

**BOARD CHARACTERISTICS AND TAX PLANNING OF
MANUFACTURING FIRMS LISTED AT THE NAIROBI SECURITIES
EXCHANGE, KENYA**

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DECLARATION

Declaration by the Student

This research project is my original work and has not been presented for a degree in any other University or for any other award. No part of this project should be reproduced without authority of the author or/and Kenyatta University.

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Declaration by Supervisors

I confirm that this project has been carried out by the candidate under my guidance as the university appointed supervisor.

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DEDICATION

This project is dedicated to my family who didn't give up on me to finish my master's degree. Especially to my husband and my parents who at least did their part to help me finish it. A great achievement after being delayed for 2 years. Those 2 years of being depressed and lost my path that I never thought I would be coming back again to finish this degree.

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ABBREVIATIONS AND ACRONYMS

APA	:	American Psychological Association
CMA	:	Capital Markets Authority
DV	:	Dependent Variables
EBT	:	Earnings Before Tax
ETR	:	Effective Tax Rate
IRA	:	Individual Retirement Account
IV	:	Independent Variables
KRA	:	Kenya Revenue Authority
NACOSTI	:	National Commission for Science, Technology and Innovation
NSE	:	Nairobi Securities Exchange
R&D	:	Research and Development
RBT	:	Resource Base Theory
TP	:	Tax Planning

OPERATIONAL DEFINITION OF TERMS

Board Age	Refers to the average tenure of a company's board members. It can be an indicator of board effectiveness, as long-tenured members may be less likely to challenge the status quo.
Board characteristics	Board characteristics are attributes of a firm's board that influence governance and decision-making, operationalized in this study as board size, board age, board meeting frequency, and board education.
Board Education	Refers to the academic qualification held by board members. It encompasses formal education like degrees or certifications, as well as industry-specific expertise
Board Meeting	It is a meeting of a firm board held to deliberate on and decide key corporate issues. Typically, board meetings are periodically held on monthly, quarterly, or annually, based on the company's desires.
Board Size	It denotes the total count of persons serving on a firm board of directors. The optimal board size varies on basis of variable like the firm's size, complexity, and industry
Effective Tax Rate	Refers to the ratio of a firm's total income tax expense (current + deferred) to its earnings before tax (EBT) for each year, expressed as a proportion/percentage.

Tax planning

Refers to the procedure of financial happenings presentation in manner which minimizes tax liabilities.

In this study, tax planning was measured as the ratio of total income tax expenses to earnings before tax.

ABSTRACT

Kenyan tax planning is among the most distinctive characteristics of financial management in listed manufacturing companies in the Nairobi Securities Exchange, with a concentration on tax reduction and adherence to regulatory policy. However, listed manufacturing firms in Kenya face significant challenges in tax planning, with some firms achieving optimal strategies while others struggle to balance compliance with tax effectiveness, leading to fiscal inefficiencies and potential penalties. This study attempted to examine board characteristics and tax planning in Kenya's NSE listed manufacturing firms. Significantly, the study examined the effect of board size, board age, board meetings, and board education on tax planning behavior. The research was grounded in stakeholder theory as well as resource-based theory, and it provided a theory foundation to understand how mechanisms of governance influence tax planning decisions. Descriptive research design was employed during the research, and the population for the research was all 8 listed manufacturing firms at the NSE via the census method. For the years 2019–2023, we utilized secondary data from published financial reports and records of corporate governance. A number of measures were employed to measure the adequacy of a board: the number of directors, average age of directors, frequency of board meetings, and percentage of directors possessing degrees or professional qualifications. The "effective tax rate" (ETR) referred to the tax policy. Measures like average and standard deviation were used in descriptive statistics in data analysis, whereas multiple regression analysis was utilized in inferential statistics. Reliability and validity tests were utilized to check accuracy and consistency of the data. The research upheld high standards of ethics, ensuring confidentiality and integrity at all levels. The results of this study are expected to contribute to the body of knowledge in regard to corporate governance and tax planning in the manufacturing industry as well as benefit policymakers and stakeholders in industry practice. The results revealed that Board age, board size, and board education significantly improved tax planning. Board meeting frequency had a weaker, marginal effect. The study concluded that board characteristics, specifically, board age, size, and education significantly affect tax planning in listed firms. Strategic focus in meetings, rather than frequency alone, is crucial for effective governance and enhanced tax planning outcomes. The study recommended that firms should maintain optimal board sizes, recruit older, experienced directors, and prioritize members with strong educational backgrounds in finance, law, or accounting. Meetings should consistently include tax strategy discussions. Policymakers should update governance codes to reflect board competence, diversity, and effective engagement as drivers of sound tax planning and compliance.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Globally, characteristics of the board of directors have emerged as critical in terms of what they do to shape their financial outcomes, including the aspects of tax planning. The wave of interest garnered across the globe by this research becomes more relevant as one reads the works of Malm and Manaf (2021). Corporate governance through board structures has been shown to impact key financial decisions such as tax planning, which directly affects the performance and sustainability of firms (Lanis & Richardson, 2022). Several board characteristics like size, diversity, and financial expertise-make up the configuration whose combination seems to be strong in determining tax strategies by the firm because they define the extent to which an organization's tax planning and compliance efforts are likely to be implemented. (Akhtar et al., 2020). globally, manufacturing firms are faced with increasing regulatory and stakeholder pressures to be open about their tax activities and optimize financial outcomes (Amidu et al., 2023). For this reason, examining the association between board characteristics and tax planning can provide useful insights into how corporate governance influences tax strategies in the manufacturing sector.

Geographically, in Africa, corporate governance patterns are evolving with more focus on board characteristics policymaking function, as well as tax planning strategies (Olowookere & Emmanuel, 2021). Manufacturing organizations in nations like South Africa and Nigeria have been compelled to improve their governance arrangements in accordance with evolving tax rules and global reporting requirements (Babatunde et al.,

2022). Regulators across the continent are restructuring fiscal norms, and tax planning is a necessary field of interest for businesses in pursuit of financial efficiency and regulatory compliance success (Adeleke & Akinola, 2023). Evidence indicates that board structure, that is, size, age mix, frequency of meetings, and education, is a fundamental protagonist of allocating corporate tax planning approaches across various industries across Africa (Okoth & Mugo, 2023).

Locally, in the Kenyan context, board traits play a central role in shaping the tax planning behavior of NSE-listed manufacturing firms, particularly in the context of increased regulatory scrutiny by the KRA and heightened corporate governance expectations. Manufacturers quoted on the NSE in Kenya operate in an environment where corporate tax laws and governance reforms, such as the Code of Corporate Governance Practices for Issuers of Securities to the Public, 2015, emphasize the duty of the board in compliance and tax effectiveness enhancement. Felix et al. (2025) concluded that the board size and composition of NSE-listed manufacturing firms influence their tax planning behavior, and firms with large, experienced, and diverse boards are more likely to utilize good tax-saving strategies with low tax risk. Owino (2024) also found that intensive frequencies of board meetings and director financial experience enhance tax compliance and create innovative tax planning approaches. As production companies struggle with rising costs of manufacturing and regulatory pressures, recognizing how the nature of boards influences tax planning becomes critical to enhancing financial performance and long-run viability.

NSE-listed manufacturing companies are a key thrust of Kenya's industrial growth, employment, and economic development (Githongo et al., 2021). Due to changing tax legislations, compliance, and vigilance by the Kenya Revenue Authority (KRA), these

entities come under mounting pressure to maximize their tax planning strategies (Muthoni & Mwangi, 2022). For such firms to be fiscally viable to remit their tax liabilities and to build shareholder wealth, tax planning is necessary. To impact tax strategy and tax compliance, governance factors in general, but board characteristics especially like size, age, frequency of meetings, and education level have a significant role (Obuya et al., 2023). By appreciating how these board attributes shape tax planning, manufacturing governance arrangements can be strengthened for purposes of regulatory compliance and enhanced financial performance.

1.1.1 Tax Planning

The method of managing the finances of a company so as to minimize tax charges is known as tax planning. It entails looking for ways of lowering tax charges legally and examining the money status of oneself. Tax planning is required by individuals as well as organizations because it maximizes returns after taxes and safeguards against tax policies and legislation (Rizkinia & Jayanti, 2024). Effective tax planning is a matter of sound knowledge of tax laws and regulation and acquaintance with the available options for tax savings. Tax obligation reduction is one of the predominant tax planning objectives. The deductions, credits, and exemptions provided by the tax regulations can be used to achieve this (Igbinenikaro & Adewusi, 2024). For example, persons can reduce their tax responsibilities by contributing to tax-advantaged retirement funds such as 401(k) plans or IRAs.

Through tax incentives utilization via bonus depreciation or R&D tax credits, firms can minimize their tax liabilities (Suganda & Fakhroni, 2025). Effective tax preparation can save a significant amount of money for both people and businesses, that can then be used for investments or expansion. One of the main goals of tax planning is to guarantee

compliance with tax laws and regulations. It can be challenging for individuals and businesses to stay up to date with the latest regulations due to the complexity and constant change of tax laws (Fitri, 2024). Noncompliance with tax laws may result in serious penalties and fines, as well as in some cases, criminal accusations. Making sure one's tax obligations are fulfilled while lowering one's tax liabilities is the goal of effective tax planning (Kumar, 2024). This dictates a philosophical tax rules as well as principles knowledge relevant to one's scenario and the capability of this knowledge application in tax liability minimization.

Lastly, reaching long-term financial goals requires careful tax preparation. Effective tax planning can help individuals and businesses achieve financial security and stability by lowering tax payments and raising after-tax profit (Fitri, 2024). This can assist people and companies in investing for the future, saving for retirement, and reaching other financial objectives. Tax planning is an continuing process requiring regular reviews and adjustments to ensure that one's financial situation is optimized for tax efficiency. To sum up, tax planning is an essential component of financial management for both individuals and businesses. It comprises evaluating one's financial situation, determining strategies to reduce taxes, and ensuring compliance with tax rules and regulations (Owino, 2024). Effective tax planning can help both people and businesses lower their tax liabilities, accomplish long-term financial goals, and boost their after-tax income (Rizkinia & Jayanti, 2024). In this study, tax planning, the dependent variable, was measured using the effective tax rate (ETR), computed as the ratio of total income tax expense to earnings before tax.

1.1.2 Board Characteristics

Board attributes points to firm's board structure, in relation to size, diversity, independence, and expertise. Board composition can be influential in tax planning by reducing tax liabilities and adhering to tax laws and regulations. For example, a company can develop strategies of reducing taxes and ensuring that all the relevant regulations are adhered to by having directors with experience in taxation laws (Wang, Guan, & Zhu, 2021). In the same perspective, independent directors can assist in ensuring that any conflicts of interest that may arise are detected and resolved and that the tax planning activities of the company are in the interests of its shareholders (Chen, Li, & Xie, 2021). All other things being equal, the structure of a corporation's board can have great impact on both overall financial success and performance and effective tax planning.

The board size of a company is indicated by the number of its members. Since there are differing views regarding the number of directors, the ideal board size is a subject of debate and research. While others hold the opinion that larger boards can ensure a greater diversity of perspective and experience, as well as more effective management monitoring (Fosberg & Sedatole, 2021), some consider that smaller boards can be more effective, efficient, and agile in making decisions. Board size research has yielded conflicting outcomes; some discover that larger boards can be linked to better performance, while others discover a negative correlation between board size and company performance. Ultimately, there is no one size fits all when it comes to ideal board size, but rather, it depends on the particular needs and nature of the company. But it is suggested in general that firms strike a balance in having a board that is broad

enough to provide diverse viewpoints and skills and yet narrow enough to facilitate effective and efficient decision-making (Ferris & Yan, 2020).

