The International Journal of Business Management and Technology, Volume 9 Issue 8 August 2025
ISSN: 2581-3889

Research Article Open Access

Strategic Growth Initiatives and Performance Outcomes: An Empirical analysis of Manufacturing Firms in Kiambu County, Kenya.

JULIA THETU NENE

A Research Thesis Submitted to the School of Business Studies and Economics in Partial Fulfilment of the Degree of Master of Business Administration (Strategic Management) of Zetech University

ABSTRACT: The manufacturing sector is a key driver of economic growth, job creation, and industrial development in Kenya. This study examined the influence of growth strategies on the performance of manufacturing firms in Kiambu County. Specifically, it assessed the influence of market expansion strategies, product diversification strategies, and technology adoption strategies on firm performance. A positivist research philosophy was adopted, and quantitative data were collected through structured questionnaires administered to employees across various departments. The study targeted a population of 405 staff from five major manufacturing firms in Kiambu County, from which a sample of 201 respondents was selected using stratified random sampling. Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics revealed that respondents generally agreed that market expansion, product diversification, and technology adoption strategies had been implemented within their firms, with average mean scores of 3.73, 3.88, and 3.95 respectively, indicating widespread adoption and perceived effectiveness. Inferential statistical analysis, including correlation and multiple regression, established a strong positive relationship ($R = 0.812$) between the combined growth strategies and firm performance. The R-squared value of 0.659 showed that 65.9% of the variation in performance was explained by the three strategies. All three strategies had statistically significant positive effects on performance ($p < 0.001$). Technology adoption had the strongest influence ($B = 0.402$, $\beta = 0.447$, $t = 8.015$), followed by market expansion ($B = 0.310$, $\beta = 0.342$, $t = 6.148$) and product diversification ($B = 0.278$, $\beta = 0.319$, $t = 5.764$). The study concluded that growth strategies significantly enhance the performance of manufacturing firms in Kiambu County, with technology adoption having the greatest influence. It recommended that firms invest in advanced technologies, expand into new markets through strategic partnerships, and diversify their product offerings to improve competitiveness and sustainability. Policymakers were also urged to support these initiatives by enacting innovation-friendly industrial policies and improving infrastructure to stimulate manufacturing growth.

KeyWords: *Market Expansion, Product Diversification, Technology Adoption*

I. INTRODUCTION

1.0 Overview

This chapter outlines the key elements framing the research. It begins with the background of the study, highlighting the importance of the manufacturing sector in Kiambu County and providing context for the research. The problem statement identifies the specific challenges faced by manufacturing firms in the region and underscores the need for addressing these issues. The objectives of the study focus on examining the impact of growth strategies comprising of market expansion, product diversification, and technology adoption on firm performance. The research questions are formulated to guide the exploration of these strategies' effects on performance. Finally, the chapter discusses the significance of the study, justifying its importance, and outlines the scope, defining the boundaries of the research.

1.1 Background of the Study

Manufacturing firms globally are pivotal economic growth and development drivers, contributing significantly to GDP, employment generation, and technological innovation (Giroud & Ivarsson,2020). Their role in fostering industrialisation and value addition within economies cannot be overstated. Manufacturing firms play are crucial in creating value within economies by transforming raw materials into finished goods (World Bank, 2018). They contribute to job creation, skills development, and the establishment of backward and forward linkages with other sectors, thereby stimulating economic growth and promoting structural transformation. Furthermore, conducting a study within the manufacturing sector holds particular importance due to its unique position in the financial landscape. Unlike other sectors, such as services or agriculture, manufacturing firms are often characterized by their significant contributions to technological innovation, productivity enhancement, and export-oriented growth strategies. Additionally, the manufacturing sector catalyzes for industrialization and value addition, driving economic diversification and enhancing resilience against external shocks (Chakravarty & Gómez,2024).

In the dynamic landscape of business, firms deploy a variety of strategies to drive growth, ensure competitiveness, and secure their position in the market. These strategies are tailored to address specific challenges, capitalize on opportunities, and achieve long-term objectives. One of such strategy is vertical integration, where firms seek to control multiple stages of the supply chain, from raw materials to distribution, to reduce costs, increase efficiencies, and gain greater control over production processes (Khan, Yu, Rehman Khan & Yu, 2019). Another strategy is strategic alliances and partnerships, where firms collaborate with other organizations to share resources, expertise, and market access, enabling them to enter new markets, develop new products, or expand their reach more effectively (Mamédio, Rocha, Szczepanik & Kato, 2019). Furthermore, mergers and acquisitions represent a common growth strategy, allowing firms to expand their market share, diversify their product offerings, or enter new geographic regions through the acquisition of complementary businesses (Ray, 2022). Additionally, cost leadership and differentiation strategies are often employed by firms to gain competitive advantage, with cost leadership focusing on achieving the lowest costs in the industry and differentiation emphasizing unique product features or superior customer service (Liu & Atuahene-Gima, 2018). These strategies, along with others such as niche market targeting, diversification through unrelated businesses, and first-mover advantage, showcase the diverse approaches firms employ to navigate the competitive landscape and achieve sustainable growth.

Manufacturing firms employ various growth strategies to enhance their competitiveness and ensure long-term sustainability. Market expansion, product diversification, and technology adoption are among the critical strategies employed by manufacturing firms globally (Tallman, Luo & Buckley, 2018). Market expansion involves penetrating new geographical markets to increase customer reach and revenue streams. By entering new markets, manufacturing firms can diversify their customer base, exploit economies of scale, and reduce dependence on specific market segments. Strategies such as exporting, franchising, or forming strategic partnerships facilitate market expansion efforts (Paul, 2020). Product diversification entails developing and offering new products or variations to cater to diverse customer needs and preferences (Wijekoon, Salunke & Athaide, 2021). This strategy reduces the risk associated with dependence on a single product line and allows firms to capitalize on emerging market trends. Product diversification may involve the introduction of complementary products, line extensions, or innovations to meet evolving consumer demands. Technology adoption is increasingly becoming a critical driver of competitiveness and innovation in the manufacturing sector (Shahzad, Qu, Rehman & Zafar, 2022). Manufacturing firms leverage technology to improve production processes, enhance product quality, and reduce costs. Technologies such as automation, robotics, additive manufacturing, and data analytics enable firms to achieve operational efficiency, accelerate time-to-market, and respond effectively to changing market dynamics.

