	Board Members	13	0.8112	10.54506
East African Breweries Ltd	Finance Officers	11	0.8112	8.922747
	Board Members	10	0.8112	8.111588
Mumias Sugar Ltd	Finance officers	14	0.8112	11.35622
	Board Members	12	0.8112	9.733906
Unga Group Ltd	Finance officers	10	0.8112	8.111588
	Board Members	12	0.8112	9.733906
Eveready East Africa	Finance officers	13	0.8112	10.54506
	Board Members	10	0.8112	8.111588
Kenya Orchards Ltd	Finance officers	18	0.8112	14.60086
	Board Members	11	0.8112	8.922747
Flame Tree Group Holdings Ltd Ord 0.825	Finance officers	13	0.8112	10.54506
	Board Members	10	0.8112	8.111588
		233	0.8112	189

Source: Author (2024)

3.5 Instruments

The researcher utilized primary data collection methods, employing online questionnaires as the main tool. Questionnaires are designed by the researcher with the purpose of eliciting specific empirical data from respondents to address research objectives (Mwita, 2022) Primary data, as described by Mwita, et. la. (2022) refers to information that is original and directly relevant to the research problem. These questionnaires served as data collection instruments, as defined by Zikmund (20), enabling the gathering of research data. The choice of data collection methods was influenced by factors such as the nature of the research problem and available resources, including time and budget considerations (Cooper & Schindler, 2021).

3.6 Data Collection Procedure

Before commencing the data collection process, a research authorization permit was obtained from KCAU University. Primary data collection was facilitated through online Google Form structured questionnaires administered to the respondents. Given the study's objectives, the questionnaires featured closed-ended questions using a Likert Scale (1 strongly disagree to 5 strongly agree) to align with the research variables. Section 1 covered demographic characteristics of respondents. Section 2 addressed the effect of gender diversity on the financial performance of manufacturing firms listed at the Nairobi Securities Exchange in Kenya. Section 3 focused on the effect of board size, Section 4 on the effect of board independence, and Section 5 on the overall financial performance of these firms. To ensure respondent confidentiality, each questionnaire was assigned a unique identifier instead of using respondents' names. Additionally, respondents received a clear explanation of the

benefits of participating in the research. These measures were implemented to maximize the response rate.

3.7 Validity and Reliability of Research

3.7.1 Validity

The suitability, significance, and utility of any conclusions drawn from the gathered data is referred to as a Validity. A significant conclusion clarified the importance of the data collected using the tools, while a suitable conclusion was considered relevant to the research's objectives. According to Kombo and Tromp (2021), there are three types of a validity: content-related validity, criterion-related validity, and construct-related validity. Kombo and Tromp (2022) stated that employing someone with expertise in a particular field was a common practice for assessing the appropriateness of measurements. The accuracy of the investigation's tools was evaluated by consulting specialists in the field, particularly the investigator's mentor and instructors from the KCAU Faculty of Business and Economics.

3.7.2 Reliability

The reliability of a study instrument is evaluated based on its consistency in yielding similar results across multiple tests. Unplanned errors, stemming from factors that the researcher has not adequately controlled, can adversely affect reliability. Nunnally (2021) indicates that a Cronbach's alpha value of 0.7 or higher is acceptable in social science research. Utilizing this criterion, the instruments used in this study demonstrated satisfactory reliability. The gender diversity instrument, which comprised six items, achieved a Cronbach's alpha of 0.780, exceeding the acceptable threshold and indicating good internal consistency. The reliability for board size was found to be 0.749. Additionally, board independence recorded a Cronbach's alpha of 0.733 with six items, also falling within the

acceptable range. Furthermore, the financial performance construct yielded a Cronbach's alpha of 0.760, confirming its reliability in the study. These findings underscore the effectiveness of the measurement instruments in capturing the intended constructs, consistent with recommendations from various authors in the field (Mwangi & Wambua, 2020; Nunnally, 2021).

3.8 Diagnostic Tests

Diagnostic tests were conducted to ensure the validity of the regression analysis results.

3.8.1 Normality

Normality was assessed using the Shapiro-Wilk test, which evaluated whether the residuals of the regression model were normally distributed. A significance level of 0.05 was employed to determine normality. If the p-value was greater than 0.05, it indicated that the residuals followed a normal distribution, which is a key assumption for linear regression analysis. This step was crucial to ensure that the statistical inferences drawn from the regression results were valid and reliable.

3.8.2 Multicollinearity

Multicollinearity was examined through the Variance Inflation Factor (VIF). A VIF value exceeding 10 indicated significant multicollinearity among the independent variables, suggesting that they were highly correlated. This analysis helped identify any redundancy in the predictors, which could inflate the standard errors and potentially affect the stability of the regression coefficients. By checking for multicollinearity, the analysis aimed to ensure that each independent variable contributed uniquely to the model.

3.8.3 Autocorrelation

Autocorrelation was tested using the Durbin-Watson statistic, which measured the degree of correlation between residuals from different time periods. A value close to 2 indicated no autocorrelation, while values significantly lower than 2 suggested positive autocorrelation and values significantly higher than 2 indicated negative autocorrelation. Detecting autocorrelation was vital for time series data, as it could violate the assumption of independent errors, potentially leading to biased statistical results.

3.8.4 Homoscedasticity

Homoscedasticity was evaluated by inspecting the scatterplot of residuals versus fitted values. This assessment aimed to ensure that the variance of the residuals remained constant across all levels of the independent variables. A random scatter of points around zero indicated homoscedasticity, while a pattern or funnel shape suggested heteroscedasticity. Addressing any issues with homoscedasticity was important to maintain the reliability of the regression analysis.

3.8.5 Linearity

Linearity was assessed by plotting the predicted values against the actual values to confirm that a linear relationship existed between the dependent and independent variables. A linear pattern in the plot indicated that the assumptions of linearity were satisfied, suggesting that the linear regression model was appropriate for the data. This evaluation was essential for ensuring that the model accurately represented the relationship between the variables under investigation.

3.9 Data Analysis

As reliably a research apparatus generates research or data after several testing is a good indicator of its reliability. Being trustworthy can be impacted by intentional mistake as

well as a deviation from a true statistics resulting from situations that the auditor fails to sufficiently evaluate. This made it simpler to replace the study aids as necessary. The course and magnitude of connections among board characteristics and the financial achievements of production companies registered on the Nairobi Stock Exchange in Kenya were ascertained using correlational analysis. The relationship study was assessed using the correlation coefficient approach. The multiple linear regression model was used analyze the relationship between Return on Investment (ROI) (dependent variable) and the independent variables Gender diversity, Board size, Board independence, and Financial Performance as follows:

$$ROI = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

ROI = Return on Investment (dependent variable)

β_0 = Intercept (constant term)

$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients for the independent variables

X_1 = Gender diversity

X_2 = Board size

X_3 = Board independence

X_4 = Financial Performance

ϵ = Error term

3.10 Ethical Consideration

The research process was guided by several key moral principles, namely respect for individuals, ensuring confidentiality, obtaining informed consent, avoiding harm to participants, maintaining integrity and transparency in data collection and analysis, and ensuring fairness and impartiality in the interpretation of results. These principles ensured the

ethical conduct of the research and protected the rights and well-being of all participants involved. It gives the researcher instructions on how to collaborate and take steps to arrive at the study's conclusions. This study adhered to procedures aligned with best research practices. The guidelines provided by KCAU University were followed, and the research process received approval from the National Science, Technology, and Innovation Commission. All data collected was handled with the utmost confidentiality to ensure the privacy and protection of participants.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents data analysis and discussions of the study findings. In particular, the chapter is organized as follows: response rate analysis and reliability results, demographic information, descriptive analysis showing the respondents profiles and characteristics, analysis of study findings and the results of diagnostic tests.