The term "board age" refers to how long a company has had the same board of directors in office. Board age can have a considerable influence on the performance and results of a company, research has demonstrated, with both positive and negative correlations being determined. On the one hand, increased board tenure can contribute to increased institutional stability, knowledge, and experience that can be used to improve decision-making and business performance (Ntim, Osei, & Mensah, 2021). However, longer board tenures also risk causing groupthink, resistance to change, and a paucity of fresh ideas, which can restrict the capacity of a corporation to innovate and react to evolving market circumstances. Firms are therefore normally counseled to strive to balance the quantity of seasoned board members who contribute experience and beneficial information and insights with fresh views that can challenge presumptions and foster innovation. Staggered board terms, annual board assessments, and constant attempts to attract experienced and diverse directors are practices that can be utilized to achieve this balance (Qian, Song & Zhang, 2021). A corporation's board of directors holds formal meetings in the form of board meetings to deliberate and vote on matters pertaining to the corporation's actions and strategy (Abiad et al., 2025).

Board meetings also vary considerably in terms of frequency and form, based on the company's requirements and the company itself. While some boards meet quarterly or monthly, or even more often, in addition to discussing financial performance, risk management, and strategic direction, board meetings usually have a regular agenda and may include presentations from senior management or outside experts (Sunny & Hoque, 2025). There must be a balance between allowing the freedom of discussion

and debate among board members and covering all matters to allow meetings to be fruitful (Del Giudice & Parisi, 2021). Corporation's board capacity to execute its supervisory role and make well-informed decisions in the interests of the business and the stakeholders depends on regular and well-conducted board meetings. The term "board education" refers to the continuous training and development that a company's board of directors pursues to improve their competencies.

Seminars, workshops, webinars, conferences, and online courses are some of the ways in which board education can be delivered (Abdullah et al., 2024). By having a better grasp of the operations and issues of the firm, board members can better undertake their monitoring functions and facilitate good governance practices (Ayadi & Bouzgarrou, 2020). Regular and tailor-made board educational programs are necessary for a firm's board to be informed, updated, and make decisions in the interests of the company and its stakeholders (Oyinlola, 2025).

1.1.3 Manufacturing Firms Listed at the Nairobi Securities Exchange

Manufacturing companies quoted on the NSE are crucial for Kenya's economic growth since they contribute to raising employment levels, industrial development, and export revenues. A total of eight manufacturing companies are quoted on the NSE as of 2025, and they are governed by the Capital Markets Authority (CMA) (Wanjiru et al., 2023). By promoting value addition and industrialization, these companies, which operate in a variety of industries like as food and beverage, cement manufacturing, industrial chemicals, and medicines, significantly boost the nation's GDP (Ngugi & Muthama, 2022). Kenya's Vision 2030 development strategy, which encourages industrial expansion and innovation in order to transform the nation into a middle-income

economy, places a strong emphasis on the manufacturing sector (Karanja & Mwangi, 2021).

From the standpoint of corporate governance, listed manufacturing companies are organized with a board of directors that has significant influence over strategic decisions, including tax planning. The effectiveness of governance in these companies has been recognized to be significantly influenced by board size; larger boards tend to bring a wider range of viewpoints, but they may also result in slower decision-making (Omondi & Githinji, 2022). Board age, which typically reflects the experience of board members, can influence strategic tax planning decisions. Older board members are often perceived as more conservative in financial planning and risk management, which includes tax strategies (Waweru et al., 2023). Additionally, the frequency of board meetings is also a vital factor to consider since more frequent meetings would allow for extensive deliberations on financial planning, regulatory matters, and tax obligations with potential resultant improved tax planning strategies (Mbugua & Kamau, 2022).

Since the educational level of board members affects how effectively they can make sound financial decisions, board education best fits when used in tax planning. Educated board members have been associated with better financial performance as they are able to grasp intricate tax laws and modify their plans to both legally acceptable and financial objectives (Owino & Njoroge, 2023). Tax planning is an important aspect of financial management in Kenya's manufacturing sector since it assists firms in reducing their tax burden under the KRA regulatory environment. Manufacturing firms must utilize strategic methods of tax planning to be able to maintain financial performance and satisfy shareholder expectations owing to the KRA's increased efforts at improving tax compliance and stemming tax evasion (Mutuku & Ochieng, 2023).

1.2 Statement of Problem

Manufacturing firms listed on the NSE in Kenya are grappling with persistent challenges in tax planning, driven by frequent changes in tax laws, heightened scrutiny from the Kenya Revenue Authority (KRA), and the complexity of balancing compliance with financial performance. While tax planning is intended to minimize tax liability legally, many listed firms struggle to achieve effective strategies, resulting in inconsistencies across the sector. Some firms optimize their tax strategies to improve financial performance, while others face inefficiencies, fiscal penalties, and reputational risks due to ineffective tax planning. This inconsistency in tax planning undermines shareholder value, weakens competitiveness, and poses a threat to the financial sustainability of the sector (Muthoni & Mwangi, 2022).

Earlier studies have considered board composition and tax preparation in various contexts. Globally, Sunny and Hoque (2025) have explored board features' influence on profitability in Indonesia, but their study of Indonesian firms provides a contextual boundary condition and therefore calls for a Kenyan-based study of board size and tax planning within the manufacturing sector. From the research by Gachanja and Kihoro (2020), the age of the board has a significant effect on corporation tax strategy and tax planning in Kenyan companies. Their research was nonetheless across a broad range of industries, and they leave a contextual gap that this research attempts to bridge by concentrating specifically on NSE listed manufacturing firms. Abdulahi and Abor (2020) tested the nexus between board size and firm tax planning in Ghana and provided evidence that board size directly affects tax strategies. The national focus of their research creates a contextual gap, necessitating a Kenyan-based analysis of board size and tax planning by manufacturing companies.

Baguma and Nalukenge (2020) investigated the relationship between board members' educational backgrounds and tax planning in Uganda, finding a strong positive link between board education and the efficacy tax preparation. While their study was based on Ugandan firms, this study specifically examined the educational qualifications of board members in NSE-listed manufacturing firms in Kenya. Similarly, Gakobo and Kaburu (2021) analyzed the board meeting frequency influence on corporate tax planning in Kenya and found a significant relationship. However, their research engrossed on a mix of industries, though this research provided a more targeted analysis within the manufacturing sector.

Conceptually, prior research has often examined board characteristics in aggregate or focused on individual variables in isolation. This study seeks to integrate multiple board characteristics board size, age, meeting frequency, and education within the context of tax planning to provide a more comprehensive understanding. Contextually, there is limited research targeting NSE-listed manufacturing firms, despite their significant contribution to Kenya's economy. Methodologically, previous studies have relied on diverse data sources and analytical techniques, underscoring the need for sector-specific, longitudinal analysis using firm-level data from financial reports. This research, therefore, aimed in addressing these conceptual, contextual, and methodological gaps by analyzing the influence of board characteristics on tax planning among NSE listed manufacturing firms.

1.3 Objectives of Study

1.3.1 General Objectives

The study sought to establish the effect of board characteristics on tax planning of manufacturing firms listed at the Nairobi Securities Exchange.

1.3.2 Specific Objectives

The specific objectives were:

- (i) To explore the influence board size has on tax planning of manufacturing firms listed at the Nairobi Securities Exchange.
- (ii) To evaluate the level of influence board age has on tax planning of manufacturing firms listed at the Nairobi Securities Exchange.
- (iii) To investigate the relationship between board meeting and tax planning of manufacturing firms listed at the Nairobi Securities Exchange.
- (iv) To assess the impact of board education and tax planning of manufacturing firms listed at the Nairobi Securities Exchange.

1.4 Research Hypotheses

The null hypotheses below were intended to be tested:

- H₀₁:** Board size has no significant effect on tax planning manufacturing firms listed at the Nairobi Securities Exchange.
- H₀₂:** Board age has no significant effect on tax planning of manufacturing firms listed at the Nairobi Securities Exchange
- H₀₃:** Board meeting has no significant effect on tax planning of manufacturing firms listed at the Nairobi Securities Exchange
- H₀₄:** Board education has no significant effect on tax planning of manufacturing firms listed at the Nairobi Securities Exchange.

1.5 Significance of Study

By investigating the connection between amidst features and tax planning activities among NSE listed manufacturing firms, this research would enrich body of knowledge already available on corporate governance. Policymakers and regulatory agencies, like the CMA and the KRA, can use this information to create rules and regulations that ensure compliance with tax laws and regulations while encouraging efficient tax planning. The report would also help manufacturing companies by providing practical suggestions for maximizing corporate governance mechanisms for best financial performance and tax planning. The research would also be beneficial to investors and other parties, such as shareholders, financial analysts, and legislators, by improving their knowledge of the influence of governance mechanisms on tax planning techniques in the manufacturing sector.

1.6 Scope of Study

The emphasis of this research was to investigate the relationship between board attributes and tax planning among NSE-listed manufacturing companies. Between 2019 and 2023, the emphasis of the research revolved around the eight manufacturing companies listed on the NSE. They were chosen because of their major role in Kenya's industrialization, job creation, and economic development. In the closely regulated context of listed manufacturing companies, tax planning is of prime importance to their long-term financial viability and compliance with KRA.

The years 2019–2023 were selected because they represent a time of significant change in the tax landscape in Kenya, like the enactment of the Finance Acts within this period, which introduced significant changes to corporate tax law, including alteration of the

corporate rate tax, introduction of minimum tax, and tightening of transfer pricing regulations. In addition, the COVID-19 pandemic, which happened at this time, resulted in financial disruption and tax relief to affect business tax planning. This time thus enabled the examination of how board structure influenced decisions concerning tax planning in the aftermath of shifting regulation and economic conditions.

Secondary data utilized in this study were collected from, among others, the following: financial statements, annual statements, and CG reports of the eight manufacturing firms quoted at the NSE. The method employed ensured that the study utilizes reliable and available data to examine the relationship between board attributes such as size, age, frequency of meeting, and education and tax planning measures in the manufacturing industry in Kenya.

1.7 Limitations of Study

There may be a number of limitations to this study on the board composition and tax planning of manufacturing companies listed on the NSE. First, because the study makes use of company reports and financial statements that are publicly available, yet such sources of information may not offer extensive information on tax planning initiatives, the quality as well as availability of information on the tax planning activities of the organizations studied may be affected. Some companies might also not be ready to disclose complex tax planning information due to confidentiality concerns, which might affect the extent of analysis.

Second, the findings may not be applicable to other industries or unlisted manufacturing companies that come under different regulatory and governance frameworks due to the study concentrating on the eight NSE listed manufacturing companies alone. The unique

operational and regulatory environment of listed firms may not fully reflect the experiences of smaller or privately held manufacturing firms in Kenya.

Lastly, changes in tax regulations and corporate governance requirements over time may affect the comparability of the findings with future studies conducted under different regulatory environments. Evolving tax policies and governance reforms could influence board-level tax planning decisions, limiting the applicability of the study's conclusions to different periods.

1.8 Organization of Study

Separated into five sections, the research project The first section provided an overview of the research problem and its background, including the following: the NSE's manufacturing firms, the importance of tax planning for businesses, the role of the board mandate in corporate governance and decision-making, the study's objectives, scope, significance, and limitations. The second chapter was titled Literature Review, which reviews previous research on board characteristics and tax planning, including relevant theories and empirical studies. Identify and summarize research gaps and conceptual framework. The third chapter contained the research methodology describing the research design, data sources, sampling strategy, and data analysis techniques, diagnostic test and ethical considerations. The fourth chapter presented the research findings and their interpretation in line with the study objectives, while the fifth chapter provided the summary, conclusions, and recommendations based on the results.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section outlined related theories, previous papers that reviewed the variables and also summarize knowledge gaps and illustrate the affiliation between variables in form of a conceptual Framework.

2.2 Theoretical Review

The theories to underpin the study included Stakeholders Theory, RBT, Stewardship Theory, and Transaction Cost Theory.

2.2.1 Stakeholders Theory

Theory was originally espoused by Freeman (1984), who argued that the interest of all stakeholders, and not just shareholders, must be considered whenever companies make their decisions. The theory relies on the assumption that the success of corporation depends on how effectively it manages relationships with various stakeholders, including investors, employees, customers, suppliers, and regulatory bodies. It centers on the reality that corporations are situated within a broader socio-economic context and owe obligations to constituencies beyond profit maximization (Freeman, Harrison, & Zyglidopoulos, 2018). More recent scholars have extended this theory to encompass corporate governance and tax planning. Castellini et al. (2023) centered on the reality that effective governance mechanisms ensure boardroom decisions are in conformity with the interest of various stakeholders like regulatory agencies to guarantee tax compliance. Similarly, Brown and Kurey (2023) elaborated that tax planning

effectiveness is increased when boards include stakeholder matters in strategic financial decisions, reducing reputational dangers. Kimani et al. (2023) also argued that board diversity, including age and education, can add to tax planning practices through ensuring the different stakeholder perspectives are considered in business tax plans.