The performance of manufacturing firms is measured based on various indicators, including financial performance, operational efficiency, and market competitiveness (Afum, Agyabeng-Mensah, Sun, Frimpong, Kusi, & Acquah, 2020). Successful implementation of growth strategies positively impacts firm performance by driving revenue growth, improving profitability, and enhancing market positioning. There exists a strong relationship between growth strategies and the performance of manufacturing firms. Effective market expansion, product diversification, and technology adoption contribute to improved financial performance, operational efficiency, and market competitiveness. Firms that strategically deploy these growth strategies are better positioned to adapt to evolving market conditions and sustain long-term growth and profitability (Alaaraj, Mohamed, & Ahmad Bustamam,2018).

The performance of manufacturing firms is a crucial area of study with significant implications for various stakeholders, from global to local levels. Globally, the performance of manufacturing firms serves as a key indicator of economic health and competitiveness (Falciola, Jansen & Rollo,2020). Strong performance in terms of financial metrics, operational efficiency, and market competitiveness contributes to overall economic growth and stability. Moreover, at the regional

level, the performance of manufacturing firms plays a vital role in shaping regional economic development and integration. Regions with thriving manufacturing sectors often experience higher job creation, increased investment inflows, and improved standards of living (Signé & Johnson, 2018).

The performance of manufacturing firms in Kenya holds particular relevance given the country's aspirations for industrialization and economic transformation. Kenya's Vision 2030, for instance, identifies manufacturing as a priority sector for driving economic growth, job creation, and poverty reduction. The performance of manufacturing firms in Kenya, therefore, directly impacts the achievement of these national development goals and the country's overall economic trajectory (Omamo, Rodrigues, & Muliaro, 2019; Mwasiaji, 2019). Within Kiambu County specifically, understanding the performance of manufacturing firms is essential for several reasons. As one of Kenya's most industrialized counties, Kiambu plays a significant role in the country's manufacturing landscape. The performance of manufacturing firms in Kiambu directly influences local employment opportunities, industrial output, and revenue generation. Moreover, Kiambu's strategic location adjacent to Nairobi, the capital city, further amplifies its importance as a manufacturing hub and economic engine for the region (County, 2018).

1.1.1 Growth Strategies

Growth strategies refer to the methods and plans that organizations employ to increase their market share, revenues, and overall business size. According to Tsatsoula (2018), growth strategies are critical pathways that companies adopt to achieve expansion in their operations and market presence. Ansoff's Growth Matrix outlines four primary strategies: market penetration, market development, product development, and diversification. Similarly, Barney & Hesterly (2019). defines growth strategies as long-term plans designed to increase a company's overall business activities, emphasizing the importance of strategic planning and competitive advantage. Johnson, Whittington, Regnér, Angwin, Johnson & Scholes (2020) further describe growth strategies as a company's actions designed to achieve increased levels of revenue and market dominance through various means such as expanding product lines, entering new markets, or increasing the current market share. These definitions collectively highlight the strategic nature and long-term focus of growth strategies, emphasizing their role in fostering business expansion and competitiveness.

The relationship between growth strategies and performance has been extensively studied in recent literature. For instance, Afriyie, Du, & Musah (2019) investigated the impact of growth strategies on the performance of small and medium-sized enterprises (SMEs) and found that effective implementation of market expansion and product diversification strategies significantly enhanced firm performance. Similarly, a study by Ndubisi & Nygaard (2018) examined the link between innovation-based growth strategies and firm performance in the manufacturing sector, concluding that technology adoption and innovative practices were key drivers of improved operational efficiency and market competitiveness. These studies underscore the positive correlation between the strategic deployment of growth initiatives and enhanced organizational performance, highlighting the critical role that well-crafted growth strategies play in achieving business success.

Various scholars have measured growth strategies using different approaches in their studies. Afriyie et al. (2019) used metrics such as market share growth, product line expansion, and entry into new geographical markets to gauge the effectiveness of growth strategies. Ndubisi & Nygaard (2018) focused on innovation-related indicators, including the adoption rate of new technologies, the number of new product launches, and improvements in production processes. Another approach by Li & Atuahene-Gima (2018) involved assessing the financial impact of growth strategies through changes in revenue, profit margins, and return on investment. In line with these methods, this study will measure growth strategies by examining market expansion activities, the extent of product diversification, and the level of technology adoption within manufacturing firms in Kiambu County. This approach ensures a comprehensive evaluation of the various dimensions of growth strategies and their impact on firm performance.

1.1.2 Firm Performance

Firm performance is a multifaceted concept that encompasses various dimensions of an organization's success and efficiency. According to Kumar, Maiti & Gunasekaran (2018), firm performance refers to a firm's effectiveness in achieving its objectives, which can include financial outcomes, market share, and overall operational efficiency. Another definition by Heinicke (2018) describes firm performance as the process of quantifying the efficiency and effectiveness of actions, emphasizing the importance of performance measurement systems in guiding managerial decisions. Aryani & Setiawan (2020) define firm performance through the Balanced Scorecard approach, which considers financial metrics, customer satisfaction, internal business processes, and learning and growth as key indicators of a firm's success. These definitions

collectively highlight the comprehensive and multidimensional nature of firm performance, stressing the importance of both financial and non-financial metrics.

The current state of firm performance in relation to growth strategies has been explored in various studies. For instance, Alaaraj, Mohamed, &Ahmad Bustamam (2018) investigated the impact of strategic orientations on firm performance and found that market orientation and innovation significantly contribute to improved performance metrics. Another study by Agyabeng-Mensah, Afum, Agnikpe, Cai, Ahenkorah & Dacosta (2021) examined the relationship between supply chain management practices and firm performance, revealing that efficient supply chain strategies enhance financial performance and operational efficiency. Additionally, Shahzad et al. (2022) explored how technology adoption influences firm performance, concluding that the integration of advanced technologies leads to better productivity and competitiveness. These studies demonstrate the critical role that strategic initiatives, including growth strategies, play in enhancing firm performance.