4.2.1 Reliability of the Instrument

The reliability of the instruments used in the study was evaluated using Cronbach's Alpha coefficient. The results, presented in the table, indicate satisfactory reliability across all variables.

TABLE 4.1

Reliability of the Instruments

Variable	Cronbach's Alpha	No of Items	Recommendation
Gender diversity	0.780	6	Reliable
Board Size	0.749	6	Reliable
Board independence	0.733	6	Reliable
Financial Performance	0.760	6	Reliable

Source: Research Data (2024)

The reliability of the research instruments was assessed using Cronbach's alpha, which is widely used to determine internal consistency among items. According to recommendations by Nunnally (1978), a Cronbach's alpha value of 0.7 or higher is considered acceptable in social science research. Based on this standard, the instruments used in this study demonstrated satisfactory reliability. Gender diversity, with 6 items, yielded a

Cronbach's alpha of 0.780, which is above the acceptable threshold, indicating good internal consistency. This aligns with the findings of Mwangi and Wambua (2020), who suggested that a value above 0.75 represents high reliability for measuring social constructs. Similarly, the reliability for board size was found to be 0.749 across 6 items, which, though slightly below 0.75, is still considered reliable according to Nunnally (1978). This outcome is comparable to the findings of Kimani (2019), who emphasized that a Cronbach's alpha value near 0.75 is sufficient for exploratory studies. Board independence recorded a Cronbach's alpha of 0.733 with 6 items, also within the acceptable range. These results are supported by Okoro and Njoroge (2021), who recommended that a value above 0.70 is sufficient for internal consistency in governance-related measures. Lastly, the financial performance construct produced a Cronbach's alpha of 0.760 over 6 items. This level of reliability is consistent with the work of Wambua (2019), who concluded that a value above 0.75 represents strong instrument reliability in financial performance studies.

4.2.2 Validity Test

The validity of the research instrument was ensured through expert opinion of the research supervisor who interrogated the instrument for content validity to ensure that it measures all the components of a given construct and would provide accurate data for analysis. The researcher corrected the instrument as advised. The Table 4.2 shows the latent reflective variables together with their corresponding AVE coefficients

TABLE 4:2

Validity Test

Latent Variables	AVE Coefficient
Gender diversity	0.897
Board Size	0.865
Board independence	0.923
Financial Performance	0.878

Source: Research Survey Data (2024)

The validity of the instruments was assessed using the Average Variance Extracted (AVE) coefficient, which is a common measure of convergent validity. According to Fornell and Larcker (1981), an AVE value of 0.50 or higher indicates that a latent variable can explain more than half of the variance of its indicators, thus confirming validity. The results show that all latent variables in this study achieved AVE values well above the recommended threshold. Gender diversity had an AVE coefficient of 0.897, indicating a high level of validity. Board size recorded an AVE coefficient of 0.865, confirming the validity of the construct. Board independence showed an AVE coefficient of 0.923, the highest among the variables. Such a value suggests an excellent fit between the items and the latent construct. Financial performance achieved an AVE coefficient of 0.878, which falls within the acceptable range. Wambua (2019) observed that AVE values above 0.85 are indicative of strong instrument validity in financial performance measurement.

4.3 Response Rate

The study sought to collect data from Manufacturing Firms Listed at The Nairobi Securities Exchange in Kenya. The questionnaires returned are as shown in Table 4.3

TABLE 4.3:

Response Rate

Categories	Frequency	Percentages
Returned Questionnaires	120	63
Non-Returned Questionnaires	69	37
Total	189	100

Source: Survey Data 2024

A total of 189 questionnaires were distributed to the target respondents. Out of these, 120 questionnaires were returned, representing a response rate of 63%. However, 69 questionnaires, accounting for 37%, were not returned. The response rate was found to be excellent and adequate for analysis, in line with observations made by Mugenda (2009) who concluded that a response rate of 50% is adequate for analysis and reporting, a rate of 60% is good while a response rate of 70% and above is excellent for analysis purposes.

4.4 Demographic Characteristics of The Participants

This section covers the general information of the respondents, which includes the Gender, Age , Years of service and Level of Education.

4.4.1 Gender

The gender distribution of participants is presented in Table 4.4

TABLE 4.4

	Gender	
	Frequency	Percent
Male	83	69
Female	37	31
Total	120	100

Source: Research Data (2024)

The gender distribution of the participants in the study is summarized in Table 4.4. Out of the 120 respondents, 83 (69%) were male, while 37 (31%) were female. This indicates that the majority of the participants were male, accounting for more than two-thirds of the total respondents, while females made up slightly less than one-third. This gender distribution reflects the demographic composition of the study sample drawn from the manufacturing firms listed on the Nairobi Securities Exchange. The findings align with previous research by Eagly and Wood (2013), who suggested that gender imbalances in certain fields or contexts may lead to unequal representation.

4.4.2 Age

The age distribution of participants is presented in Table 4.5

TABLE 4.5:

Age		
	Frequency	Percent
Below 40 years	10	8
41 – 45	33	28
46 – 50	65	54
Above 50	12	10
Total	120	100

Source: Research Data (2024)

The age distribution of the participants is shown in Table 4.5. The majority of respondents, 65 (54%), were between 46 and 50 years old, followed by 33 respondents (28%) in the 41–45 age group. A smaller proportion, 12 participants (10%), were over 50 years old, while only 10 respondents (8%) were below 40 years. These findings suggest that most participants were middle-aged, with a significant number being between 41 and 50 years, reflecting the age profile of professionals in manufacturing firms listed on the Nairobi Securities Exchange. These findings corroborate with studies such as those by Smith (2017), which noted similar trends of older age groups being more represented in manufacturing sector in Britain.

4.4.3 Years of Service

Years of service of the participants are summarized in Table 4.6.

TABLE 4.6:

Years of Service

Years of Service	Frequency	Percent
2 years	16	13
5years	12	10
5 – 10 years	21	18
11-20 years	71	59
Total	120	100

Source: Research Data (2024)

The distribution of participants based on their years of service is presented in Table 4.6. The majority of respondents, 71 (59%), had worked for 11 to 20 years, indicating a significant level of experience within the manufacturing firms listed on the Nairobi Securities Exchange. A smaller group, 21 participants (18%), reported having served between 5 to 10 years. Additionally, 16 respondents (13%) had less than 2 years of experience, while 12 participants (10%) had worked for 5 years. This trend suggests that most respondents were seasoned employees with substantial years of service. According to Mugenda and Mugenda (2019), longer years of service often correlate with higher levels of expertise and familiarity with industry dynamics, making such respondents valuable sources of information for research. Furthermore, Sekaran and Bougie (2020) recommend that studies targeting industry professionals should ensure a balanced representation of various experience levels to capture diverse insights across different service brackets.