Although it has been widely adopted, stakeholder theory has been subject to significant criticisms. Alabdullah et al. (2023) criticized that the theory is too vague and tends not to offer precise instructions on how companies should rank and balance the rival interests of different stakeholders, which can be inconvenient for managerial decision-making. Wang and Zhang (2023) further posited that the broad scope of responding to numerous stakeholders is likely to divert focus from the core financial objectives such that boards will find it challenging to balance tax optimization and compliance. Otieno and Mwangi (2023) further faulted the hypothesis that certain firms employ stakeholder rhetoric as a cosmetic veneer of corporate social responsibility while aggressively pursuing tax avoidance. Mutua (2023) added that the need to address different interests of different stakeholders could at times cause disagreement and hence indecisiveness and inefficiencies in determining the corporate tax planning strategies.

Stakeholder theory is most applicable to this research in that it highlights the critical importance of board characteristics in balancing tax planning efficacy and compliance with laws. The listed industrial enterprises on the NSE are subject to close monitoring by the KRA, as well as accountability to shareholders, workers, and the public. Board attributes such as size, age, rate of meeting, and education level can sustain tax planning procedures in a way that different stakeholders' expertise is utilized in strategic choices. For instance, an educated board will be able to read tax legislation more effectively, while frequent meetings enable quick adaptation to tax policy changes. Thus, the theory

is a suitable structure for analysis of how board attributes affect tax planning in listed manufacturing firms.

2.2.2 Resource Based Theory

RBT, formalized by Wernerfelt (1984) and further development by Barney (1991), contends that the sustainable competitive advantage of a firm increases from the unique resources and capabilities possessed by it. RBT contends that resources within firms are imperfectly mobile and heterogeneous in nature, implying that firms possessing valuable, rare, inimitable, and non-substitutable (VRIN) resources are able to achieve superior long-term performance. Barney (1991) emphasized that in-house assets such as managerial expertise, organizational knowledge, and strategic board skills are key drivers of competitive superiority. RBT has also been employed by today's scholars in corporate governance and tax planning. Kinyua et al. (2023) emphasized that board members' expertise is a strategic asset that enables firms to deal with complex tax systems. Similarly, Zhang et al. (2024) argued that boards with diverse professional backgrounds enhance tax planning efficacy through their immense competence and improved monitoring of tax-decision making. This was also the situation in the context of a Kenyan study by Kamau and Otieno (2023), which found that manufacturing firms whose boards consisted of experienced finance professionals had more effective tax-saving initiatives. Despite RBT's commonality, it has not been devoid of critics.

Osei et al. (2024) argued that RBT can generally not keep up with the rapid pace of regulatory and technological advancements, which have the potential to quickly devalue the value of valuable internal possessions. Brown et al. (2024) also criticized RBT for being self-centered in overlooking the importance of adapting to fluid external environments such as global tax reforms. A local study by Kamau and Otieno (2023)

was worried that overemphasis on in-house board knowledge could limit the responsiveness of Kenyan listed companies to abrupt tax reforms, such as those implemented through Kenya's Finance Acts. Taylor and Smith (2024) further countered that RBT fails to take into account the worth of external partnerships and industry memberships, which may be essential towards enhancing a firm's tax planning ability and resiliency in the face of volatile regulatory environments. Such arguments suggest that while internal assets are most important, companies must also consider including external market and regulatory concerns in a bid to remain competitive in tax planning. Resource-Based theory is most appropriate in this questionnaire because it emphasizes the strategic importance of board characteristics as firm assets that could enhance tax planning practices in NSE-listed manufacturing firms. Board characteristics such as education, age, size, and meeting frequency are intellectual assets that ensure compliance in taxation and finance.

A properly constituted board provides experience and expertise in niche domains that guide the development of effective tax planning strategy so that firms can minimize tax charges but stay within regulatory requirements. Employing RBT, this study knows that firms with strategy-constituted boards have an edge in navigating Kenya's complex tax environment toward sustainable financial performance.

2.2.3 Stewardship Theory

Stewardship Theory, put forth by Donaldson and Davis (1991), asserts that managers are stewards who act in the shareholders' best interests and prioritize organizational goals over personal gains. Contrary to Agency Theory, which asserts that managers are egoistic, Stewardship theory assumes that managers are motivated by organizational performance, long-term improvement, and trust relationships. The stewardship theory

focuses on the fact that stewards are intrinsically driven by rewards such as achievement and recognition and align their objectives with those of the shareholders. Global research studies in recent times have applied the stewardship theory to corporate taxation and tax planning. Lee et al. (2024) argued that boards following a stewardship philosophy would likely adopt tax planning strategies balancing tax efficiency and regulation. Similarly, Wang and Zhao (2024) found that stewardship boards design collaborative tax policy aligned with transparency to ensure stakeholder and investor trust. In the Kenyan context, Njoroge and Muturi (2023) observed that firms whose boards exhibited stewardship norms had better tax planning practices with reduced tax risks and enhanced corporate reputation.

Critics have argued that stewardship theory ignores possible conflicts of interest and trusts individuals to always act in the best interest of the organization, and due to this reason, its utopian vision of managers and board members has faced criticism (Bendickson et al., 2020). Critics state that stewardship theory ignores circumstances when board members have no skills or expertise needed to best utilize resources, particularly in complex domains such as tax planning that demands specialist knowledge (Wang & Hu, 2021; Muthoni & Omondi, 2022). Additionally, the theory will fail to adequately describe the way external pressures, such as tax liabilities and changes in governance, impact board behavior and financial decision-making (Ndungu et al., 2021). Based on these criticisms, stewardship theory can perform better when combined with other governance models that recognize the possibility of self-interest and also incorporate accountability measures.

While these have been the criticisms levied against stewardship theory, it is still a great option for the goals of this study since it specifies the manner in which board attributes

like size, age, meeting frequency, and education can influence tax planning choices in manufacturing companies. This study looks into whether or not the profiles of board members are compatible with the stewardship function by considering them stewards of organizational resources, which could result in better tax planning and, subsequently, financial sustainability. The idea offers a basis for exploring how boards should function from a stewardship perspective to maximize tax plans that are useful to the business and its members.

2.2.4 Transaction Cost Theory

TCT, which was founded by Coase (1937) and advanced by Williamson (1975), foresees the existence of firms as a means of lowering the costs of market transactions, including bargaining, monitoring, and the enforcement of contracts. The theory assumes that there are transaction costs due to issues like opportunism, bounded rationality, and asymmetry of information that can hamper efficient market exchanges. Williamson (1985) highlighted that companies internalize transactions when coordination through the market becomes expensive, thus mitigating uncertainties and protecting against opportunism. Recent international research has applied TCT to corporate governance and tax planning. Johnson et al. (2024) contended that effectively designed boards lower the transaction cost of tax planning by facilitating information flows and guaranteeing timely tax compliance decisions. Similarly, Becker and Schmidt (2024) determined that board expertise lowers compliance costs associated with taxes by way of a reduction in information asymmetry between tax authorities and companies. In the African context, Okoye and Mensah (2023) observed that expert boards in firms' tax laws effectively mitigate compliance risks and transaction costs associated with audits and tax litigation.

Nonetheless, other researchers contend that Transaction Cost Theory's exclusive focus on cost minimization ignores other factors that may influence organizational choices, including long-term sustainability or strategic growth (Makori & Otieno, 2020). The theory ignores the complexity of decision-making since it believes any move an organization makes is geared towards lowering transaction costs (Muthee & Ngugi, 2021). Furthermore, the theory has been faulted for not emphasizing the importance of human characteristics like commitment and trust in shaping organizational behavior, especially in banking organizations where these elements have an important bearing on board decision-making (Kamau & Kariuki, 2022). The critics conclude in spite of Transaction Cost Theory giving a perceptive perception, it might not account for the varied motivations underpinning board decisions in listed manufacturing firms.

Transaction Cost Theory is nonetheless applicable to our study in as much as it emphasizes how vital board composition is to the successful management of transaction costs associated with taxes. This study investigates the degree to which the boards of listed manufacturing firms mitigate the transaction costs associated with tax compliance by analyzing how board size, age, meeting frequency, and level of education affect tax planning. The theory forms a solid foundation for comprehending the real issues confronting boards of listed manufacturing companies in their efforts to maximize tax planning and improve financial efficiency.

2.3 Empirical Review

The empirical review presents findings from previous studies that have examined the relationship between board characteristics and tax planning across different contexts. It highlights how variables such as board size, board age, board education, and frequency of board meetings have been linked to corporate tax strategies, both globally and

locally. By critically analyzing these studies, the section identifies areas of convergence and divergence in findings, while also exposing conceptual, contextual, and methodological gaps that this study seeks to address.

2.3.1 Board Size and Tax Planning

Samuel and Indrati (2025) studied tax planning of firms with audit committees, profitability, and boards of directors' power. It used a quantitative research design and formed data of publicly traded companies in order to examine the impact of these governance variables on corporate tax planning strategies. Authors considered how the presence of an audit committee, profitability levels, and board composition impact companies' tax planning behaviour. The findings indicated that firms with effective audit committees and more profitable firms engaged in more structured tax planning initiatives, with compliance intact and reducing tax liabilities. The study also indicated that an effective board of directors contributes to tax strategic planning, which elevates tax financial sustainability and lowers regulatory risks. Githiomi and Koori (2024) examined the impact of board size on tax planning of listed manufacturing and allied firms at NSE.

The research employed a panel data regression analysis model to analyze data from financial statements of listed manufacturing firms. The research explored the impact of board size changes on corporate tax planning. The research established that firms with larger boards undertake more systematic tax planning, utilizing the diverse experience and strategic direction of directors to reduce tax burdens while ensuring compliance. In addition, the research established that an ideal board size enhances governance processes, resulting in quality decision-making in taxation issues. The survey concluded that effectively constituted boards have a key role to play in striking a

balance between tax efficiency and regulatory compliance, which ultimately supports financial sustainability. Board size and tax planning of Canadian publicly traded companies were examined by Bugeja and Chen (2021). We used 238 publicly traded Canadian companies over the years 2011 to 2015 with the fixed-effects econometric method. There is a positive relationship between board size and tax planning, according to the study. Canadian firms were used in their study while NSE listed manufacturing companies used in the new study.

2.3.2 Board Age and Tax Planning

Yahaya (2025) examined board characteristics and tax aggressiveness of listed firms in Nigeria from 2014-2023. Examining a panel dataset of 153 firms and a pooled OLS regression specification, the evidence showed that audit committee independence and gender diversity reduced tax aggressiveness, while larger audit committees and regular meetings encouraged tax planning. The findings identify governance structures needed in juggling tax effectiveness with compliance, offering implications for corporate boards and regulators.

Thai agro-sector listed companies were the target in a study by Thomya and Ritsri (2024) into the association between audit committee features and tax planning. The aspects of listed firms' audit committee, independence, and frequency in meetings were tested against tax strategising using panel data. The findings suggested that increased size of audit committees and frequent meetings were associated with more aggressive tax planning, while increased independence equated to conservative tax approaches. The study emphasized the significance of audit committee composition in dictating firms' tax planning approaches, particularly for firms in regulated sectors like agriculture.

Out of listed industries and allied business companies on the NSE between 2010 and 2019, Akims & Akims (2023) analyzed the impact of a number of board characteristics on fiscal preparedness of corporations. Utilizing an explanatory research approach, the research analyzed nine listed companies' data with descriptive and inferential statistical methods. Board independence lowered the effective tax rate greatly, from the results., with more independent directors in the companies having more formal tax planning. On the other hand, taxation rate was not affected much by board size and gender balance, indicating negligible control over tax planning methods. The research found independent boards to be crucial to corporate tax planning and recommended that listed companies use well-balanced boards with executive and non-executive directors to achieve maximum control and tax efficiency.