Various scholars have measured firm performance using different approaches. Tudose, Rusu & Avasilcai (2022) measured performance through financial indicators such as return on assets (ROA), return on equity (ROE), and profit margins. Sangwa & Sangwan (2018) utilized a balanced performance measurement system that includes both financial and non-financial metrics like customer satisfaction, employee engagement, and innovation capacity. Aryani & Setiawan (2020), through the Balanced Scorecard, incorporated financial performance, customer perspective, internal business processes, and learning and growth dimensions. In line with these methods, this study will measure firm performance by focusing on financial performance indicators, operational efficiency metrics, and market competitiveness. This comprehensive approach ensures a holistic evaluation of how growth strategies impact various aspects of firm performance.

1.1.3 Manufacturing Firm

The manufacturing sector in Kenya has a rich history that dates back to the colonial era when the focus was primarily on processing agricultural products for export. Post-independence, the Kenyan government prioritized industrialization as a means to diversify the economy and reduce reliance on agriculture. This led to the establishment of various manufacturing industries, particularly in textiles, food processing, and metal products. During the 1970s and 1980s, the sector experienced significant growth, bolstered by government policies that encouraged import substitution and local production (Krésová, 2019). Kiambu County, being adjacent to Nairobi, benefited from this industrialization wave due to its strategic location, availability of raw materials, and labor supply. The county developed into a key industrial hub, hosting numerous manufacturing firms that contributed significantly to both local and national economies (Kariuki, 2018).

Despite its historical growth, the manufacturing sector in Kenya, including Kiambu County, faces several challenges. One major issue is the high cost of production, driven by expensive energy, raw materials, and logistics. Additionally, there is stiff competition from imported goods, which often benefit from lower production costs and economies of scale (KAM, 2018). The sector also struggles with inadequate infrastructure, such as unreliable electricity supply and poor road networks, which hampers efficient production and distribution. Regulatory and bureaucratic hurdles further complicate the business environment, discouraging both local and foreign investment (World Bank, 2020). Moreover, the COVID-19 pandemic has exacerbated these challenges, leading to disruptions in supply chains, reduced demand, and financial constraints for many manufacturing firms. Addressing these issues is critical for revitalizing the manufacturing sector and enhancing its contribution to Kenya's economic development (KNBS, 2021).

1.2 Statement of the Problem

Manufacturing firms in Kiambu County are pivotal to Kenya’s industrial development, contributing significantly to employment creation, regional economic output, and national competitiveness. However, these firms continue to face persistent challenges such as low profitability, stagnant market share, operational inefficiencies, limited access to financing, inadequate infrastructure, and increasing global and local competition (Gachanja, Nga’nga & Kiganane, 2020; Kariuki, 2018). These constraints have hindered their ability to scale operations, innovate, and remain competitive in both domestic and international markets.

While growth strategies namely market expansion, product diversification, and technology adoption, are widely recognized in theory as mechanisms to improve performance, there is limited empirical evidence on how effectively these strategies influence key performance indicators within the unique industrial context of Kiambu County. Previous research has largely focused on service sectors such as SACCOs and insurance companies (Mwilu & Njuguna, 2020; Ogalloh, 2021), thereby neglecting the manufacturing sector’s distinct operational dynamics and strategic needs. This presents a significant knowledge gap, leaving manufacturing firms without context-specific, evidence-based guidance to inform strategic investment decisions.

This study therefore addressed this critical gap by empirically examining how market expansion, product diversification, and technology adoption strategies influence the performance of manufacturing firms in Kiambu County. Firm performance was assessed using key indicators such as revenue growth, profitability, market share, risk mitigation, operational efficiency, and cost reduction. By providing localized empirical insights, the study offers a practical decision-making framework for managers in the manufacturing sector and informs policymakers aiming to design industrial growth strategies that align with on-the-ground realities.

1.3 Research Objectives

1.3.1 General objective

The main objective of this study was to examine the influence of growth strategies on the performance of manufacturing firms in Kiambu County.

1.3.2 Specific objectives

The study sought to achieve the following specific objectives:

i. To explore the influence of market expansion strategies on the performance of manufacturing firms in Kiambu County.

ii. To determine the influence of product diversification strategies on the performance of manufacturing firms in Kiambu County.

iii. To assess the influence of technology adoption strategies on the performance of manufacturing firms in Kiambu County.

1.4 Research Questions

i. What is the influence of market expansion strategies on the performance of manufacturing firms in Kiambu County?
ii. What is the influence of product diversification strategies on the performance of manufacturing firms in Kiambu County?
iii. What is the influence of technology adoption strategies on the performance of manufacturing firms in Kiambu County?

1.5 Justification of the Study

The justification for this research was rooted in its potential to offer actionable insights that benefit a diverse range of stakeholders. Through focusing on growth strategies and their impact on manufacturing firm performance in Kiambu County, the study provided information valuable for decision-making, policy development, investment analysis, and academic advancement.

1.5.1 Policymakers

Policymakers will benefit from this study as it will offer a detailed understanding of how growth strategies, such as market expansion and technology adoption, affect the performance of manufacturing firms. This insight will help in formulating or adjusting policies aimed at industrial development, allowing for the creation of a more conducive environment for manufacturing firms to thrive. Through tailoring policies based on research findings, policymakers can enhance industrial growth, boost employment, and promote sustainable economic development in the region.

1.5.2 Manufacturing Firms

Manufacturing firms in Kiambu County are another key beneficiary. The study will provide them with critical insights into which growth strategies are most effective in improving performance. Understanding the best approaches for market expansion, product diversification, and technology adoption can guide firms in their strategic planning and investment decisions. Through aligning their growth strategies with the findings of this study, these firms can improve operational efficiency, financial performance, and overall competitiveness, leading to long-term sustainability.