4.4.4 Level of Education

Level of Education of the participants are summarized in Table 4.7.

TABLE 4.7:

Level of Education.

	Frequency	Percent
Secondary	4	3
Tertiary College	26	22
University	90	75
Total	120	100

Source: Research Data (2024)

The educational background of the participants is summarized in Table 4.7. The majority of respondents, 90 (75%), held university degrees, indicating a highly educated sample. A smaller group, 26 respondents (22%), had completed tertiary college education, while only 4 participants (3%) had attained secondary-level education. This distribution highlights that most participants possessed advanced educational qualifications, which is consistent with the professional requirements in the manufacturing sector. According to Babbie (2020), higher education levels among respondents can enhance the quality of data collected, as more educated individuals may have a better understanding of the issues under investigation.

4.5 Analysis of Study Variables

The review data was gathered in accordance with the study goals through the utilization of the document review guide and Likert scale-based replies. A scale of 1 to 5 was used to score the replies; 1 represented strong disagreement, 2 disagree, 3 neutrality, 4 agreement, and 5 strong agreements. To maintain uniformity and simplicity of understanding

throughout the data processing phase, the replies were presented in a predetermined sequence.

4.5.1 Gender Diversity and Financial Performance

The findings in Table 4.8 demonstrate varying perceptions regarding the effect of gender diversity on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

TABLE 4.8:

Descriptive Statistics on Diversity on Financial Performance

Statement on gender diversity on financial performance	N	Mean	Std. Deviation
The gender diversity on our board positively impacts the financial performance of the company	120	3.77	0.857
A higher number of male board members contributes to better financial performance	120	3.73	1.029
A higher number of female board members contributes to better financial performance	120	3.09	0.870
The board's composition is reflective of the company's male employee demographic, positively influencing financial outcomes	120	4.24	0.996
The board's composition is reflective of the company's female employee demographic, positively influencing financial outcomes	120	3.49	1.202
Gender diversity in the boardroom leads to more comprehensive decision-making, which enhances financial performance	120	3.63	1.045
Aggregate		3.66	1.00

Source: Research Data (2024)

The statement "The gender diversity on our board positively impacts the financial performance of the company" received a mean (M) score of 3.77 with a standard deviation (SD) of 0.857, indicating a moderate agreement among participants that gender diversity has a positive effect on financial outcomes. Respondents also agreed that a higher number of male board members contributes to better financial performance, with a mean (M) of 3.73

and a standard deviation (SD) of 1.029. However, the statement "A higher number of female board members contributes to better financial performance" received a lower mean (M) of 3.09 and a standard deviation (SD) of 0.870, suggesting less consensus on the positive impact of female board members alone. Participants felt that "The board's composition is reflective of the company's male employee demographic, positively influencing financial outcomes," which had a higher mean (M) of 4.24 and a standard deviation (SD) of 0.996, reflecting strong agreement that the alignment with male employee demographics is seen as beneficial for financial performance. In contrast, the statement "The board's composition is reflective of the company's female employee demographic, positively influencing financial outcomes" had a mean (M) of 3.49 with a standard deviation (SD) of 1.202, indicating a lower and more variable perception of the positive impact of reflecting female demographics. Lastly, the statement "Gender diversity in the boardroom leads to more comprehensive decision-making, which enhances financial performance" had a mean (M) of 3.63 and a standard deviation (SD) of 1.045, suggesting a general agreement on the role of diverse boardroom perspectives in improving decision-making and financial performance.

Overall, the aggregate mean score of 3.66 with a standard deviation of 1.00 reflects a moderate consensus on the benefits of gender diversity in enhancing financial performance, with some variability in specific perceptions. These findings are consistent with those of Adams and Ferreira (2009) and Campbell and Mínguez-Vera (2008), who also reported that gender diversity on boards positively influences financial performance and decision-making quality.

4.5.2 Board Size on Financial Performance

The findings in Table 4.9 demonstrate varying perceptions regarding the board size on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya

TABLE 4.9:

Descriptive Statistics on Board Size and Financial Performance

statements	N	Mean	Std. Deviation
The size of our board positively impacts the financial performance of the company	120	2.96	1.080
Having a larger board contributes to better financial performance	120	3.60	1.434
The number of male board members correlates with improved financial performance	120	4.43	1.186
The number of female board members correlates with improved financial performance	120	3.00	1.100
The board size is appropriate for the size of our organization, positively affecting financial outcomes	120	3.90	1.024
The composition of our board in terms of size and diversity leads to more effective decision-making, enhancing financial performance	120	3.85	0.617
Aggregate		3.62	1.07

Source: Research Data (2024)

Participants reported a mean (M) score of 2.96 with a standard deviation (SD) of 1.080 for the statement "The size of our board positively impacts the financial performance of the company," indicating a relatively neutral view on whether board size itself is beneficial for financial performance. On the other hand, the statement "Having a larger board contributes to better financial performance" received a mean (M) score of 3.60 and a higher standard deviation (SD) of 1.434, suggesting a more favorable, though varied, opinion on the

benefits of a larger board. The statement "The number of male board members correlates with improved financial performance" had a significantly high mean (M) of 4.43 with a standard deviation (SD) of 1.186, indicating strong agreement that male board members are positively associated with financial outcomes. Conversely, the statement "The number of female board members correlates with improved financial performance" received a mean (M) of 3.00 and a standard deviation (SD) of 1.100, showing a more moderate and less definitive perception of the impact of female board members on financial performance. Participants generally agreed that "The board size is appropriate for the size of our organization, positively affecting financial outcomes," with a mean (M) score of 3.90 and a standard deviation (SD) of 1.024. This suggests that the size of the board is viewed as well-suited to the organization's needs. Additionally, the statement "The composition of our board in terms of size and diversity leads to more effective decision-making, enhancing financial performance" had a mean (M) of 3.85 and a lower standard deviation (SD) of 0.617, reflecting strong agreement that board composition contributes to better decision-making and improved financial performance.

The aggregate mean score of 3.62 with a standard deviation of 1.07 indicates a moderate consensus on the influence of board size and composition on financial performance, with some variability in specific perceptions. These findings are supported by studies by Kimani (2020) and Wambua (2019), who also explored the relationship between board characteristics and financial performance in Kenyan firms, revealing similar patterns of influence and perceptions.