Gachanja and Kihoro (2020) evaluated board age relationship with corporate tax planning in Kenya. Using sample of 30 NSE listed firms for the span 2013-2017, the study applies a fixed-effect regression model in exploring the board age impact on tax planning. The results suggest that board age directly influence corporate tax planning. This study specifically evaluated manufacturing firms listed at the NSE unlike the previous that comprised firms from other sectors.

Groot, Michels and Roosenboom (2020) looked into the connection board age has with corporate tax planning in Luxembourg. Using data from a sample of 115 listed firms on the Luxembourg Stock Exchange for the period 2012-2016, the study applies a fixed-effect regression model to investigate the impact of board age on tax planning. The results suggested that board age influenced tax planning positively. This study is regionally different from this proposed study which assessed Kenyan NSE listed manufacturing firms.

Louw and Mersham (2020) checked the connection amidst board age and tax planning in South Africa. Applying a fixed-effect regression model to evaluate 83 listed firms on the Johannesburg listed firms between 2010-2015. The result suggested that board age has a positively affects tax planning. The context of this research differs from that of this new study as it sought to examine NSE listed manufacturing firms.

2.3.3 Board Meetings and Tax Planning

Martins and Omoye (2024) studied board characteristics effect on tax planning in listed firms in Nigeria from 2017 to 2021 using panel regression analysis. The research discovered that board independence and political connections positively influenced tax planning, board size as well as gender diversity had a negative but insignificant effect. The study recommended monitoring politically connected firms to prevent tax manipulation.

Okuta and Mwangi (2024) studied board committee reports effect on tax planning and profitability of sugar manufacturing companies in Kenya from 2017 to 2021. Using an explanatory research design and multiple linear regression analysis, the research revealed that board committee reports had positive significant influence tax planning and profitability. The study recommended regular review of financial and tax reports to enhance compliance and financial performance.

Gakobo and Kaburu (2021) pursued the association of board meetings and corporate tax planning in Kenya. Via a sample of 40 listed NSE firms for the duration 2014-2018, the study applied the fixed-effects regression model in board meetings impact on tax planning analysis. A direct and important influence was affirmed between board

meetings and corporate tax planning. This study specifically analyzed NSE listed manufacturing firms.

Lawal and Adetula (2020) probed the dependence of corporate tax planning on board meetings in Nigeria. The research utilized 84 firms listed on the Nigerian Stock Exchange data for the span 2011-2017 and employed the fixed-effects regression model in analyzing the link amidst board meetings and tax planning. The results advocate board meetings possess substantial positive impact on corporate tax planning. Manufacturing firms listed at the NSE examined in this study which is regionally different from this previous study which assessed Nigerian firms.

Nanda and Moser (2020) investigated board meetings influence on corporate tax aggressiveness in the US. Utilizing a sample of 1,200 US firms for the duration 2005-2014, they applied the fixed-effects regression model to analyze the affiliation amidst board meetings and tax aggressiveness. Board meetings indicated a positive association with tax aggressiveness. Firms in the USA were scrutinized in this study this proposed scrutinized NSE listed manufacturing firms.

2.3.4 Board Education and Tax Planning

Iazzi et al. (2023) investigated corporate board characteristics and auditors effect on tax aggressiveness among non-financial corporations listed on the Milan Stock Exchange in Italy. Using panel data from 168 firms covering the period 2011 to 2018, the study employed fixed effects regression analysis on five tax aggressiveness indices. The findings revealed that larger board size, gender diversity, CEO duality, and high external audit quality increased corporate tax aggressiveness. The research highlighted

the necessity for regulatory forms to strengthen board composition guidelines and auditor monitoring to balance tax planning and compliance.

Njoroge and Njoroge (2021) researched the correlation between board education and tax planning among firms in Kenya. A dataset of 40 listed firms on the NSE was analyzed for the time frame of 2014 to 2018, revealing that board education has a substantial and favourable impact on tax planning. The NSE listed manufacturing firms was investigated in the new study unlike this previous study which investigated generally firms listed at NSE.

Liew, Arshad and Yaacob (2021) explored board education correlation with corporate tax planning in Malaysia. A sample of 301 listed firms was used for the time span of 2012 to 2017. The findings indicate that a board's education influenced tax planning directly. Malaysian firms were considered in this paper, but the proposed evaluated NSE listed manufacturing firms.

Baguma and Nalukenge (2020) determined the correlation between the educational background of board members and tax planning in Uganda. A dataset comprising of 40 publicly traded firms listed on the Uganda Securities Exchange over a span of 6 years (2013-2018) is used for the analysis. An important and affirmative relationship between board education and tax planning was indicated. Ugandan firms were the base for this study unlike the ongoing that based on NSE listed manufacturing firms.

2.4 Summary of Literature and Research Gaps

This section synthesizes the key insights from the reviewed theoretical and empirical literature, drawing attention to areas where consensus exists and where findings diverge.

Table 2.1: Summary of Literature Review and Research Gap

Author (Year)	Focus of previous study	Major Findings	Research Gaps	Current research focus
Samuel & Indrati (2025)	Investigated the impact of audit committees, economic viability, and boards of directors on the preparation of taxes for various businesses.	Found that audit committees, profitability, and effective boards positively influence tax planning.	Publicly traded companies were the focus of their study.	The research focused on general firms, while the current research focuses specifically on manufacturing firms listed at the NSE.
Yahaya (2025)	Considered the audit board features affect on aggressiveness in taxation in openly traded enterprises.	Independence and gender diversity reduced tax aggressiveness, while larger committees and frequent meetings promoted tax planning.	Focused on publicly traded firms across industries; this research looked only at manufacturing enterprises that are traded on the NSE.	Manufacturing firms listed at the NSE will be examined in this current study.
Githiom i & Koori (2024)	Kenyan manufacturing and associated enterprises quoted on the NSE had their board sizes and tax plans reviewed.	Established that larger boards enhance tax planning efficiency by leveraging diverse expertise for compliance and tax optimization.	The research focused on both manufacturing and allied firms	Manufacturing firms listed at the NSE will be examined in this current study.

Martins & Omoye (2024)	Examined board characteristics and tax planning in listed firms in Nigeria.	Board independence and political connections positively influenced tax planning, while board size and gender diversity had no significant effect.	Misunderstanding of context due to the study's execution in Nigeria, a country with a very varied economic and social landscape.	Manufacturing firms listed at the NSE
Okuta & Mwangi (2024)	Examined board committee reports and their effect on tax planning and profitability of sugar firms in Kenya.	Board committee reports positively influenced tax planning and profitability.	Problems with the study's methodology due to its use of a research design with explanations	Adopt descriptive research design in manufacturing firms listed at the NSE
Thomya & Ritsri (2024)	Examined the effect of board characteristics on tax planning in agro-industry firms in Thailand.	Larger audit committees and frequent meetings increased tax planning, while independence led to conservative tax practices.	Focused on agro-industry firms in Thailand; the current study focused on manufacturing firms listed at the NSE.	Manufacturing firms listed at the NSE
Akims & Akims (2023)	Examined the board features influence on company planning for taxes in NSE listing industry and associated companies.	The impact of independence of boards on ETR is strong and adverse, but the effects of board number and diversity of genders on ETR are negligible.	Focused on both manufacturing and allied firms; the current study exclusively analyzed NSE listed manufacturing firms.	Manufacturing firms listed at the NSE
Iazzi et al. (2023)	Examined the corporate board and auditors role in tax aggressiveness among listed firms in Italy.	Tax aggression rose with larger boards, more diverse boards, multiple chief executive officers, and high-quality audits..	Conceptual gap by considering other board characteristics like audit excellence, diversity of genders, and dual-CEO structures	Board education in manufacturing firms listed at NSE

Gachanj <i>a et al</i> (2020)	evaluated board age relationship with corporate tax planning in Kenya.	The results suggest that board age directly influence corporate tax planning.	the previous included firms from other sectors.	This study specifically evaluated manufacturing firms listed at the NSE
Louw, <i>et al</i> (2020)	Researched the correlation amongst committee seniority and South African tax preparation.	The outcomes suggest that tax planning is favourably impacted by board age.	The context of this study differ from that of	this new study as it sought to examine NSE listed manufacturing firms.
Groot, <i>et al.</i> (2020)	looked into the connection board age has with corporate tax planning in Luxembourg.	The results suggested that board age influenced tax planning positively.	This study is regionally different	this proposed study assessed Kenyan manufacturing firms listed at the NSE.
Nanda <i>et al</i> (2020)	explored how board sessions affect the tax assertiveness of US corporations.	There was a favourable connection among tax aggression and board sessions.	Firms in the USA were scrutinized in this study	this proposed scrutinized manufacturing firms listed at the NSE.
Lawal, <i>et al</i> (2020)	probed the dependence of corporate tax planning on board meetings in Nigeria.	The results suggest that board meetings have a significant positive influence on corporate tax planning.	this previous study is regionally different, it assessed Nigerian firms.	NSE listed Manufacturing firms
Baguma , <i>et al.</i> (2020)	determined the correlation between the educational background of board members and tax planning in Uganda.	An important and affirmative relationship between board education and tax planning was indicated.	Ugandan firms were the base for this study	The ongoing that based on NSE listed manufacturing firms.
Njoroge and	researched the correlation	board education has a significant	this previous study	The NSE listed manufacturing

Njoroge (2021)	between board education and tax planning among firms in Kenya.	and favourable impact on tax planning	investigated generally firms listed at NSE.	firms listed at the NSE was investigated in the new study
Liew, <i>et al</i> (2021)	explored board education correlation with corporate tax planning in Malaysia.	The findings indicate that a board's education influenced tax planning directly.	Malaysian firms were considered in this paper	the proposed evaluated manufacturing firms listed at the NSE.
Gakobo <i>et al.</i> (2021)	explored into the association of board meetings and corporate tax planning in Kenya.	A direct and important influence was affirmed between board meetings and corporate tax planning.	Their study generalized findings among listed firms from different sectors	This study specifically analyzed manufacturing firms listed at the NSE
Bugeja <i>et al.</i> (2021)	analyzed board size and corporate tax planning of publicly traded firms in Canada.	The study finds positive affiliation amidst board size and tax planning.	Canadian firms were assessed in their study.	NSE listed manufacturing firms was assessed in the new research.

Source: Literature Review (2025)

2.5 Conceptual Framework

The conceptual framework focuses on four key board attributes and their influence on tax outcomes. Board size, defined by the total number of board members (H01), explores how the scale of governance impacts tax strategies. Board age, measured as the average age of board members (H02), investigates whether the experience and maturity of the board affect tax planning decisions. Board meeting frequency, represented by the total number of meetings annually (H03), assesses the role of active engagement and oversight in shaping tax policies. Lastly, board education, determined by the highest qualification of board members (H04), examines the influence of expertise and knowledge on effective tax planning.