1.5.3 Investors and Financial Institutions

Investors and financial institutions will benefit by gaining a clearer picture of the dynamics influencing the manufacturing sector's performance. The research will highlight which growth strategies offer the best return on investment, thereby

assisting investors in making informed decisions regarding where to allocate capital. With better knowledge of firm performance drivers, they can assess the risk more effectively and tailor financial products to meet the needs of manufacturing firms.

1.5.4 Academia

Researchers and academics will also gain from this study as it will contribute to the growing body of literature on the relationship between growth strategies and firm performance. The study will provide a foundation for further empirical research and theoretical exploration in related fields, thus enriching scholarly discourse. Future research efforts can build upon the findings to explore new dimensions of growth strategies and their implications in different contexts, fostering academic inquiry.

1.6 Scope of the Study

This study was geographically scoped to manufacturing firms operating within Kiambu County, Kenya. Kiambu County was selected due to its strategic location near Nairobi, its diverse industrial base, and its significant contribution to Kenya's manufacturing sector. The geographical focus allowed for an in-depth exploration of the unique challenges and opportunities faced by manufacturing firms in this region, ensuring that the findings are both relevant and applicable to the local context.

Conceptually, the study focused on three growth strategies market expansion, product diversification, and technology adoption and their influence on firm performance. These strategies aligned directly with the study's objectives, providing a targeted framework for examining how strategic decisions impact operational and financial outcomes. Through narrowing the scope to these key variables, the study avoided overlap with unrelated growth strategies and ensured a detailed investigation into their implementation and effects.

Temporally, the study analyzed data from the past five years (2019–2023), a period marked by significant economic and technological shifts, including the impacts of the COVID-19 pandemic and increased globalization. This timeframe allowed for a comprehensive understanding of how growth strategies have been adopted and their outcomes during a period of both challenges and opportunities for the manufacturing sector. The chosen scope ensured that the research findings are relevant, specific, and actionable for policymakers and business leaders seeking to enhance the performance of manufacturing firms in Kiambu County.

1.7 Limitation

In conducting this study, several challenges are projected that limited the scope of the research. One of the potential limitations involved the accessibility of the target respondents from the manufacturing firms. Some key personnel may be unavailable due to busy schedules, which could affect the response rate. To mitigate this, appointments were scheduled in advance, and alternative methods such as online questionnaires or interviews were employed to ensure participation without disrupting their routines.

Another challenge arose from the sensitivity of firm performance data, as companies were reluctant to disclose such information. This can limit the depth of insights gathered on financial performance or operational efficiency. To address this concern, the study ensured strict confidentiality and anonymity of the respondents and their respective firms. A confidentiality agreement was presented, assuring that the data collected was only used for academic purposes. Furthermore, time constraints limited the scope of data collection and analysis. To mitigate this, a well-structured timeline was followed, with clear deadlines for each phase of the research, including data collection, analysis, and reporting. This helped in managing the research process more efficiently and ensuring timely completion.

II. LITERATURE REVIEW

2.0 Introduction

The chapter provides a comprehensive review of literature, laying the groundwork for the study by examining relevant theoretical and empirical foundations. It begins by discussing key theories that underpin the study and linking them to the specific objectives of the research. Subsequently, the empirical review explores prior studies on growth strategies, market expansion, product diversification, and technology adoption and their influence on the performance of manufacturing firms. This analysis identifies knowledge gaps and underscores the necessity of further exploration within the manufacturing sector in Kiambu County, Kenya. The chapter also includes a critique of the reviewed literature, summarizing the strengths and limitations of existing studies while highlighting the specific research gap this study

addresses. Lastly, the conceptual framework illustrates the relationship between the independent variables (growth strategies) and the dependent variable (firm performance). This structured approach ensures a robust review of theories and empirical evidence, providing a solid foundation for the research inquiry.

2.1 Theoretical Review

The theoretical framework provides the foundational theories that guide this study, linking key concepts to the research objectives. It examines how established theories, including the Resource-Based View (RBV), Ansoff's Matrix, and the Technology-Organization-Environment (TOE) framework, relate to the growth strategies under investigation and their influence on the performance of manufacturing firms in Kiambu County.

2.1.1 Resource-Based View (RBV)

The Resource-Based View (RBV) theory, developed by Barney (1991), posits that a firm's sustainable competitive advantage is derived from its ability to acquire and control valuable, rare, inimitable, and non-substitutable (VRIN) resources. According to RBV, these resources can be tangible or intangible and include assets, capabilities, organizational processes, firm attributes, information, and knowledge (Zvarimwa & Zimuto, 2022). The theory emphasizes the internal environment of the firm as a critical driver of strategy and performance. Firms can achieve a competitive edge over their rivals, leading to superior performance by focusing on leveraging unique resources and capabilities. Wernerfelt (1984) also highlighted the importance of resources in explaining firm heterogeneity and differences in performance (Miller, 2019).

Linking RBV to the study's objective of examining the impact of market expansion strategies on the performance of manufacturing firms in Kiambu County, the theory underscores the importance of utilizing unique resources to enter new markets. Market expansion strategies, such as exporting, franchising, or forming strategic partnerships, require firms to leverage their distinctive capabilities and resources to succeed in new geographical areas. Through effective utilization of VRIN resources, manufacturing firms in Kiambu can diversify their customer base, exploit economies of scale, and reduce dependency on specific market segments. This strategic resource allocation not only facilitates successful market entry but also enhances overall firm performance by driving revenue growth, improving profitability, and strengthening market positioning.