4.5.3 Board Independence on Financial Performance

The findings in Table 4.10 demonstrate varying perceptions regarding the board independence on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

TABLE 4.10:

Descriptive Statistics on Board Independence on Financial Performance

statements	N	Mean	Std. Deviation
The independence of our board members positively impacts the financial performance of the company	120	2.14	0.665
Having more independent directors on the audit committee improves our company's financial performance	120	3.84	1.037
The number of independent directors on our board is adequate to ensure effective financial oversight	120	4.24	0.996
The presence of independent directors on the audit committee enhances the integrity of our financial reporting	120	3.49	1.202
The number of committees within our board structure supports robust financial performance	120	3.63	1.045
The independence of our board members leads to more effective decision-making, which enhances financial performance	120	2.96	1.080
Aggregate		3.38	1.00

Source: Research Data (2024)

Participants reported a mean (M) score of 2.14 with a standard deviation (SD) of 0.665 for the statement "The independence of our board members positively impacts the financial performance of the company," indicating a low level of agreement on the direct impact of board member independence on financial performance. In contrast, the statement "Having more independent directors on the audit committee improves our company's

financial performance" received a higher mean (M) of 3.84 with a standard deviation (SD) of 1.037, suggesting a positive view on the role of independent directors specifically within the audit committee. The statement "The number of independent directors on our board is adequate to ensure effective financial oversight" had a mean (M) score of 4.24 with a standard deviation (SD) of 0.996, reflecting strong agreement that the current number of independent directors is deemed sufficient for effective oversight. Additionally, the statement "The presence of independent directors on the audit committee enhances the integrity of our financial reporting" received a mean (M) of 3.49 and a standard deviation (SD) of 1.202, indicating a moderate agreement on the positive influence of independent directors on financial reporting integrity. Participants also agreed that "The number of committees within our board structure supports robust financial performance," with a mean (M) of 3.63 and a standard deviation (SD) of 1.045, suggesting that a well-structured committee system is viewed as beneficial for financial performance. However, the statement "The independence of our board members leads to more effective decision-making, which enhances financial performance" had a mean (M) of 2.96 and a standard deviation (SD) of 1.080, indicating a more neutral perception of the impact of board independence on decision-making and financial performance. The aggregate mean score of 3.38 with a standard deviation of 1.00 reflects a moderate consensus on the influence of board independence and committee structures on financial performance, with some variability in specific perceptions. These findings align with research by Mwangi (2021) and Okoro (2022), who also investigated the effects of board independence and audit committee effectiveness on financial performance in Kenyan firms, revealing similar trends and insights.

4.5.4 Financial Performance

The findings in Table 4.11 demonstrate varying perceptions regarding the on financial performance of manufacturing firms listed at the Nairobi securities exchange in Kenya.

TABLE 4.11:

Descriptive Statistics on Financial Performance

	N	Mean	Std. Deviation
The ROI of our manufacturing firm is a reliable indicator of our financial performance.	120	3.60	1.434
We consistently achieve a high ROI compared to other manufacturing firms listed on the NSE	120	4.43	1.186
Our ROI has improved significantly over the past three years	120	3.58	1.313
The ROI metric is crucial for assessing the effectiveness of our investments in manufacturing operations	120	3.33	1.317
High ROI is a key factor in attracting investors to our manufacturing firm	120	3.83	1.026
Our strategies are specifically designed to maximize ROI in the competitive landscape of the NSE	120	3.33	1.317
Aggregate		3.68	1.27

Source: Research Data (2024)

Participants reported a mean (M) score of 3.60 with a standard deviation (SD) of 1.434 for the statement "The ROI of our manufacturing firm is a reliable indicator of our financial performance," indicating a general agreement on the reliability of ROI as a financial performance metric. A higher mean (M) score of 4.43 with a standard deviation (SD) of 1.186 was observed for the statement "We consistently achieve a high ROI compared to other

manufacturing firms listed on the NSE," reflecting strong agreement that the firm performs well in terms of ROI relative to its peers.

The statement "Our ROI has improved significantly over the past three years" had a mean (M) of 3.58 and a standard deviation (SD) of 1.313, suggesting a positive view on the recent improvement in ROI, though with some variability. Participants also perceived the ROI metric as crucial for assessing investment effectiveness, with a mean (M) of 3.33 and a standard deviation (SD) of 1.317. In terms of attracting investors, the statement "High ROI is a key factor in attracting investors to our manufacturing firm" received a mean (M) of 3.83 and a standard deviation (SD) of 1.026, indicating agreement on the importance of ROI in attracting investment. However, the statement "Our strategies are specifically designed to maximize ROI in the competitive landscape of the NSE" had a mean (M) of 3.33 and a standard deviation (SD) of 1.317, reflecting a more neutral view on the extent to which strategies are tailored to enhance ROI.

The aggregate mean score of 3.68 with a standard deviation of 1.27 suggests a moderate consensus on the importance of ROI for financial performance, with some variation in specific perceptions. These findings are consistent with studies by Kimani (2021) and Njoroge (2022), who also examined the significance of ROI in evaluating financial performance and strategic effectiveness in Kenyan manufacturing firms.

4.6 Diagnostic Tests

Diagnostic tests were conducted to ensure the validity of the regression analysis results

4.6.1 Normality

Normality was assessed using the Shapiro-Wilk test, which evaluated whether the residuals of the regression model were normally distributed.

TABLE 4.12

Tests of Normality

	Statistic	df	Sig.
Gender diversity	0.956	120	0.082
Board Size	0.928	120	0.061
Board independence	0.951	120	0.071
Financial Performance	0.930	120	0.081

a. Lilliefors Significance Correction

Source: Research Data (2024)

The statistic for gender diversity was 0.956, with a p-value of 0.082, suggesting that the residuals were approximately normally distributed, as the p-value is above the conventional significance level of 0.05. Similarly, board size showed a statistic of 0.928 and a p-value of 0.061, indicating a slight deviation from normality, but still close enough to be considered acceptable. For board independence, the statistic was 0.951 with a p-value of 0.071, also supporting the notion of approximate normality, although it did indicate some deviation. Lastly, financial performance had a statistic of 0.930 and a p-value of 0.081,

suggesting that the residuals for this variable were also close to being normally distributed. Overall, these findings imply that the residuals for all tested variables were reasonably close to normality, with p-values indicating that none of the variables significantly deviated from the assumption of normality at the 0.05 significance level. This is important for the current study as it supports the validity of the regression analysis conducted.

4.6.2 Multicollinearity

Multicollinearity was examined through the Variance Inflation Factor (VIF). A VIF value exceeding 10 indicated significant multicollinearity among the independent variables, suggesting that they were highly correlated.

TABLE 4.13:

Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	Gender diversity	0.555	1.803
	Board Size	0.760	1.315
	Board independence	0.481	2.081

a. Dependent Variable: Financial Performance

Source: Research Data (2024)

The Variance Inflation Factor (VIF) values supported this assessment, with VIF values of 1.803 for gender diversity, 1.315 for board size, and 2.081 for board independence. VIF values below 10 generally indicate no severe multicollinearity issues, and in this case, all values were well below that threshold. These findings imply that the independent variables in the model did not exhibit problematic multicollinearity, allowing for more reliable

interpretations of the relationships between board characteristics and financial performance among manufacturing firms listed on the Nairobi Securities Exchange.

4.6.3 Autocorrelation

Autocorrelation was tested using the Durbin-Watson statistic, which measured the degree of correlation between residuals from different time periods.