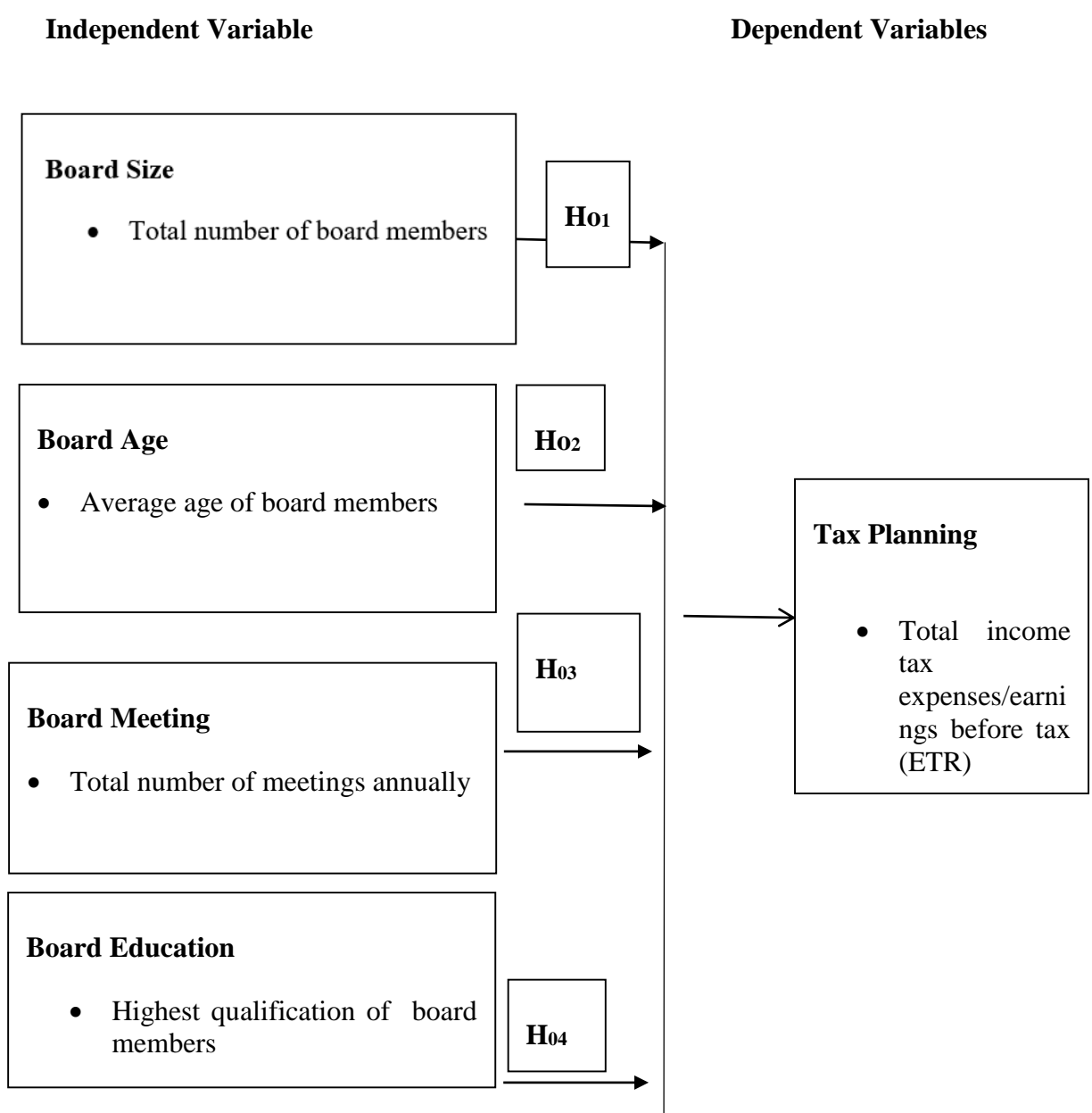


Figure 2.1: Conceptual Framework

Source: Researcher (2025)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design that was followed to investigate the link between board characteristics and tax planning in listed manufacturing firms in the NSE. The ethical considerations, data analysis and collection procedures, sample size, and study design are all described in this chapter.

3.2 Research Design

Research design is the overall plan or strategy that researchers use to answer their research hypothesis or question. It encompasses all the elements of the research process, including the methodology and processes of collecting and analyzing data, sample selection, and the overall study design (Cooper & Schindler, 2023). Descriptive research design was used in the research to examine the association between tax planning and board characteristics. As it allows for the gathering of quantitative, factual data from financial accounts, the design was suitable, enabling the proper assessment of the association between board characteristics and tax planning without intervention into variables.

3.3 Empirical Model

Descriptive statistical analysis and multiple regressions were employed to analyse the given data. The model for this research is below

$$TP_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BA_{it} + \beta_3 BM_{it} + \beta_4 BE_{it} + \varepsilon \dots \dots \dots 3.1$$

Where:

TP = Tax Planning

BS = Board Size

BA = Board Age

BM = Board Meeting

BE = Board Education

t = Time Scope

i = Firm

β_1 to β_4 = Coefficients

ε = Error term

3.4 Operationalization and Measurements of Variables

The measurement and operationalisation of the variables appear in Table 3.2.

Table 3. 1: Operationalization and Measurement of Variables

Variable	Type	Operational definition	Indicator /Measurement	Measurement scale
Board Size	I V	Number of directors on the board.	Number of board of directors	Interval
Board Age	IV	Board membership' average age.	Mean age of board members.	Interval

Board Meeting	IV	How often the board convenes annually.	Number of meetings per year.	Interval
Board Education	IV	The level of education of members of the board	Highest qualification of board members	Interval
Tax Planning	DV	Firm's approach to minimizing tax obligations legally.	Total income tax expenses/earnings before tax	Ratio

Source: Researcher (2025)

3.5 Target Population

The study's intended subjects were the eight manufacturing enterprises listed on the NSE (NSE, 2023).

3.6 Sampling Design

The procedure of choosing a representative subset, or sample, of a population for research purposes is known as sampling design (Kothari, 2021). All eight of the manufacturing companies listed on the NSE were chosen for the study using a census sample technique.

3.7 Data Collection

Annual accounts and annual reports of the chosen companies for the period 2019–2023 were utilized as the secondary sources of data during the research. Some of the data collected include board size, age, meetings, and tax planning. Each board size was based on the number of board members; the education of every board was based on the average age of the board members; each board size was based on the number of

meetings that occurred in the year; and the education level of the board members was based on qualifications. Tax planning was measured by the effective tax rate (ETR) of each firm.

3.8 Data Analysis and Presentation

Analysis of the data collected was carried out through descriptive and inferential statistics throughout the research. The use of descriptive statistical analysis in summarizing the data, which are the mean, standard deviation, and frequency distribution of variables, was utilized. Inferential statistics are utilized in order to test the hypotheses as well as establish if tax planning is related with board attributes. Multiple regression analysis was utilized by the research in order to ascertain the relationship between board size, age, meetings and tax planning.

3.9 Diagnostic Tests

Diagnostic tests are statistical tests that are used in checking the regression model assumptions and validity. They are used to detect any issues with the model, such as non-normality, heteroscedasticity, and multicollinearity, that may result in biased estimates and incorrect conclusions (Gujarati & Porter, 2022).

3.9.1 Multicollinearity Test

In a regression model, multicollinearity occurs whenever two or more predictor variables possess high correlation degree, which indicates that they are heavily dependent on one another (Frost, 2022). Regression coefficient estimates become unstable and imprecise as a result, perhaps leading to inaccurate inferences regarding the associations between the predictor and outcome variables. We assessed each predictor variable using the Variance Inflation Factor (VIF). VIFs greater than 5 or 10

are often considered to be indicative of multicollinearity. To address this, the correlated predictor variable is removed from the model.

3.9.2 Normality Test

Normality test is a statistical method used to check if the data follows a normal distribution. It is an important assumption for many statistical tests, counting Pearson's correlation and linear regression (Tabachnick & Fidell, 2019). The most widely used normality test, based on the assumption that data is regularly dispersed, the Shapiro-Wilk test. Considering the data do not follow a typical pattern, we may conclude that the null assumption is false, if the test statistic and p-value are below the selected level of significance (typically 0.05). Non-parametric tests were to be employed in place of parametric tests if the data is not regularly distributed.

3.9.3 Heteroscedasticity Test

Whenever there is a significant variation in the error variance across every one of the variables that are autonomous in a model of regression, this is known as heteroscedasticity (Frost, 2022). Stated differently, the residuals' distribution varies depending on the range of values of the independent variable or variables. Heteroscedasticity can be found using a variety of methods, such as the White test, the Breusch-Pagan test, and visual examination of residual plots. The decision rules for this test are a p-value of >0.05 . If heteroscedasticity is found, robust standard errors was to be applied to account for it.

3.9.4 Hausman test

To ensure coherence, statisticians utilise the Hausman test and also for efficiency of estimators, particularly in cases where two different methods provide different results

(Wooldridge, 2022). The test helps determine which of the two methods provides more accurate and reliable results by checking for the presence of endogeneity, or correlation amidst the the regression model's variables that are autonomous and its error term. The test is based on comparing the difference between the two estimators and their estimated variance-covariance matrices. If the difference is significant, the null hypothesis of no systematic difference between the two estimators is rejected, indicating that one of the methods is inconsistent or inefficient. In this case, the preferred method is the one that produces consistent and efficient results.

3.10 Ethical Considerations

This study adhered to established research ethics throughout its execution. First, approval to conduct the study was obtained through a research permit issued by the National Commission for Science, Technology and Innovation (NACOSTI), as required by the Kenyan legal and academic framework. In addition, a letter of introduction from Kenyatta University was obtained to formally identify the researcher and facilitate access to relevant secondary data sources.

Since the study relied exclusively on secondary data from publicly available financial statements and governance reports of NSE-listed manufacturing firms, no direct interaction with human subjects was involved. Nevertheless, the principles of confidentiality, integrity, and responsible reporting were maintained. Firm-specific data was anonymized during analysis and presentation to avoid exposing sensitive financial or governance details.

The principle of informed consent was observed by acknowledging all data sources and ensuring that proper credit was given to the originators of the information. Furthermore,

ethical standards relating to academic honesty and avoidance of plagiarism were strictly followed, with all sources appropriately cited in accordance with APA (7th edition) referencing guidelines.

CHAPTER FOUR RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the research endeavor, documenting the findings and discussions arising from the investigation. Discussed and presented are the findings from panel regression, descriptive statistics, and correlation analysis. The outcomes are connected with the existing literature, allowing for comparisons to be made.

4.2 Descriptive Analysis

Documented in this section is the analysis of descriptive nature, relying on values ranging from highest to lowest, average figures, and variability, with Table 4.1 illustrating the statistical outcome of the investigation.

Table 4. 1: Summary of Descriptive Statistics

stats	Board Age	Board Meeting	Board Education	Board Size	Tax Planning
N	40	40	40	40	40
min	43.1	4	3.5	6	-1.25362
max	65.3	10	4.6	10	0.765702
mean	50.0175	5.875	4.035	7.375	0.279007
sd	2.666207	1.651534	0.291372	1.212911	0.283712

Source: Researcher (2025)

Average age of board members across the sampled firms is approximately 50 years, with a relatively wide range between 43.1 and 65.3 years while a low SD of 2.67, indicating that a mature and experienced board composition, which may influence the firm's approach to tax planning through cautious and compliance-oriented strategies.

Board meetings averaged 5.88 per year, ranging from 4 to 10, suggesting variability in how often boards convene. A moderate standard deviation of 1.65 shows that while

some boards meet infrequently, others maintain more active engagement, which can enhance oversight and the implementation of effective tax planning practices.

Board education levels among the firms were relatively high and homogeneous, scoring a mean value of 4.04 and exhibiting a slight variability measured at 0.29 in standard deviation. The education ranged from 3.5 (masters) to 4.6 (PhD). This points to a well-qualified board, and such educational attainment is likely to equip board members with the requisite knowledge to understand and navigate complex tax regulations, potentially leading to more efficient tax management.

The average board size was 7.38 members, ranging from 6 to 10, and showed moderate variability ($SD = 1.21$). A wider range of expertise and viewpoints, which can help uncover tax-saving possibilities, is often contributed by having more members on a board, they could also face challenges in coordination and decision-making.

Exhibiting the greatest fluctuation, tax planning, quantified as the proportion of tax expense to pre-tax income—had a mean of 0.279 and ranged between -1.25 and 0.765702. Relatively high SD of 0.284 suggests significant differences in how firms manage their tax obligations. A value of 0.2790 indicating that, on average, the firms in the study allocated about 27.9% of their earnings before tax to income tax expenses. The minimum value of -1.2536 suggests that some firms may have experienced negative tax expenses relative to their earnings, potentially due to factors like tax refunds, credits, or losses carried forward. In contrast, the maximum value of 0.7657 indicates that some firms allocated up to 76.57% of their earnings before tax to income tax expenses, suggesting potentially aggressive tax planning strategies or high levels of tax liability. The standard deviation of 0.2837 suggests considerable variation in tax

planning strategies among the firms. This implies that while some firms manage their tax obligations efficiently, others may face challenges or adopt more aggressive or conservative approaches to tax planning.

4.3 Correlation Analysis

Applied was method correlation Pearson in assessing the associations among study the variables. Contained are the correlation test outcomes between the study variables in Table 4.2. The direction of the relationship this provided.