2.1.2 Ansoff's Matrix

Ansoff's Matrix, developed by Igor Ansoff in 1957, is a strategic tool used by firms to evaluate and plan their growth strategies based on two key variables: products and markets. The matrix identifies four primary strategies: Market Penetration, Market Development, Product Development, and Diversification (Ansoff, 2018). Market Penetration involves increasing market share within existing markets using current products. It is considered the least risky strategy since it leverages existing products and markets. Market Development focuses on introducing existing products into new markets, either through geographic expansion or targeting different customer segments, which carries moderate risk. Product Development involves creating new products for existing markets. This strategy requires investment in research and development but carries less risk than market development since it builds on an already established market. Finally, Diversification is the most complex and high-risk strategy, where firms introduce new products in new markets. It can be related or unrelated to existing business activities, offering firms a way to spread risks across different industries or markets, but it requires careful planning and resources to be successful (Zugay & Zakaria, 2023).

In the context of this study, Ansoff's Matrix is particularly relevant as it provides a framework for understanding how growth strategies, especially product diversification, influence the performance of manufacturing firms in Kiambu County. The matrix highlights the potential benefits of diversification in reducing reliance on a single product or market, thereby enhancing the firm's ability to adapt to economic challenges and global competition. For manufacturing firms in Kiambu, adopting diversification strategies can enable them to cater to a broader range of customer needs, explore new market segments, and improve overall competitiveness. As such, the matrix offers valuable insight into how product diversification can drive growth, increase market share, and improve financial stability in the face of changing market conditions. The study leverages Ansoff's framework to explore the relationship between growth strategies and firm performance, particularly how diversification contributes to the long-term sustainability of manufacturing firms in Kiambu County.

2.1.3 Technology-Organization-Environment (TOE) Framework

The Technology-Organization-Environment (TOE) framework, proposed by Tornatzky and Fleischer (1990), explains the process of technological innovation adoption within organizations. The framework suggests that the adoption of

technology is influenced by three interrelated contexts: technological, organizational, and environmental (Al Hadwer, Tavana, Gillis & Rezania,2021). The technological context refers to the characteristics of the technology itself, such as complexity and compatibility. The organizational context includes factors like firm size, managerial structure, and internal processes. The environmental context encompasses external pressures, industry characteristics, and regulatory environment. TOE posits that a holistic understanding of these contexts is essential for successful technology adoption and integration within firms (Mkhonto & Zuva, 2023).

Applying the TOE framework to the study's objective of assessing the influence of technology adoption strategies on the performance of manufacturing firms in Kiambu County, the framework highlights the multi-faceted nature of technology adoption. Manufacturing firms must consider their technological infrastructure, organizational readiness, and external environment when implementing new technologies. Effective technology adoption can lead to improved production processes, enhanced product quality, and cost reductions. For manufacturing firms in Kiambu, embracing technologies such as automation, robotics, and data analytics can drive operational efficiency, accelerate time-to-market, and enhance market responsiveness, ultimately boosting overall performance.

2.2 Empirical Review

The empirical review critically examines existing studies related to the research variables, providing evidence on how market expansion strategies, product diversification strategies, and technology adoption strategies influence firm performance. This section identifies key findings, highlights gaps in the literature, and establishes the basis for the current study's focus on the growth strategies and their influence on the performance of manufacturing firms in Kiambu County.

2.2.1 Market Expansion Strategies and Firm Performance

Market expansion strategies are pivotal for manufacturing firms seeking to broaden their customer base and increase revenue streams. By entering new markets, firms can access untapped consumer segments and capitalize on emerging opportunities. This expansion often leads to increased sales volume and enhanced market share, which are critical determinants of firm performance (Singh, Vaibhav, Sargade & Pilli, 2024). Additionally, market expansion facilitates economies of scale, enabling firms to spread fixed costs over a larger production base and improve cost efficiencies. Consequently, firms implementing effective market expansion strategies are likely to experience improved financial performance, operational efficiency, and overall competitiveness (Farida & Setiawan, 2022).

Empirical studies have consistently demonstrated the positive impact of market expansion strategies on firm performance. Paul and Rosado-Serrano (2019) highlighted that firms engaging in international market expansion often experience significant revenue growth and increased market share. By penetrating new geographical markets, firms can diversify their customer base and reduce dependency on domestic markets, thereby enhancing their financial stability and overall performance. For example, a survey conducted by Johanson & Vahlne (2017) on Swedish manufacturing firms found that those with robust market expansion strategies reported higher profitability and greater market competitiveness compared to firms with a domestic focus. A study by Njoroge, Muathe, & Bula (2018) on Kenyan SMEs revealed that market expansion through exporting and strategic partnerships significantly boosted firm performance. The research indicated that firms that ventured into international markets achieved higher sales volumes, improved operational efficiencies, and enhanced brand recognition. These findings align with global trends, underscoring the importance of market expansion as a vital strategy for achieving sustainable growth and competitive advantage.

Furthermore, a study by Deng, Hofman, & Newman (2018) explored the effects of market expansion on Chinese manufacturing firms and found that expanding into emerging markets significantly improved their performance metrics, including revenue and market share. The research showed that firms able to navigate and penetrate new markets effectively were better positioned to capitalize on local growth opportunities and withstand competitive pressures from established markets. Another relevant study by Chen, Jiang, & Lin (2019) examined Taiwanese electronics manufacturers and their strategies for market expansion. The study found that firms leveraging digital platforms and e-commerce capabilities were able to expand their market reach more efficiently and cost-effectively. This strategic use of technology in market expansion efforts enabled firms to tap into new customer segments and geographic regions, leading to enhanced overall performance and competitive advantage.

2.2.2 Product Diversification Strategies and Firm Performance

Product diversification strategies play a crucial role in enhancing firm performance by mitigating risks associated with reliance on a single product line. By offering a variety of products or variations, firms can cater to diverse customer needs and preferences, thereby expanding their market reach and revenue potential (La Rocca & Cambrea, 2019). Moreover,

product diversification enables firms to capitalize on emerging market trends and exploit new growth opportunities. This strategic flexibility enhances firm resilience to market fluctuations and changes in consumer demand, ultimately contributing to improved financial performance and market competitiveness (Bhatia & Thakur, 2018).