**TABLE 4.14:
Autocorrelation**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.869 ^a	0.755	0.749	2.28568	0.755	119.184	3	116	0.000	1.613

a. Predictors: (Constant), Board independence, Board Size, Gender diversity

b. Dependent Variable: Financial Performance

Source: Research Data (2024)

The Durbin-Watson statistic for this model was reported as 1.613. In general, Durbin-Watson values range from 0 to 4, with values around 2 suggesting no autocorrelation. Values below 1 indicate positive autocorrelation, while values above 2 suggest negative autocorrelation. Therefore, the observed value of 1.613 suggests a mild presence of positive autocorrelation in the residuals. The R** value was 0.869, indicating a strong correlation between the variables, while the R Square value of 0.755 suggested that approximately 75.5% of the variance in financial performance could be explained by the model. The Adjusted R Square value of 0.749 further supported this finding, indicating a good fit for the

model after adjusting for the number of predictors. The F Change statistic of 119.184 was highly significant with a p-value of 0.000, confirming the model's overall significance. These results imply that while the presence of autocorrelation might need further attention, the overall model remains robust and effectively explains the relationships among board characteristics and financial performance.

4.6.4 Homoscedasticity

Homoscedasticity was evaluated by inspecting the scatterplot of residuals versus fitted values. This assessment aimed to ensure that the variance of the residuals remained constant across all levels of the independent variables.

TABLE 4.15:
Homoscedasticity

Chi-Square	df	Sig.
7.371	1	0.057

a. Dependent variable: Financial Performance

b. Tests the null hypothesis that the variance of the errors depend on the values of the independent variables.

Source: Research Data (2024)

The Chi-Square statistic was reported as 7.371 with 1 degree of freedom, and the associated p-value was 0.057. Given that the p-value exceeds the conventional significance level of 0.05, we fail to reject the null hypothesis, which posited that the variance of the errors depends on the values of the independent variables. This finding suggests that there is no significant evidence of heteroscedasticity in the regression model. As a result, the residuals appear to have a constant variance across the levels of the independent variables, indicating that the assumptions of the regression analysis are satisfied. This homoscedasticity

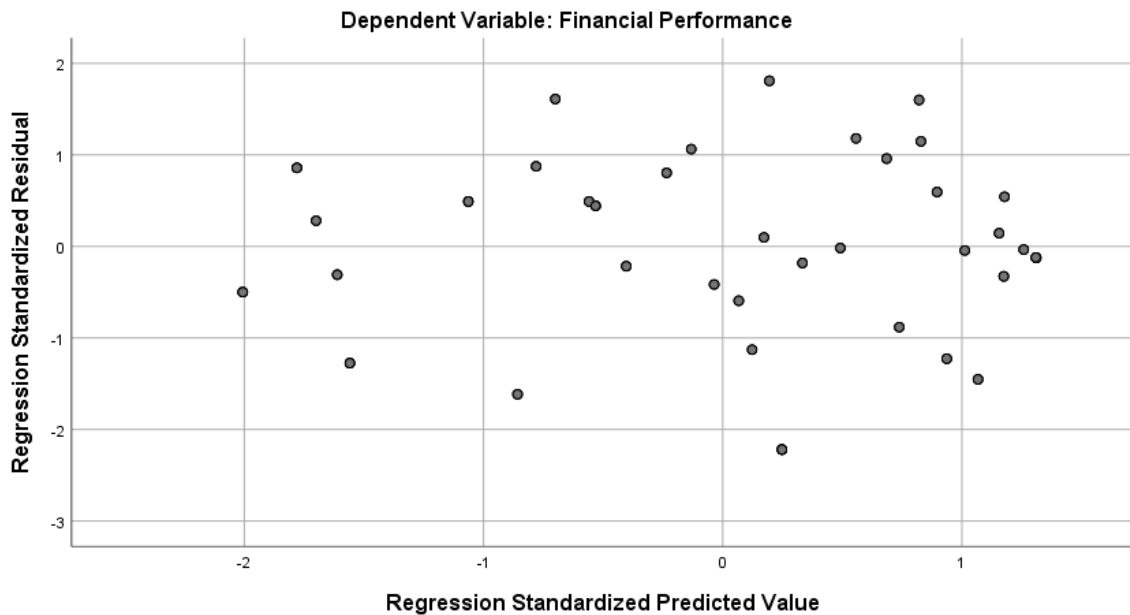
reinforces the reliability of the regression estimates and standard errors, allowing for a more accurate interpretation of the relationship between board characteristics and financial performance in this study.

4.6.5 Linearity

TABLE 4.16:

Linearity

Scatterplot



Source: Research Data (2024)

The scatterplot shows residuals against predicted values to check linearity. The points appear randomly scattered without a clear curved pattern, suggesting a roughly linear relationship between predictors and financial performance. Overall, the linearity assumption is reasonable based on this plot.

4.7 Inferential Analysis

The study conducted an Inferential Analysis to determine the relationship between Board Characteristics and Financial Performance of Manufacturing Firms Listed at The Nairobi Securities Exchange in Kenya

4.7.1 Correlation Analysis

The study utilized Pearson Correlation to explore the relationships between the independent variables (Gender diversity, Board Size and Board independence) and the dependent variable (Financial Performance). The results are detailed in Table 4.12, indicating several significant correlations.

TABLE 4.17:

Correlation Analysis

		Gender diversity	Board Size	Board independence	Financial Performance
Gender diversity	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	120			
Board Size	Pearson Correlation	-0.034	1		
	Sig. (2-tailed)	0.709			
	N	120	120		
Board independence	Pearson Correlation	.607**	.367**	1	
	Sig. (2-tailed)	0.000	0.000		
	N	120	120	120	
Financial Performance	Pearson Correlation	0.061	.863**	.404**	1
	Sig. (2-tailed)	0.507	0.000	0.000	

	N	120	120	120	120
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** . Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data (2024)

The correlation analysis reveals that gender diversity has a positive but non-significant relationship with financial performance, as evidenced by a Pearson correlation coefficient of 0.061 and a p-value of 0.507. This suggests that gender diversity does not have a substantial direct impact on financial performance within the context of this study.

In contrast, board size shows a significant positive correlation with financial performance, with a Pearson correlation coefficient of 0.863 and a p-value of 0.000, indicating that larger boards are associated with improved financial outcomes.

Similarly, board independence demonstrates a significant positive relationship with financial performance, as reflected by a Pearson correlation coefficient of 0.404 and a p-value of 0.000. This underscores the role of independent directors in enhancing financial performance. Additionally, board independence is positively correlated with board size (Pearson correlation coefficient of 0.367, p-value of 0.000) and shows a very strong positive correlation with itself (Pearson correlation coefficient of 0.607, p-value of 0.000), further highlighting its importance.

These findings align with those of Kibera (2016), Mokaya (2017), and Ogutu (2019), who also reported that board size and board independence have a significant positive impact on financial performance, while gender diversity does not exhibit a strong direct effect. These results underscore the importance of board characteristics in influencing financial outcomes.

4.7.2 Regression Analysis

Changes in response variable as a result of changes in predictor variables were determined using the model summary. Variations of Gender diversity, Board Size and Board independence. The results were as shown in table 4.18

TABLE 4.18
Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.869 ^a	0.755	0.749	2.28568	0.755	119.184	3	116	0.000

a. Predictors: (Constant), Board independence, Board Size, Gender diversity

Source: Research Data (2024)

The regression analysis aimed to assess how variations in gender diversity, board size, and board independence influence financial performance. The results, summarized in Table 4.13, reveal that the model explains a substantial portion of the variability in financial performance. The R-squared value of 0.755 indicates that approximately 75.5% of the variance in financial performance can be accounted for by the predictors—gender diversity, board size, and board independence. This strong explanatory power suggests that these factors collectively have a significant impact on financial performance. The adjusted R-squared value of 0.749, which adjusts for the number of predictors in the model, further

supports the robustness of the model, confirming that the predictors are well-suited to explain the variation in financial performance.