Table 4. 2: Pearson Correlation

	Taxation Planning	Board Age	Board Meeting	Board Education
Taxation Planning	1			
Board Age Sig	0.6535 0.000	1		
Board Meeting Sig	-0.5359 0.0004	-0.3298 0.0377	1	
Board Education Sig	0.7671 0.000	0.6232 0.000	-0.7128 0.000	1
Board Size Sig	-0.3552 0.0245	-0.4532 0.0033	0.5251 0.0005	-0.4199 0.007

Source: Researcher (2025)

The Pearson correlation results reveal significant relationships between board characteristics and taxation planning among manufacturing firms listed at the NSE. Board education exhibits the strongest positive correlation with tax planning ($r = 0.7671$, $p < 0.001$), suggesting that higher educational qualifications among board members are associated with more effective tax planning strategies. This implies that

well-educated boards are better equipped to understand complex tax regulations and employ strategies that legally minimize tax liabilities.

Board age also shows a strong positive correlation with tax planning ($r = 0.6535$, $p < 0.001$), indicating that older, and presumably more experienced, boards are more inclined or capable of implementing effective tax planning practices. Their accumulated experience may help them better anticipate and manage tax risks and obligations.

Conversely, board meeting frequency is negatively correlated with tax planning ($r = -0.5359$, $p = 0.0004$). This suggests that more frequent board meetings do not necessarily translate to better tax planning. It is possible that frequent meetings are reactive (e.g., in response to crises) rather than proactive or strategic in nature, potentially diverting attention from long-term financial optimization like tax planning.

Board size also has a negative correlation with tax planning ($r = -0.3552$, $p = 0.0245$), though weaker than the other relationships. This may imply that larger boards might experience coordination challenges or diluted responsibility, reducing the board's effectiveness in steering strategic tax decisions. Overall, the results highlight that smaller, older, and more educated boards meeting at strategic intervals are more likely to enhance a firm's tax planning practices.

4.4 Diagnostic Tests

To provide appropriateness of the CLRM axioms, various diagnostic tests were strictly adhered to and carried out in the investigation. Evaluation of regression models on violated assumptions of CLRM would lead to inefficiency and inconsistency in

estimated parameters. The tests conducted include: heteroscedasticity, normality, autocorrelation, stationarity, multicollinearity, as well as fixed and random effect tests.

4.4.1 Multi-collinearity Test

The multi-collinearity test in the investigation relied on VIF approach. According to the VIF test threshold, a value below 2 for the independent variables is preferred to reduce the possibility of excessive (high) multi-collinearity (Field, 2009). Table 4.3 below presents the results of the VIF test.

Table 4. 3: Multi-collinearity Test Results

Variable	VIF	1/VIF
Board Education	3.19	0.313682
Board Meeting	2.63	0.380823
Board Age	1.99	0.502266
Board Size	1.62	0.618216
Mean VIF	2.36	

Source: Researcher (2025)

Based on the Variance Inflation Factor (VIF), the results of the multi-collinearity test show moderate multi-collinearity present among the model's independent variables. According to Field (2009), a VIF value below 2 suggests low multi-collinearity and is generally acceptable for regression analysis. However, the mean VIF value in this study is 2.36, with individual VIF scores ranging from 1.62 to 3.19. Specifically, board education (VIF = 3.19) and board meetings (VIF = 2.63) exceed the recommended threshold, implying that these variables may be moderately correlated with other predictors in the model. Board age (VIF = 1.99) and board size (VIF = 1.62) fall within acceptable limits, indicating lower collinearity.

4.4.2 Normality Test

A test called the Shapiro-Wilk test was used to determine whether the variables investigated were normally distributed. This test checks if the data followed a normal distribution. The null hypothesis cannot be discarded if the test statistic is larger than 0.05, which implies that the variable follows a distribution that is typical. Table 4.4 below displays the results of the normalcy test.

Table 4. 4: Normality Test

Variable	Obs	W	V	z	Prob>z
Tax Planning	40	0.98418	0.625	-0.989	0.83856
Board Age	40	0.96161	1.518	0.878	0.19002
Board Meeting	40	0.99406	0.235	-3.048	0.99885
Board Education	40	0.96103	1.541	0.909	0.18157
Board Size	40	0.94635	2.121	1.582	0.05682

Source: Researcher (2025)

All of the investigated variables had values that higher than the 0.05 criterion, as is apparent in Table 4.4, indicating that they do not significantly deviate from normality. Specifically, Tax Planning ($p = 0.83856$), Board Age ($p = 0.19002$), Board Meeting ($p = 0.99885$), Board Education ($p = 0.18157$), and Board Size ($p = 0.05682$) all show sufficient evidence of normal distribution. Although Board Size has the lowest p-value (0.05682), it still remains slightly above the critical threshold, thus not violating the normality assumption. This provides support for using parametric statistical approaches like regression modelling in the parts that follow, since it suggests that all variables' data follow a typical distribution.

4.4.3 Heteroscedasticity Test

The heteroscedasticity test within the regression was model conducted in using Wald the Modified test for heteroskedasticity groupwise inside a regression effects fixed framework. This evaluates test whether the terms error of variance remain constant (homoscedastic) among all observations. The hypothesis null (H_0) for posits the test that residual the are variances equal (i.e., homoscedastic model the is). The results shown are in obtainable Table below 4.5.

Table 4. 5: Heteroscedasticity Test Results

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model	
H0: $\sigma(i)^2 = \sigma^2$ for all i	
chi2 (8) =	101.78
Prob>chi2 =	0. 1668

Source: Researcher (2025)

The values 101.78, and 0.1668 are chi-square and P values respectively are shown in Table 4.5 according to the outcomes. The null assumption cannot be refuted since the outcome of p is larger than the customary 0.05 threshold indicating absence of significant evidence of heteroscedasticity in the model, and thus, the assumption of homoscedastic error terms holds. As a result, the regression estimates are considered reliable, and the model does not suffer from inefficiency due to non-constant error variances.

4.4.4 Autocorrelation Test

To identify first-order employed correlations in serial panel regression data, the Wooldridge autocorrelation test was used. Table 4.6 contains the outcome.

Table 4. 6: Autocorrelation Test Results Wooldridge test for autocorrelation

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
F(1, 7) = 2.327
Prob > F = 0.1710

Source: Researcher (2025)

Test outcomes yielded an F-statistic of 2.327, with an accompanying p-value of 0.1710, as seen in Table 4.6 of the outcomes. The null assumption cannot be discounted given that the value of p is greater than 0.05. Based on the data, it appears the model does not have any substantial evidence of first-order autocorrelation.

4.4.5 Stationarity Test

With the use of the Fisher-type (Phillips-Perron) unit root test, a reliable method for finding unit roots in panel data, we checked whether the dataset was stationary. This test is essential to ensure the validity of regression results by avoiding the risk of spurious relationships among non-stationary variables. Reported in Table 4.7 below are the outcomes of the test for stationarity.

Table 4. 7: Stationarity Test Results

Variable name	t-Statistic(adjusted)	P-value	Stationary
Board Size	35.8894	0.0000	hold
Board Age	13.5564	0.0000	hold
Board Meeting	11.5993	0.0000	hold
Board Education	15.0745	0.0000	hold
Taxation Planning	25.6136	0.0000	hold

Source: Researcher (2025)

As presented in Table 4.7, all variables Board Size, Board Age, Board Meeting, Board Education, and Taxation Planning recorded adjusted t-statistics with corresponding p-values of 0.0000. These p-values are significantly below the 0.05 threshold, indicating strong statistical evidence to reject the null hypothesis of a unit root. Therefore, it can be concluded that all variables are stationary, making them suitable for regression analysis without requiring differencing or transformation.

4.4.6 Model Specification Test

The investigator did the Hausman test to see if our model was suitable for panel effects analysis, which takes into account both fixed and random effects in regression. Assuming effects are random and uncorrelated, Baltagi to (2005) presupposes a model in which individuals are assumed to have fixed heterogeneity and to have correlated factors that explain it. Uses the Hausman test to determine if there is a systematic difference in the two models' coefficients. Hausman test outcome is presented in Table 4.8.

Table 4. 8: Hausman Test Results

	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b S.E.
Board Age	0.243253	0.249433	-0.00618	0.049686
Board Meeting	0.637691	-0.11166	0.749347	0.277004
Board Education	2.733123	1.445105	1.288018	0.504127
Board Size	1.802807	0.233713	1.569093	0.597476

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg
 Test: Ho: difference in coefficients not systematic

$$\text{chi2}(4) = (b-B)'[(V_b - V_B)^{-1}](b-B)$$

$$= 8.89$$

$$\text{Prob} > \text{chi2} = 0.0438$$

Source: Researcher (2025)

The test statistic chi-square and P values were 8.89, and 0.0438 respectively, both of which are less than the conventional 0.05 threshold of significance (as shown in Table 4.8). This means that we can rule out the possibility of a systematic difference in the coefficients, which is the null hypothesis. So, if you want consistent and trustworthy estimations, it's best to go with the fixed model rather than the random one.

4.5 Regression Analyses

For manufacturing companies registered on the NSE, the purpose of the panel regression study was to determine which board qualities had the most impact on tax planning. The study specifically investigated the effect of four independent variables board size, board age, board meeting frequency, and board education on the dependent variable, which is tax planning. Using a fixed effects model (as determined by the Hausman specification test), the regression sought to capture how variations in these board attributes across firms and over time relate to their tax planning behaviors. The regression output provides coefficients for each variable, indicating the direction and magnitude of their influence on tax planning. Positive coefficients suggest that

increases in the respective board characteristics are associated with higher levels of tax planning while negative coefficients suggest the opposite.

4.5.1 Regression Model

The results were derived from a fixed-effects (within) panel regression model, which was selected based on the Hausman specification test. The model incorporated 40 observations across 8 firms, each contributing five data points. Contained the outcomes are below in Table 4.9.

Table 4. 9: Regression Model

Fixed-effects (within) regression	Number of obs	=	40
Group variable: FirmID	Number of groups	=	8
R-sq: within = 0.6814	Obs per group:		
between = 0.0244	Min	=	5
overall = 0.4000	Avg	=	5
	Max	=	5
	F(4,28)	=	14.97
corr(u _i , X _b) = -0.4643	Prob > F	=	0

Source: Researcher (2025)

The within R-squared value of 0.6814 indicates that approximately 68.1% of the variability in tax planning within individual firms over time is explained by board characteristics such as board age, board meeting frequency, board education level, and board size. This suggests that changes in these characteristics within a firm significantly impact its approach to tax planning. In contrast, the between R-squared was 0.0244, showing that differences in board characteristics across firms do not account for much of the variation in tax planning. The overall R-squared of 0.4000 implies that the model explains 40% of the total variation in tax planning, which is a reasonably good fit for

panel data in social science research. Furthermore, both the F-statistic of 14.97 and the p-value of 0.000 indicate that the hypothesis of regression is significantly different, indicating that board characteristics jointly have a meaningful effect on tax planning strategies.

4.5.2 Regression Coefficient

The regression coefficient results provide insight into the extent and direction of the variables as revealed in Table 4.10.

Table 4. 10: Regression Coefficient

Tax Planning	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Board Age	0.243253	0.116405	2.09	0.046	0.004809	0.481697
Board Meeting	0.637691	0.346609	1.84	0.076	-0.0723	1.347688
Board Education	2.733123	0.666665	4.1	0.000	1.367521	4.098725
Board Size	1.802807	0.769907	2.34	0.027	0.225725	3.379889
_cons	-8.25113	2.369324	-3.48	0.002	-13.1045	-3.39779

Source: Researcher (2025)

The analysis reveals that board age has a positive and statistically significant relationship with tax planning ($\beta = 0.243$, $p = 0.046$). This implies that as the average age of board members increases, the firm tends to engage in more effective tax planning strategies. The likely explanation is that older board members may bring more experience and risk aversion, leading to conservative yet efficient tax approaches.

The frequency of board meetings also has a positive coefficient ($\beta = 0.638$), indicating a potential positive influence on tax planning. However, this relationship is only marginally significant ($p = 0.076$), suggesting that while increased meeting frequency

may help improve oversight and strategic alignment on tax matters, the strength of this relationship is not robust enough to be conclusive at the 5% significance level.