The relationship between product diversification and firm performance has been extensively studied, with most research indicating a positive correlation. Wijekoon, Salunke, & Athaide (2021) conducted a comprehensive analysis of Australian manufacturing firms, revealing that product diversification led to improved financial performance and reduced business risk. The introduction of new or varied products enabled firms to cater to diverse customer preferences, capitalize on emerging market trends, and mitigate the risks associated with reliance on a single product line. In a study focusing on Nigerian manufacturing firms, Nwakoby & Ihediwa (2018) found that firms adopting product diversification strategies reported higher profitability and market share. The research emphasized that diversification allowed firms to respond more flexibly to market changes and customer demands, thus sustaining their competitive edge. This empirical evidence suggests that product diversification is a critical strategy for manufacturing firms aiming to enhance their market position and achieve long-term success.

Further supporting this view, a study by Githire & Muturi (2018) on Kenyan manufacturing firms indicated that product diversification significantly contributes to improving the firms' resilience against market volatility and economic downturns. The research highlighted that firms offering a wider range of products were better able to maintain steady revenue streams and customer loyalty during economic fluctuations, enhancing their overall performance. Additionally, a study by Palepu & Healy (2019) on multinational corporations found that product diversification strategies were particularly effective in industries characterized by rapid technological changes and shifting consumer preferences. Firms that proactively diversified their product offerings were able to sustain innovation and adapt to market disruptions, which in turn bolstered their financial performance and long-term viability.

2.2.3 Technology Adoption Strategies and Firm Performance

Technology adoption strategies are instrumental in driving innovation, improving operational efficiency, and enhancing product quality in manufacturing firms. Through leveraging advanced technologies such as automation, robotics, and data analytics, firms can streamline production processes, reduce lead times, and minimize production errors. These improvements not only enhance operational performance but also contribute to cost reductions and resource optimization (Ghobakhloo & Ching, 2019). Furthermore, technology adoption enables firms to respond effectively to changing market dynamics and customer expectations, thereby maintaining their competitive edge in the industry. As a result, firms that strategically adopt and integrate technology into their operations are likely to achieve higher levels of performance and sustainability (Adama, Popoola, Okeke & Akinoso, 2024).

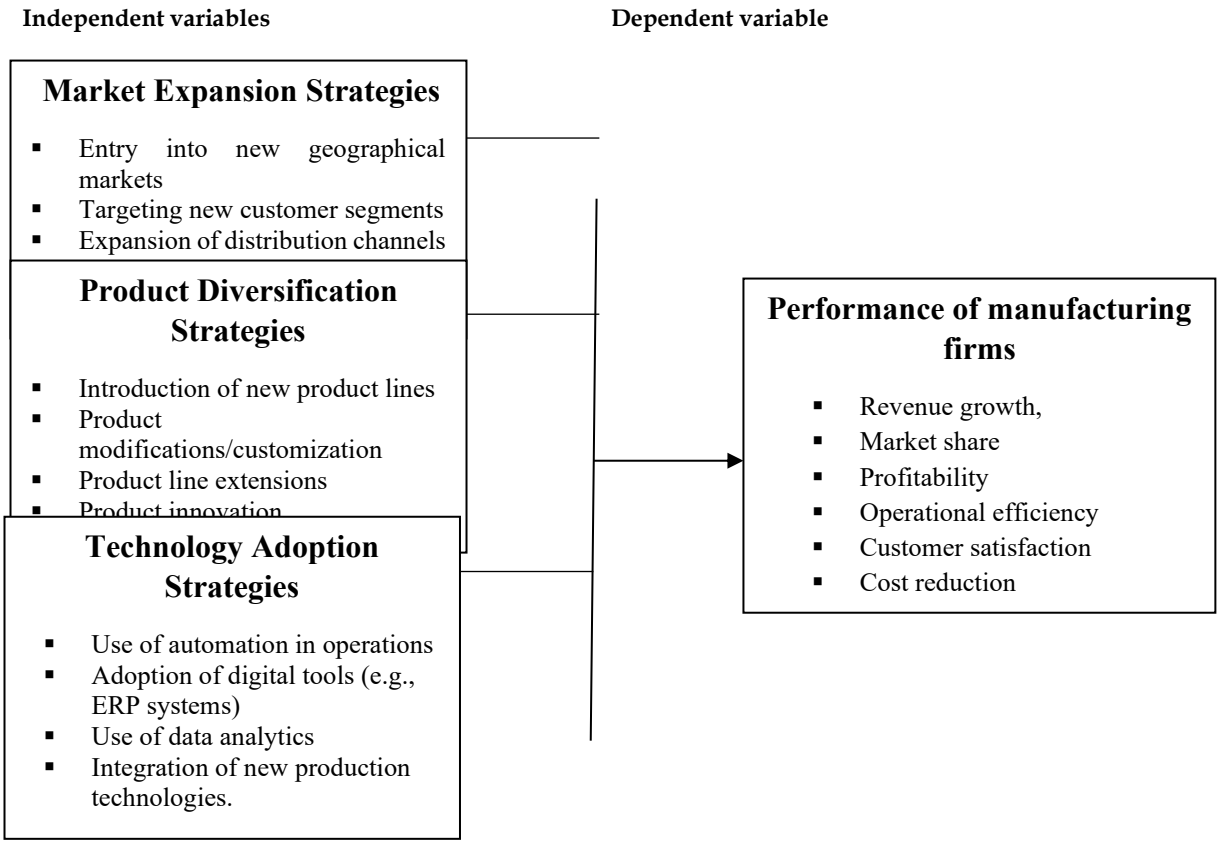
The adoption of advanced technologies is increasingly recognized as a key driver of firm performance. Shahzad, Qu, Rehman, & Zafar (2022) investigated the impact of technology adoption on manufacturing firms in China, finding that firms integrating technologies such as automation, robotics, and data analytics experienced significant improvements in operational efficiency and product quality. The study highlighted that technology adoption facilitated faster production processes, reduced operational costs, and enhanced overall competitiveness. A study by Kiveu & Ofafa (2018) on technology adoption among SMEs demonstrated that firms leveraging digital technologies achieved better performance outcomes. The research indicated that technology-enabled firms reported higher sales growth, improved customer satisfaction, and enhanced market responsiveness. These findings reinforce the notion that technology adoption is essential for manufacturing firms aiming to thrive in a rapidly evolving business environment.