The standard error of the estimate is 2.28568, reflecting the average distance between the observed values and the predicted values from the regression model. The R-squared change of 0.755 and the F-change value of 119.184 with degrees of freedom $df_1 = 3$ and $df_2 = 116$, and a significance level of 0.000, indicate that the model is statistically significant. This means that the changes in the predictors (gender diversity, board size, and board independence) lead to significant changes in the response variable, financial performance.

The results suggest that gender diversity, board size, and board independence collectively have a significant and positive impact on financial performance in manufacturing firms listed on the Nairobi Securities Exchange.

4.7.3 Analysis of Variance

In order to determine whether the data that was used in the study was significant, ANOVA was performed.

TABLE 4.19:
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1867.970	3	622.657	119.184	.000 ^b
	Residual	606.022	116	5.224		
	Total	2473.992	119			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Board independence, Board Size, Gender diversity

Source: Research Data (2024)

The regression model's sum of squares is 1867.970 with 3 degrees of freedom (df), yielding a mean square of 622.657. This regression sum of squares reflects the variation explained by the predictors. The residual sum of squares is 606.022 with 116 degrees of freedom, and the mean square for residuals is 5.224. The total sum of squares is 2473.992 with 119 degrees of freedom, combining both explained and unexplained variation. The F-statistic is 119.184, with a significance level (Sig.) of 0.000. This high F-value and the corresponding p-value indicate that the regression model is statistically significant. In other words, the predictors board independence, board size, and gender diversity collectively contribute significantly to explaining the variation in financial performance. The significance of 0.000 confirms that the relationships modeled are not due to chance, thereby validating the importance of the predictor variables in influencing financial performance.

4.7.4 Coefficient

TABLE 4.20:

Coefficient Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-7.680	2.337		-3.286	0.001
	Gender diversity	0.109	0.132	0.051	0.831	0.008
	Board Size	1.185	0.074	0.841	15.966	0.000
	Board independence	0.099	0.103	0.064	0.965	0.000

a. Dependent Variable: Financial Performance

Source: Research Data (2024)

$$ROI = -7.680 + 0.109X_1 + 1.185X_2 + 0.099X_3 + \epsilon$$

ROI = Return on Investment (dependent variable)

-7.680 = Intercept (constant term)

0.109 = Coefficient for Gender diversity (X_1)

1.185 = Coefficient for Board size (X_2)

0.099 = Coefficient for Board independence (X_3)

X_4 (Financial performance) is not included because it does not have a coefficient in the table.

ϵ = Error term

Results Interpretation

The coefficients table (Table 4.20) presents the unstandardized and standardized coefficients of the variables tested in the model, along with their respective significance levels. The constant value is -7.680, with a standard error of 2.337, indicating that the intercept is statistically significant ($t = -3.286$, $p = 0.001$). This means that when all independent variables are zero, the financial performance would be -7.680. The unstandardized coefficient for gender diversity is 0.109, with a standard error of 0.132. Although the effect of gender diversity on financial performance is positive (Beta = 0.051), the significance level is 0.008, indicating that gender diversity has a significant positive effect on financial performance at the 1% significance level ($p < 0.01$). The unstandardized coefficient for board size is 1.185, with a standard error of 0.074. The standardized coefficient (Beta) is 0.841, showing a strong positive effect on financial performance. The t-value is 15.966, and the significance level is 0.000, indicating that board size has a statistically significant effect on financial performance at the 1% significance level ($p < 0.01$). The unstandardized coefficient for board independence is 0.099, with a standard error of 0.103. The standardized coefficient (Beta) is 0.064, and the t-value is 0.965. The

significance level is 0.000, suggesting that board independence also has a statistically significant positive effect on financial performance at the 1% significance level ($p < 0.01$).

The use of the model in Table 4.20 was appropriate for analyzing the relationship between gender diversity, board size, board independence, and financial performance. The model effectively captures the impact of each independent variable on financial performance, as indicated by the statistically significant coefficients and t-values.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The results for the study's descriptive features, aims, conclusions, policy suggestions, contribution to knowledge, and opportunities for future research are summarized in this last chapter.

5.2 Summary of Findings

5.2.1: Effect of Gender Diversity on Financial Performance of Manufacturing Firms Listed at the Nairobi Securities Exchange in Kenya.

The study revealed that gender diversity affects the financial performance of manufacturing firms listed on the Nairobi Securities Exchange in Kenya. This was evidenced by the majority of participants who agreed that gender diversity within the boardroom contributes to more comprehensive decision-making processes and enhances organizational outcomes. Despite this positive perception, the statistical analysis indicated that gender diversity alone did not have a significant direct impact on financial performance.

The proportion of male and female board members was found to influence decision-making dynamics, but this did not translate into a measurable financial performance

improvement. This finding concurs with previous research by Wanjiku (2022), who also observed that while gender diversity is valued for its potential contributions to decision-making and governance, its direct effects on financial performance are less clear.

These results are supported by Stewardship Theory, developed by Donaldson and Davis (1989), which posits that the role of board members, including gender diversity, influences decision-making and governance practices, but the impact on financial outcomes can vary based on the effectiveness of these practices.

5.2.2: Effect of Board Size on Financial Performance of Manufacturing Firms Listed at the Nairobi Securities Exchange in Kenya.

The study revealed that board size affects the financial performance of manufacturing firms listed on the Nairobi Securities Exchange in Kenya. This was evidenced by the majority of participants who agreed that a larger board size contributes positively to the firm's financial outcomes. Participants emphasized that the total number of board members plays a crucial role in optimizing governance and decision-making processes. An appropriately sized board was deemed essential for effective oversight and strategic decision-making.

This finding concurs with previous research by Okoro (2022), who also identified a significant positive relationship between board size and financial performance. These results are supported by Upper Echelon Theory, developed by Hambrick and Mason (1984), which suggests that the characteristics of top executives, including the size of the board, influence organizational outcomes. According to this theory, larger boards provide diverse perspectives

and expertise, which enhance decision-making and ultimately improve financial performance.

5.2.3: Effect of Board Independence on Financial Performance of Manufacturing Firms Listed at the Nairobi Securities Exchange in Kenya.

The study revealed that board independence affects the financial performance of manufacturing firms listed on the Nairobi Securities Exchange in Kenya. This was evidenced by the majority of participants who agreed that having a higher proportion of independent directors contributes to more effective and unbiased oversight, as well as better management of conflicts of interest. Participants noted that independent directors play a crucial role in ensuring transparency and accountability, which are vital for improving financial performance.