Board education demonstrates the strongest and most statistically significant effect on tax planning ($\beta = 2.733$, $p < 0.001$). This suggests that boards with higher levels of education likely reflecting better financial literacy, legal understanding, and strategic insight are better equipped to oversee and implement effective tax planning practices. This result reinforces the critical role that intellectual capital and expertise play in shaping sound corporate governance and fiscal strategies.

Similarly, board size is positively and significantly associated with tax planning ($\beta = 1.803$, $p = 0.027$). Larger boards may bring diverse perspectives and a broader skillset, which can enhance decision-making related to tax efficiency. However, this must be balanced against the potential for inefficiencies associated with overly large boards.

The negative and significant constant term ($\beta = -8.251$, $p = 0.002$) suggests that in the absence of the board characteristics considered, the firms would engage in significantly less tax planning.

4.6 Hypotheses Testing

In order to evaluate the null hypothesis of the investigation, the p-value approach was applied. The investigation evaluated the following null hypotheses that we had previously developed.

H₀₁: Board size has no significant effect on tax planning manufacturing firms listed at the NSE.

The intention of the investigation was to look at manufacturing companies listed on the NSE and see how the size of their boards affected their tax strategies. According to this particular objective, we tested the hypothesis that boards of larger sizes do not affect tax policies used by these companies. 0.05 level of significance was utilized in testing the hypothesis. The regression study proved that Board Size does affect Tax Planning at the 0.05 level of significance, p-value being 0.027. Hence, it was found that Board Size significantly influenced Tax Planning in these firms, and the null hypothesis was rejected.

This suggests that larger boards, with a greater variety of viewpoints and experience, can administer and manage more effective tax planning better. Nonetheless, this has to do with the ability of the board to handle divergent inputs as well as to make decisions in a timely manner. While bigger boards can offer more experience, there is also the risk of inefficiency or slow decision-making, especially if the board becomes so big that it cannot efficiently work. This, in its turn, at times cancels out the advantages of a bigger board.

The finding from the current study that the board size directly affects tax planning of manufacturing firms quoted on the NSE (NSE) is attested to by several empirical studies that also see positive correlation of board size with tax planning. Following these studies, large boards possess diversified minds and experience and thus help firms make strategic and informative tax decisions. Githiomi and Koori (2024) determined that larger boards in NSE-listed manufacturing firms positively affected tax planning. The authors argued that the diverse expertise and strategic direction offered by a larger board enhance better decision-making on taxes. Similarly, Samuel and Indrati (2025) investigated the effects of board composition and audit committees on corporate tax

planning, and found that firms with effective boards and audit committees were more likely to engage in structured tax planning to optimize tax liabilities while ensuring regulatory compliance. This supports the idea that boards with diverse expertise contribute to strategic decision-making, including tax planning. In addition, a favourable correlation between board membership and company tax planning was discovered by Bugeja and Chen (2021) in their investigation of publicly traded businesses in Canada.// In their Chen and Bugeja (2021) study of firms publicly traded in Canada, reported they a relationship positive between size board and tax corporate planning.

However, despite the support from these studies, the current findings stand in contrast to some research that has shown no significant connexion among planning and size of the board. For instance, previous studies have submitted that while grander boards may have the potential to bring more expertise, they can also introduce inefficiencies, slow decision-making, or lead to conflicts within the boardroom. Jin et al. (2022) argued that excessively large boards could create challenges related to coordination, decision-making delays, and internal conflicts. In their view, smaller, more cohesive boards could make quicker and more effective tax decisions. This runs counter to what we discover in the present investigation, which links larger boards to better tax planning.

The link among board size and tax planning can be theoretically anchored in Stakeholder, Resource-Based, Stewardship, and Transaction Cost Theory. Stakeholder Theory highlights that larger boards, through diverse representation, better align tax decisions with stakeholder interests and regulatory expectations. RBT supports this by framing larger, more qualified boards as internal strategic assets that enhance decision-making in complex tax environments. Stewardship Theory suggests that board

members committed to firm success will prioritize effective and compliant tax strategies. Lastly, TCT contends that larger boards lower tax-withholding transaction costs by increasing monitoring and trimming informational imbalances. Through the introduction of wide-ranging sets of skills and perspectives, More extensive boards are ideally placed to manage complex tax regimes and improve tax conformity. But the finding also underscore the importance of good board management alongside the dangers of overly large boards, which are likely to be beset by decision-making inefficiencies.

H02: Board age has no significant effect on tax planning of manufacturing firms listed at the NSE

The objective of the study was to investigate manufacturing companies listed on the NSE and establish how board age affects their tax planning. In line with this particular objective, we tested the hypothesis that the age of the board of directors has no significant impact on the tax planning of these companies.

This finding suggests that older boards, which tend to have more experience and longer-term orientations, can be more appropriately positioned to plan and oversee general tax planning strategies. Their accumulated experience and knowledge can create valuable insight into the complexities of tax regulations, potentially leading to more effective tax strategies. Conversely, the influence of Board Age can also be attributed to more traditional decision-making approaches, which at times may encroach upon the application of newer innovative tax planning techniques. However, the positive correlation in the study shows that Board Age contributes to better tax planning processes.

The strong positive correlation, supports many studies and theoretical reasoning which emphasize the board characteristics in influencing corporate tax planning. Many studies confirm the positive correlation of board age and tax planning. For instance, Gachanja and Kihoro (2020), in their study of 30 NSE-listed firms from 2013-2017, found that the age of the board directly influences corporate tax planning. Their observation would suggest that older boards, having gained knowledge and experience, are more able to manage tax planning effectively. Similarly, Groot, Michels, and Roosenboom (2020), from their study of 115 Luxembourg Stock Exchange-listed companies, also documented a positive influence of board age on tax planning. They argued that more aged boards help in better tax planning due to their experience in dealing with complex tax legislations. Louw and Mersham (2020), studying 83 companies listed on the Johannesburg Stock Exchange between 2010 and 2015, also determined that older boards had a positive influence on tax planning, solidifying the argument that experience is of essence in dealing with tax compliance and strategic development.

However, not all studies align with the current findings. When investigating industrial companies listed on the NSE between 2010 and 2019, Akims and Akims (2023) considered the impact of diverse board attributes on corporate tax preparedness. Board age was not found to have a notable influence on tax planning in their investigation, with a suggestion that other board attributes, such as board independence, were more successful in leading tax planning. Similarly, Thomya and Ritsri (2024), in their study of Thai agro-sector firms, focused on audit committee characteristics and their impact on tax planning, where they identified committee size, independence, and frequency of meetings as more dominant determinants than board age. This contrasts with the current study's emphasis on board age as a significant determinant of tax planning.

Theoretical frameworks such as Stakeholder Theory, Resource-Based Theory, Stewardship Theory, and Transaction Cost Theory offer an insight into how board age influences tax planning. Stakeholder Theory emphasizes that older (more experienced) boards are better able to balance diverse stakeholder interests, which is reflected in more compliant and strategic tax decisions. Resource-Based Theory views older board members as valuable internal resources, whose experience enhances firms' ability to handle tax issues effectively. Stewardship Theory argues that older directors emphasize long-term goals, aligning tax planning with firm performance sustainability. Lastly, Transaction Cost Theory forecasts that seasoned boards reduce uncertainty and cost in complex tax decisions, making better tax planning processes easier.

H₀₃: Board meeting has no significant effect on tax planning of manufacturing firms listed at the NSE

The purpose of research was to investigate how NSE-listed manufacturing firms tax plans are formulated after board meetings. The researchers presumed that tax planning in the companies is independent of the number of board meetings. Under 0.05 level of significance, the hypothesis was tested. The regression analysis indicated that there is no significant association between Board Meeting Frequency and Tax Planning since it has a probability value of 0.076, higher than the 0.05 significance level threshold.

Because the p-value is above 0.05, null hypothesis rejection is not warranted, and it indicates that board meeting frequency has no significant impact on the tax planning strategies implemented by the manufacturing companies under consideration in this study. This finding indicates that frequent meetings could be a means of delivering tax problems but frequency itself is not directly related to effective tax planning. These,

and possibly other considerations such as the board's expertise or strategic focus on tax matters, can play more influential parts in shaping the firm's tax planning strategy. Therefore, frequency of board meetings alone cannot be a key determinant of tax planning effectiveness for such firms.

This concurs with some empirical studies but is contrary to others. Martins and Omoye (2024) had found in a study that while some board characteristics such as political connections and independence did affect tax planning in Nigerian companies, the frequency of board meetings was never highlighted as a determining factor. Similarly, Okuta and Mwangi (2024) emphasized the importance of the agenda and content of board committee reports, not the frequency of board meetings, as crucial for specifying tax planning and profitability in Kenyan sugar production companies. This accentuates the fact that the agenda and content of boardroom discussion, and not their frequency, might be more critical in specifying effective tax strategies.

By comparison, though, some research studies documented a high correlation of board meetings with tax planning. Gakobo and Kaburu (2021), based on the evidence of 40 listed Kenyan companies during 2014-2018, documented a significant direct effect of board meetings on corporate tax planning and suggested that frequent meetings can enhance monitoring and involvement in tax policy decisions. Lawal and Adetula (2020) also determined that board meeting frequency positively influenced tax planning using Nigerian data. Nanda and Moser (2020), in their study of U.S. firms, discovered a positive association between board meeting frequency and tax aggressiveness, and therefore the contention that more frequent meetings could leave room for discussion and implementation of aggressive tax strategies.

The mixed findings on board meeting frequency and tax planning can be explained through several theoretical perspectives. Agency Theory suggests that more frequent board meetings enhance oversight, including tax planning, but assumes these meetings are substantive and focused an assumption challenged by the current study. Resource Dependence Theory highlights that meeting effectiveness relies on the board's expertise and strategic input; without tax-specific competence, frequency alone offers little benefit. Stewardship Theory assumes directors naturally act in the firm's interest, including overseeing tax matters, yet if tax is not a priority or is handled elsewhere, meeting frequency may not affect tax planning outcomes.

H₀₄: Board education has no significant effect on tax planning of manufacturing firms listed at the NSE

Examining the effects of Board Education on Tax Planning in NSE-Listed Manufacturing Firms was the primary objective of the research. In keeping with this objective, we postulated the null hypothesis, which states that these companies' tax planning is unaffected by board-level education. At the 0.05 threshold of significance, this was examined. The examination of the regression yielded a p-value of 0.000, which is much lower than the significance level of 0.05. Board education has a statistically significant effect on tax planning according to this finding.

Therefore, the research established that Board Education does have a significant contribution to Tax Planning, thus denying the null hypothesis as invalid. The positive and statistically significant coefficient presents that firms whose board members have higher educational qualification are likely to adopt effective tax planning practices. This can be attributed to the fact that highly educated board members are apt to be more

sophisticated in comprehending complex tax laws and finance management strategies, enabling them to make decisions that keep tax liability low within legal limits. The education of board members is therefore key to determining the tax planning behavior of manufacturing firms in Kenya.

This finding is consistent with many empirical study papers highlighting the importance of board education within business tax planning. For instance, Njoroge and Njoroge (2021) in a study with 40 listed companies in Kenya established a big and statistically significant positive impact of board education on tax planning, affirming the point that education enhances board members' capacity to guide effective tax policies. Similarly, Liew, Arshad, and Yaacob (2021), using Malaysian firms, discovered that board education was positively associated with corporate tax planning, affirming that an educated board is better able to make more informed and strategic tax-related decisions. Baguma and Nalukenge (2020) further established a positive and significant association between the educational level of the board of directors and tax planning for Ugandan listed firms. All these studies support the current finding by establishing education as an important board feature in determining optimal tax behavior.

In contrast, Iazzi et al. (2023), in their study of non-financial companies in Italy, identified other board attributes such as board size, gender diversity, and CEO duality as more significant in promoting tax aggressiveness, but not board education as such. While their findings do not contradict in plain language the impact of board education, they suggest that other factors may moderate or be superior to education based on the system of governance as well as regulatory culture.