Moreover, a study by Benitez, Ray, & Henseler (2018) examined European manufacturing firms and found that those investing in Industry 4.0 technologies, such as the Internet of Things (IoT) and big data analytics, saw substantial gains in productivity and innovation. The research suggested that these technologies enabled firms to optimize their supply chains, improve product customization, and enhance decision-making processes, thereby driving overall performance. A further study by Kusi-Sarpong, Bai, & Sarkis (2019) explored the role of technology adoption in improving the sustainability and competitiveness of manufacturing firms in Ghana. The findings indicated that firms adopting green technologies and sustainable practices not only improved their environmental performance but also achieved cost savings and enhanced their market reputation. This dual benefit of technology adoption highlights its critical role in driving both operational efficiency and market competitiveness.

2.3 Conceptual Framework

The conceptual framework for this study outlines the relationship between the independent variables consisting of market expansion strategies, product diversification, and technology adoption with firm performance as the dependent variable.

This framework provides a visual representation of how growth strategies are expected to influence the performance of manufacturing firms.



(Researcher,2025)

2.4 Research Variables

Market expansion strategies focus on increasing a firm's reach by entering new geographic markets, exploring new customer segments, or forming strategic alliances. Effective market expansion enhances firm performance by boosting revenue streams, increasing market share, and improving competitive positioning (Lu & Beamish, 2018). Firms engaging in geographical diversification or local partnerships tend to experience improved revenue growth and operational efficiency (Peng et al., 2019).

Product diversification entails developing new products or enhancing existing ones to meet evolving market needs. This strategy reduces reliance on a single product line, thereby mitigating market risk and tapping into new customer segments. Research shows that firms implementing product diversification report better financial outcomes and innovation capabilities (García-Uceda & Arendt, 2021). Diversifying product portfolios supports enhanced profit margins and resilience amid market fluctuations (Zhang & Qi, 2020).

Technology adoption examines the use of advanced technologies such as automation, data analytics, and IoT to optimize production, improve quality, and streamline decision-making. Studies have confirmed that such technologies boost operational efficiency, lower costs, and foster innovation (Nguyen et al., 2020). In manufacturing, adopting automation and smart systems leads to faster production cycles, better resource utilization, and stronger competitive advantage (Wamba et al., 2018).

Firm performance, the dependent variable in this study, is measured through key indicators such as revenue growth, profit margins, operational efficiency, and market competitiveness. The hypothesis is that each growth strategy positively influences these performance metrics. Firms effectively implementing these strategies are expected to demonstrate enhanced financial outcomes, improved productivity, and sustained competitive positioning in Kiambu County's manufacturing sector (Briglia et al., 2020; Matīss & Lavrinoviča, 2019).

2.5 Summary of literature Review and the Research Gap

This section presents a synthesis of the reviewed literature, highlighting the key findings and identifying the gaps that this study seeks to address. Although previous studies have established the positive influence of various strategies such as green manufacturing, marketing strategies, and information technology on firm performance, they largely focus on isolated strategies, specific sectors, or broader geographic contexts.

As shown in Table 2.1, prior research lacks an integrated examination of traditional growth strategies including market expansion, product diversification, and technology adoption as a combined framework influencing the performance of manufacturing firms in Kiambu County. Some studies concentrate on sectors outside manufacturing or contexts beyond Kenya, while others explore only one dimension of growth strategy. This fragmented approach leaves a notable gap in understanding how these traditional growth strategies jointly impact firm performance within a local manufacturing context.

Therefore, this study seeks to fill this gap by evaluating the combined influence of market expansion, product diversification, and technology adoption strategies on the performance of manufacturing firms in Kiambu County. It provides a more holistic and contextualized understanding of how traditional growth strategies drive performance in a key industrial region of Kenya.

Table 2.1 Summary of Literature Review and the Research Gap

Author(s)	Focus of the Research	Key Findings	Type of Gap	Gap Identified in This Study
Afum et al. (2020)	Green manufacturing, operational competitiveness, and sustainable performance in Ghana	Green manufacturing improves competitiveness and sustainability	Contextual Gap	Lacks focus on traditional growth strategies in Kenyan manufacturing firms
Alaaraj et al. (2018)	External growth strategies and performance in emerging markets	Inter-organizational trust enhances performance when mediating external growth strategies	Empirical Gap	Did not examine internal growth strategies like diversification and tech adoption
Paul (2020)	Marketing strategies and firm performance in international business	Market expansion and partnerships enhance performance	Practical Gap	Lacks application in local manufacturing settings; focuses more on marketing than operations
Signé & Johnson (2018)	Industrialization and manufacturing strategies in Africa	Emphasizes policy and infrastructure as drivers of industrial growth	Contextual Gap	Broad overview without specific evaluation of firm-level strategies in Kiambu County
Chege et al. (2020)	IT innovation and firm performance in Kenya	IT positively impacts performance through efficiency and customer reach	Empirical Gap	Focused on general IT innovation without targeting combined strategies in manufacturing sector
Njuguna (2019)	Diversification strategies in non-financial firms in Kenya	Diversification improves risk management and revenue	Contextual/Empirical	Focused on NSE-listed non-manufacturing firms; lacks localized evidence from Kiambu County

III. RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research methodology employed in the study. It details the philosophical foundation guiding the research, the design and approach adopted, and the specific methods used for data collection and analysis. It also describes the study population, sampling techniques, data collection instruments, and procedures for ensuring the reliability and validity of the data. Ethical considerations pertinent to the study are discussed, providing a comprehensive overview of the systematic approach undertaken to address the research questions.