This finding concurs with previous research by Njoroge (2023), who also observed a positive impact of board independence on financial performance. These results are supported by Agency Theory, developed by Jensen and Meckling (1976), which posits that independent directors are crucial in mitigating agency problems between shareholders and management. Agency Theory underpins the exploration of board independence's influence on financial performance, highlighting how independent oversight can enhance corporate governance and contribute to better financial outcomes.

5.3: Conclusions

5.3.1: Gender Diversity on Financial Performance

Based on the aforementioned findings, the study concludes that while gender diversity is recognized for its potential to enrich decision-making and enhance organizational

outcomes, it does not exhibit a significant direct impact on the financial performance of manufacturing firms listed on the Nairobi Securities Exchange. The analysis indicates that although a diverse board can improve governance processes, its influence on financial results is not as pronounced. In contrast, the study found that board size has a substantial effect on financial performance, with a larger board size positively associated with better financial outcomes. This suggests that an increased number of board members can enhance governance and decision-making capabilities, underscoring the importance of having an optimal board size to effectively address organizational challenges and drive financial success.

For gender diversity, the unstandardized coefficient was 0.109, with a standard error of 0.132 and a beta coefficient of 0.051. The t-value for gender diversity is 0.831, resulting in a p-value of 0.408, indicating that gender diversity does not significantly impact financial performance in this model. This conclusion aligns with previous research by Luring and Villesèche (2019), who discovered that the level of gender diversity had a mitigating impact, suggesting that the effect of openness to diversity and favorable team-level diversity attitudes becomes more significant as the gender makeup of the team approaches numerical balance.

5.3.2: Board Size on Financial Performance

Based on the aforementioned findings, the study concludes that board size significantly impacts the financial performance of manufacturing firms listed on the Nairobi Securities Exchange in Kenya. The analysis reveals that a larger board size is positively associated with improved financial outcomes. Specifically, board size had an unstandardized coefficient of 1.185 and a standard error of 0.074, yielding a standardized beta coefficient of 0.841. The t-value for board size is 15.966, with a p-value of 0.000, indicating a highly

significant positive effect on financial performance. This finding suggests that larger board sizes are strongly linked to enhanced financial performance.

These findings align with the research conducted by Rwakihembo and Nsambu Kijjambu (2020), which examined the relationship between board size and the fiscal health of private limited firms in Uganda, revealing a strong positive association between board size and company performance. The research provides a clear and concise explanation of the connection between board size and performance, making it a valuable contribution to practice and policy.

The results suggest that a greater number of board members contributes to more effective governance and decision-making processes. An increased board size facilitates a broader range of expertise and perspectives, enhancing the board's capacity to address complex issues and make strategic decisions. Consequently, firms with optimally sized boards tend to achieve better financial performance. The findings emphasize the importance of optimizing board size to support effective oversight and drive financial success.

5.3.3: Board Independence on Financial Performance

Based on the findings presented, this study concludes that board independence significantly affects the financial performance of manufacturing firms listed on the Nairobi Securities Exchange in Kenya. The analysis indicates that a higher proportion of independent directors is positively associated with enhanced financial outcomes. Independent directors contribute to more effective oversight, reduce potential conflicts of interest, and ensure greater transparency in decision-making processes. This independent oversight helps maintain rigorous financial controls and accountability, which are crucial for improving a firm's financial performance.

Furthermore, board independence exhibited an unstandardized coefficient of 0.099, a standard error of 0.103, and a standardized beta coefficient of 0.064. The t-value is 0.965, and the p-value is 0.337, indicating that board independence does not significantly impact financial performance in this context. In summary, while board size demonstrates a significant positive influence on financial performance, neither gender diversity nor board independence exhibits a significant effect in the current model.

These findings align with previous studies. According to Yeh et al. (2011), the strength of the audit committee increases with its independence, which mitigates agency issues and reduces the potential for insider expropriation. Additionally, Chan and Li (2008) found that a company's success is positively correlated with the independence of its audit committee. In a similar vein, Kallamu and Saat (2015) and Naimah (2017) discovered a favorable correlation between the independence of audit committee members and profitability, which serves as a proxy for firm performance.

5.4: Recommendations

5.4.1: Gender Diversity on Financial Performance

To government policymakers, it is recommended to implement policies that encourage gender diversity in boardrooms. This can be achieved through incentives or requirements for companies to adopt gender diversity targets. Such policies can help in fostering a more inclusive environment that supports diverse perspectives, which could contribute to improved governance.

To management in manufacturing firms listed at the NSE, it is advisable to actively promote gender diversity within their boards. While the direct financial impact may be less

pronounced, fostering a diverse board can enhance decision-making processes and strengthen overall governance.

Firms should strive to create an inclusive culture that values diverse viewpoints. To shareholders, it is recommended to advocate for gender diversity on the boards of the companies they invest in. While the immediate financial benefits may not be evident, supporting diversity can lead to better governance practices and long-term improvements in organizational performance.

5.4.2: Board Size on Financial Performance

To government policymakers, it is recommended to establish guidelines that promote optimal board sizes for effective corporate governance. Policymakers should consider creating regulations or best practices that ensure boards are neither too large nor too small, but rather appropriately sized to enhance decision-making and oversight.

To management in manufacturing firms listed at the NSE, it is important to evaluate and adjust board size to ensure it is conducive to effective governance and decision-making. Firms should regularly assess their board composition to align with the optimal size that maximizes performance and supports strategic objectives.

To shareholders, it is recommended to engage with companies to ensure that board size is optimal for effective governance. Shareholders should encourage firms to review and adjust their board structures to enhance performance and accountability, thus supporting better financial outcomes.

5.4.3: Board Independence on Financial Performance

To government policymakers, it is advisable to introduce regulations that require a certain proportion of independent directors on boards. Ensuring a higher level of board independence can improve corporate governance and enhance financial performance by reducing conflicts of interest and increasing transparency.

To management in manufacturing firms listed at the NSE, it is recommended to prioritize the inclusion of independent directors on their boards. This will enhance oversight and accountability, leading to better governance practices and improved financial performance. Firms should regularly review and strengthen their board independence to maintain robust financial controls.

To shareholders, it is beneficial to advocate for increased board independence in the companies they invest in. Shareholders should seek to ensure that boards have a significant proportion of independent directors, as this can contribute to better decision-making, reduced conflicts of interest, and improved financial performance.

5.5: Limitations of the Study

The study had several limitations that should be considered. Firstly, the analysis was confined to only a few variables: gender diversity, board size, board independence, and financial performance. This narrow focus may have overlooked other factors that could influence financial outcomes, such as executive compensation or market conditions. Additionally, the study employed a descriptive research design, which primarily provided a snapshot of the current situation rather than exploring causal relationships or changes over time.

The study adopted a random sampling technique with a sample size of 189 respondents, which may not have fully captured the diversity of opinions within the broader population of manufacturing firms listed on the Nairobi Securities Exchange. The reliance on primary data collected through online questionnaires as the main tool may also have introduced biases, as it may not have reached all relevant stakeholders equally or accurately reflected their views. These limitations suggested that while the findings provided valuable insights, they might not have encompassed all factors influencing financial performance or been fully representative of the entire population of firms.