Evidence in favor of the positive effect of board education on tax planning is provided by different theories. Upper Echelons Theory suggests that educated board members better perceive complex environments and execute successful tax initiatives. Resource Dependence Theory sees such members as valuable assets that bring expertise, especially in managing tax authority. Agency Theory stresses that educated boards improve monitoring, aligning managers' actions with shareholder objectives and discouraging tax aggressiveness. Together, these theories emphasize that educational qualifications enhance the board's strategic, compliance, and monitoring roles in tax planning, leading to more efficient, informed, and legally sound corporate tax strategies.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the study conclusion, findings-based conclusions, recommendations, contribution to knowledge, and recommendation for further research. These are based on the particular study objectives and outcomes of correlation and panel regression tests that investigated the role of board features in tax planning of manufacturing firms listed in the NSE.

5.2 Summary

The study sought to examine the effect of board characteristics on tax planning of manufacturing firms listed at the NSE. The specific objectives were to investigate the influence of board age, board meetings, board education, and board size on tax planning among these firms. The summary of the study is guided by the outcomes of various analytical techniques employed. Descriptive analysis revealed that board characteristics such as board age, board education, and board size exhibited moderate variability, while frequency of board meetings showed relatively wider dispersion over the study period. Board characteristics generally reflected observable variations across firms and over time. The inferential analysis was anchored on correlation and panel regression analyses. All diagnostic assumptions of panel regression normality, multicollinearity, heteroscedasticity, autocorrelation, and stationarity were satisfied, indicating that the data used in the study were appropriate and robust for reliable estimation.

5.2.1 Influence Board Size Has On Tax Planning

Descriptive statistics showed an average board size of 7.38 members, ranging from a minimum of 6 to a maximum of 10 with a moderate S.D of 1.21, showing some variation between the sampled firms. Correlation analysis showed a negative and statistically significant relationship between board size and tax planning ($r = -0.3552$, $p = 0.0245$), suggesting that larger boards could suffer from coordination issues that could hinder strategic decision-making. However, the impact of board size on tax planning was significant and positive ($\beta = 1.803$, $p = 0.027$) in the fixed-effects panel regression results. This suggests that larger board size contributes to improved tax planning. The contrast between the regression and correlation results means that when the other board characteristics are controlled, the potential benefits of larger board size such as diversity of perspective and expertise prevail over the detriments. Hence, the null hypothesis that board size has no significant effect on tax planning was rejected.

5.2.2 Level Of Influence Board Age Has On Tax Planning

The descriptive statistics indicated that the mean age of the boards was 50.02 years with the comparatively low standard deviation of 2.67, implying that boards consist of experienced and old members. The Pearson correlation results indicated that there existed a very strong positive relationship between tax planning and board age ($r = 0.6535$, $p < 0.001$), indicating that experienced board members have effective tax planning procedures. This is also supported by the regression analysis when board age alone had a statistically significant positive effect on tax planning ($\beta = 0.243$, $p = 0.046$). The evidence suggests that experienced older board members have accumulated experience, a long-term orientation, and a conservative approach that promotes

compliance and conservative but effective tax planning. There was a considerable impact of board age on tax planning from the above results, defying the null hypothesis.

5.2.3 Relationship Between Board Meeting And Tax Planning

Descriptive analysis revealed that boards met a mean of 5.88 times per year, between 4 and 10 meetings and with an SD of 1.65, reflecting variability in meeting frequency within firms. Correlation analysis showed that board meeting frequency had a negative and statistically significant correlation with tax planning ($r = -0.5359$, $p = 0.0004$), suggesting that increased meeting frequency is not necessarily favorable for improved tax planning and could be an expression of reactive rather than strategic board activity. Yet regression analysis detected a positive though statistically marginal relationship ($\beta = 0.638$, $p = 0.076$), suggesting that while more frequent meeting might indeed make tax planning easier by enhancing control and coordination, the evidence remains weak enough not to confirm an impact at the 5% level. The null hypothesis that the frequency of board meetings has no significant effect on tax planning thus could not be rejected.

5.2.4 impact of board education and tax planning

Descriptive statistics showed that the board members were well educated, with a mean of 4.04 on a scale ranging from 3.5 (master's degree) to 4.6 (PhD), and a low SD of 0.29, suggesting relative homogeneity of high educational level. Pearson correlation between tax planning and board education was strong and positive ($r = 0.7671$, $p < 0.001$), reflecting strong consistency between higher levels of education and effective tax management. The regression results supported this finding, where board education had the largest coefficient across all board characteristics ($\beta = 2.733$, $p < 0.001$),

reflecting a large and significant statistical effect. It ends with the null hypothesis rejection that there is no substantial influence of board education on tax planning.

5.3 Conclusion

5.3.1 Influence Board Size Has On Tax Planning

The results of the research showed that board size has a positive and significant influence on tax planning among listed manufacturing firms at the NSE (NSE). The research therefore concluded that board size has a significant influence on tax planning among listed manufacturing firms at the NSE. A proportionate board provides a broad spectrum of experience, diverse views, and effective oversight, and all these combined contribute to better tax-related decisions. A good board size is, therefore, crucial in making the board balanced, promoting active participation, and enhancing the effectiveness of tax planning initiatives.

5.3.2 Influence Board Age Has On Tax Planning

The analysis concluded that board age has a meaningful impact on tax planning in the NSE-listed manufacturing companies. The research revealed that the age of board members has a significant impact on tax planning procedures of listed manufacturing companies. Older board members are expected to contribute rich experience, wisdom, and a cautious decision-making attitude, which are pivotal for effective tax planning. Their past experience with regulatory environments enables them to project future tax implications and lead firms to conformity and strategic tax evasion. The outcome highlights the value of having mature professionals in boards to leverage their maturity and wisdom in achieving more effective and lawfully sound tax planning outcomes.

5.3.3 Relationship Between Board Meeting And Tax Planning

The study was capable of identifying a mixed and not very robust association between board meeting frequency and tax planning. The study was capable of establishing that the frequency of board meetings has a relatively narrow but measurable influence on tax planning by listed manufacturing firms. Frequent meetings open up the scope for enhanced communication, observation, and examination of tax approaches, but the outcome is highly dependent on the intensity and relevance of discussions carried out. Merely increased frequency of meetings doesn't necessarily improve tax planning unless the meetings seriously discuss tax issues. Quality interaction at board meetings is therefore more critical than frequency for the promotion of good tax planning techniques.

5.3.4 Impact Of Board Education And Tax Planning

Board education turned out to be the most important force in enhancing tax planning strategies for NSE-listed manufacturing firms. The study concluded that the level of education among directors plays a significant role in the tax planning among listed manufacturing firms. Directors holding higher education, particularly in finance, law, or accounting, have a better chance of understanding complex tax structures and making strategic decisions. Their expertise enables businesses to develop sophisticated tax planning techniques that are compliant and efficient. Trained board members also enhance the overall quality of governance, ensuring accountability and high performance. Educational backgrounds and credentials on boards are thus vital drivers in the provision of best tax planning outcomes.

5.4 Policy Implications and Recommendations of the Study

An optimum board size promotes more effective tax planning by achieving a balance between diverse expertise and effective decision-making. Inordinately large boards can compromise accountability and efficiency, whilst inordinately small boards may restrict oversight capability. Regulators such as CMA should provide direction on optimum board sizes by firm size and industry. Boards should review their structure periodically to ensure that it allows for active participation, strategic debate, and effective oversight of tax matters.

Board age diversity, particularly the presence of older directors, enhances tax planning due to their greater experience and risk-averse decision-making approaches. This allows for consistent and compliant tax planning. Companies must consider age diversity as part of board appointments, with the perspective of having experienced professionals who can render strategic advice. Policymakers can design policies for age-balanced boards to promote long-term value creation and conservative tax planning.

While frequent board meetings may suggest active governance, their efficacy in tax planning is limited if not focused on the relevant matters. The quality of discussions is more important than the frequency of meetings. Boards should schedule meetings to include detailed discussions of tax matters, elevating tax planning to a regular agenda item. Regulatory bodies may recommend best practices for meeting content and frequency, where substance is given precedence over form in corporate governance.

Educational qualifications of board members, especially in finance, law, or accounting, enhance their ability to oversee and contribute to strategic tax planning. This improves

governance quality and compliance. Firms should prioritize educational qualifications when selecting board members, particularly in areas relevant to financial and legal decision-making. Policymakers should encourage corporate governance codes that support minimum educational standards for board appointments in public companies.

5.5 Suggestion for Further Research

Further empirical investigations are warranted based on the research gaps identified during the current study. First, although the study established a substantial effect of board characteristics and tax planning, the R-squared value for the overall model was relatively low (Less than 50%). This indicates that additional factors beyond board size, board age, meeting frequency, and educational qualifications may influence tax planning. Future research should therefore explore other potential determinants such as ownership structure, executive compensation, or industry regulations that may explain the remaining variance in tax planning practices among listed firms.

Second, this study relied solely on quantitative secondary data from financial reports, which may limit insights into underlying boardroom dynamics or behavioral aspects influencing tax decisions. A mixed-methods strategy that includes qualitative interviews might be used in future study with board members or tax experts to provide deeper understanding and context. This would allow for triangulation of findings and help explain anomalies such as data outliers or inconsistent tax planning behaviors observed across firms during the study period.

Finally, the investigation only included manufacturing companies that were listed on the NSE. The scope of future studies should be broadened to encompass all industries in which listed companies operate, as this would allow for a more comprehensive

understanding of how different board characteristics influence tax planning across industries. This broader focus would help identify industry-specific dynamics and practices that could further refine tax planning strategies for firms listed on the NSE.

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APPENDICES

Appendix I: Manufacturing Firms Listed at the NSE

1. B.O.C Kenya Plc.
2. British American Tobacco Kenya Plc.
3. Carbacid Investments Plc.
4. East African Breweries Ltd.
5. Mumias Sugar Co. Ltd
6. Unga Group Ltd.
7. Kenya Orchards Ltd.
8. Flame Tree Group Holdings Ltd.

Source: NSE (2023)

Appendix II: Secondary Data Collection Schedule

Time scope	Board Size	Board Age	Board Meeting	Board Education	Tax planning
2019					
2020					
2021					
2022					
2023					

Appendix III: Research Authorization

(4)



**KENYATTA UNIVERSITY
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Our Ref: D53/OL/CTY/32589/2017

DATE: 25th March, 2025

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR EMILY BOKE MWITA - REG. NO. D53/OL/CTY/32589/2017

I write to introduce **Emily Boke Mwita** who is a Postgraduate Student of this University. The student is registered for M.B.A degree programme in the **Department of Accounting & Finance**.

Emily intends to conduct research for a M.B.A Project Proposal entitled, **“Board Characteristics and Tax Planning of Manufacturing Firms listed at the Nairobi Securities Exchange.”**

Any assistance given will be highly appreciated.

Yours faithfully,


PROF. ELIUD NJAGI
EXECUTIVE DEAN, GRADUATE SCHOOL

SR/mo

Transforming Higher Education... Enhancing Lives
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Appendix IV: NACOSTI Permit

 <p>REPUBLIC OF KENYA</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>
<p>Ref No: 613188</p>	<p>Date of Issue: 30/May/2025</p>
<p>RESEARCH LICENSE</p>	
	
<p>This is to Certify that Ms. Emily Boke Mwita of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: BOARD CHARACTERISTICS AND TAX PLANNING OF MANUFACTURING FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE for the period ending : 30/May/2026.</p>	
<p>License No: NACOSTI/P/25/4174442</p>	<p>Deputy Director</p>
<p>Applicant Identification Number 613188</p>	<p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>
<p>Verification QR Code</p>	
	
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<p>See overleaf for conditions</p>	

Appendix V: Research Approval

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Internal Memo

FROM: Executive Dean, Graduate School **DATE:** 29th March, 2025
TO: Emily Boko Mwita **REF:** D53/OL/CTY/32589/2017
C/o Accounting & Finance Dept.

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL


This is to inform you that Graduate School Board at its meeting of 18th March, 2025 approved your Research Project Proposal for the M.B.A Degree Entitled, **"Board Characteristics and Tax Planning of Manufacturing Firms listed at the Nairobi Securities Exchange."**

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage download.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you




**SARAH RIUNGU
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL**

c.c: Chairman, Accounting & Finance Dept.
Supervisors:

1. Dr. Moses Akoth
C/o Department of Accounting & Finance
Kenyatta University

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