To address the limitations of the study, several strategies were implemented. Although the analysis focused on specific variables gender diversity, board size, board independence, and financial performance the study was designed to provide a foundational understanding of these key factors. Future research could expand to include additional variables, such as executive compensation or market conditions, to offer a more comprehensive analysis. The descriptive research design was complemented with robust data collection and analysis techniques to maximize the accuracy and relevance of the findings. While the design provided a snapshot of the current situation, it laid the groundwork for more in-depth causal studies and longitudinal research in the future. To mitigate the potential bias of the random sampling technique and the sample size of 189 respondents, efforts were made to ensure a representative cross-section of firms within the Nairobi Securities Exchange. Despite this, the study acknowledged the need for future research with larger and more diverse samples to capture a wider range of perspectives. The use of online questionnaires as the primary data collection tool was supplemented by ensuring that the survey was accessible and inclusive, reaching a broad audience within the constraints of digital communication.

Efforts were made to design the questionnaire to minimize biases and accurately capture respondent views.

5.6: Suggestions for Further Studies

The research examined the effect of board characteristics on the financial performance of manufacturing firms listed at the Nairobi Securities Exchange in Kenya using a descriptive research design and primary data collected through online questionnaires. The study focused on key variables including gender diversity, board size, and board independence. The study recommends that future research should explore a broader range of factors influencing financial performance, such as executive compensation, market conditions, and industry-specific variables.

Additionally, future studies could adopt longitudinal or experimental research designs to investigate causal relationships and changes over time. Expanding the sample size and employing diverse data collection methods, including face-to-face interviews or mixed-method approaches, could enhance the comprehensiveness and representativeness of the findings. Further research could also examine the impact of these board characteristics across different sectors or geographical regions to provide a more nuanced understanding of their effects on financial performance.

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APPENDIX I: INTRODUCTION LETTER

Dear Sir/Madam

RE: RESEARCH QUESTIONNAIRE

Linnet Mutuku Reg, No. 15/06428, I'm a student at KCA University pursuing a master's degree in business administration with a focus on corporate management. Effect of Board Characteristics on Financial Performance of Manufacturing Firms Listed at The Nairobi Securities Exchange in Kenya is the subject of my research project. As a result of the type of data needed, I have chosen you to be my study participant. Please take your time answering the questions on this questionnaire by checking the box next to each statement that represents how much you agree or disagree with it.

Your disclosure of any information will only be used for academic reasons and will be treated in the strictest of confidence. Your responses will be very helpful in shedding light on the relationship between board characteristics and the financial performance of manufacturing companies listed on Kenya's Nairobi Securities Exchange.

I really appreciate your involvement in this study, but if you have any questions or need any clarification, please don't hesitate to contact me at the number below or by email.

Yours sincerely

Linet Mutuku

Reg, No: 15/06428

APPENDIX 1I

RESEARCH QUESTIONNAIRE

SECTION A GENERAL INFORMATION

Please tick the answer that is appropriate

1. What is your Gender?

Female []

Male []

2. What is your Age?

Below 40 years []

41 – 45 []

46 – 50 []

Above 50 []

3. Years of Service

- 2 years []
- 5years []
- 5 – 10 years []
- 11-20 years []

4. Highest Level of Education

- Secondary []
- Tertiary College []
- University []

SECTION B: Gender Diversity

Tick the corresponding number for your answer to each of the inquiries beneath. Where: Strongly Disagree 1, Disagree 2, Neither Agree 3 nor Disagree, 4 Agree and 5 Strongly Agree)

	Statement	5	4	3	2	1
5	The gender diversity on our board positively impacts the financial performance of the company					
6	A higher number of male board members contributes to better financial performance					
7	A higher number of female board members contributes to better financial performance					

8	The board's composition is reflective of the company's male employee demographic, positively influencing financial outcomes					
9	The board's composition is reflective of the company's female employee demographic, positively influencing financial outcomes					
10	Gender diversity in the boardroom leads to more comprehensive decision-making, which enhances financial performance					

SECTION C: Board Size

Tick the corresponding number for your answer to each of the inquiries beneath. Where: Strongly Disagree 1, Disagree 2, Neither Agree 3 nor Disagree, 4 Agree and 5 Strongly Agree.

	Statement	5	4	3	2	1
11	The size of our board positively impacts the financial performance of the company.					
12	Having a larger board contributes to better financial performance.					

13	The number of male board members correlates with improved financial performance					
14	The number of female board members correlates with improved financial performance					
15	The board size is appropriate for the size of our organization, positively affecting financial outcomes					
16	The composition of our board in terms of size and diversity leads to more effective decision-making, enhancing financial performance					

SECTION D: Board Independence

Tick the corresponding number for your answer to each of the inquiries beneath.

Where Strongly Disagree 1, Disagree 2, Neither Agree 3 nor Disagree, 4 Agree and 5 Strongly Agree

	Statement	5	4	3	2	1
17	The independence of our board members positively impacts the financial performance of the company					

18	Having more independent directors on the audit committee improves our company's financial performance					
19	The number of independent directors on our board is adequate to ensure effective financial oversight.					
20	The presence of independent directors on the audit committee enhances the integrity of our financial reporting.					
21	The number of committees within our board structure supports robust financial performance.					
22	The independence of our board members leads to more effective decision-making, which enhances financial performance.					

SECTION E: Financial Performance

Tick the corresponding number for your answer to each of the inquiries beneath.

Where: Strongly Disagree 1, Disagree 2, Neither Agree 3 nor disagree, 4 Agree and 5

Strongly Agree

Statement	5	4	3	2	1
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23	The ROI of our manufacturing firm is a reliable indicator of our financial performance.					
24	We consistently achieve a high ROI compared to other manufacturing firms listed on the NSE.					
25	Our ROI has improved significantly over the past three years					
26	The ROI metric is crucial for assessing the effectiveness of our investments in manufacturing operations					
27	High ROI is a key factor in attracting investors to our manufacturing firm					
28	Our strategies are specifically designed to maximize ROI in the competitive landscape of the NSE.					

Thanks for your time a cooperation

APPENDIX III

List of Listed Manufacturing Firms as at 2023

	Listed Manufacturing Firms as at 2023
1	B.O.C Kenya Ltd
2	BAT Ltd
3	Carbacid Investments Ltd

4	East African Breweries Ltd
5	Mumias Sugar Ltd
6	Unga Group Ltd
7	Eveready East Africa
8	Kenya Orchards Ltd
9	Flame Tree Group Holdings Ltd

APPENDIX IV

SCHEDULE OF EVENTS 2024

Schedule of Events	DATE SCHEDULE						
ACTIVITY	May.20 24	June. 2024	July. 2024	August.2 025	Sept. 2024	Oct.20 24	Nov.20 24

The creation of the idea							
approving the idea							
data gathering							
Assessing data							
assembling an assignment							
Project defense							
Data Analysis							
Dissertation preparation, Final Dissertation & Defense							
Submission & Graduation							

APPENDIX V

FUND FOR WORK

ITEM	COSTING SHS
Data Collection	12,850.00
Transport Expenses	3,400.00

Stationary	55,060.00
External Hard Drive	65,300.00
Printing and Photocopy	10,500.00
Telephone	2,520.00
Binding the research	4,020.00
Hidden Costs	5,010.00
Total Expenses	158,660.00