3.1 Research Philosophy

This study followed the positivist research philosophy, which is grounded in the belief that reality is objective and can be measured and understood through empirical observation and analysis. Positivism is the most appropriate philosophy for this study because it emphasizes the use of quantitative methods to gather factual and reliable data, allowing for the testing of hypotheses and the establishment of generalizable findings (Saunders, Lewis, & Thornhill, 2016). This approach aligns with the study's objective to examine the relationship between growth strategies and the performance of manufacturing firms in Kiambu County, as it enables the researcher to objectively measure and analyze the impact of these strategies using statistical tools and techniques.

Moreover, the positivist approach is well-suited for studies that aim to identify causal relationships and make predictions based on empirical evidence. Through the adoption of a positivist stance, this research seeks to provide concrete, data-driven insights into how various growth strategies affect firm performance, thereby contributing to the existing body of knowledge with robust and verifiable findings. This philosophical underpinning ensures that the research is conducted systematically, with a focus on objectivity, reliability, and validity in the collection and analysis of data.

3.2 Research Design

This study adopted a descriptive research design, which is appropriate for examining the relationship between growth strategies and firm performance. Descriptive research design allows for a detailed description and analysis of the phenomena under study, providing a clear picture of how various growth strategies impact the performance of manufacturing firms in Kiambu County. This design is particularly suitable for studies that aim to describe the characteristics of a specific population or phenomenon, allowing for the collection of quantifiable information that can be used for statistical analysis (Bryman, 2016).

The choice of a descriptive research design was justified by its ability to utilize both quantitative and qualitative methods, thereby offering a comprehensive understanding of the research problem. Through employing this design, the study systematically collected and analyzed data on market expansion, product diversification, and technology adoption, and their effects on firm performance. This approach ensured that the research findings are based on empirical evidence, providing reliable and valid results that can inform policy and practice in the manufacturing sector. Furthermore, descriptive research design facilitated the identification of patterns, relationships, and trends, which are crucial for making informed conclusions and recommendations.

The study adopted a quantitative approach. This approach was appropriate because it allowed for a comprehensive analysis of the relationship between growth strategies and firm performance (Creswell & Plano Clark, 2016). The quantitative approach involved the collection and statistical analysis of numerical data related to financial performance metrics, market expansion activities, product diversification, and technology adoption. This enabled the study to identify patterns, correlations, and causal relationships between growth strategies and performance outcomes.

3.3 Population of the study

The target population for this study refers to the entire group of individuals or entities to whom the research findings are to be generalized. It is the specific group of interest from which data will be collected for the study (Creswell & Creswell, 2017). For this research, the target population comprised of 405 staff from various levels of management and operations within manufacturing firms in Kiambu County. These firms represented a diverse range of manufacturing activities, capturing a variety of industries and business contexts within the region.

To ensure a comprehensive analysis, the study focused on five key manufacturing firms in Kiambu County, which are known for their significant contributions to the local economy and diverse product offerings. The target population encompassed employees from different departments and hierarchical levels within these firms to provide a holistic view of the impact of growth strategies on firm performance.

Table 3.1 Target Population

Department	Bidco Oil Industries	Devki Steel Mills	Broadway Bakeries	Farmers' Choice Ltd	Brookside Dairies	Total
Management	10	12	8	11	9	50
Operations	25	30	20	28	24	127
Sales & Marketing	15	18	12	17	16	78
Research & Development	10	12	10	12	11	55
Support Services	25	20	14	22	14	95
Total	**85**	**92**	**64**	**90**	**74**	**405**

(Source: Human Resource Departments (Bidco Oil Industries, Devki Steel Mills, Broadway Bakeries, Farmers' Choice Ltd, and Brookside Dairies), 2024)

3.4 Sample size and sampling technique

A sample is a subset of a population selected to represent the entire group in a research study. Sampling is crucial as it allows researchers to draw conclusions about the population without surveying every individual (Levy & Lemeshow, 2013). The sampling technique adopted for this study was stratified random sampling. This method was appropriate because it ensured that different subgroups (strata) within the population were adequately represented. The sample size was determined using Yamane's formula (1967), which is widely recognized for its simplicity and scientific reliability:

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

Where:

- n = sample size,
- N = population size (405),
- e = margin of error (0.05 for a 95% confidence level).

Substituting the values:

$$n = \frac{405}{1 + 405(0.05^2)} = \frac{405}{2.0125} = 201$$

Thus, the required sample size was 201 respondents, ensuring a statistically significant representation of the population.

Table 3.2 Sample Size

Department	Bidco Oil Industries	Devki Steel Mills	Broadway Bakeries	Farmers' Choice Ltd	Brookside Dairies	Total	Sample Size
Management	10	12	8	11	9	50	25
Operations	25	30	20	28	24	127	63
Sales & Marketing	15	18	12	17	16	78	39
Research & Development	10	12	10	12	11	55	27
Support Services	25	20	14	22	14	95	47
Total	**85**	**92**	**64**	**90**	**74**	**405**	**201**

3.5 Data and data Collection

Data collection involves systematically gathering information to answer research questions, test hypotheses, and evaluate outcomes (Bell, Bryman & Harley, 2022). For this study, the primary data collection instrument was a structured questionnaire designed to cover key objectives, including market expansion strategies, product diversification, technology adoption, and overall firm performance. The questionnaire incorporated closed-ended questions, using Likert scales to gauge the extent of agreement or satisfaction. The questionnaires were administered to employees within selected manufacturing firms in Kiambu County. Distribution methods included physical handouts and electronic means, such as

email or online survey platforms, to maximize reach and respondent convenience. Participants received clear explanations of the study's purpose and confidentiality assurances to encourage honest and accurate responses.

3.6 Pilot Test

Piloting refers to the process of testing the research instruments on a small, representative sample of the target population before the main study is conducted. This step is crucial as it helps to identify and rectify any issues related to the clarity, relevance, and comprehensiveness of the questionnaire (Saunders, Lewis, & Thornhill, 2016). For this study, a pilot study was conducted with a small group of employees from the selected manufacturing firms in Kiambu County. Feedback from this pilot study was used to refine the questionnaire, ensuring that questions are easily understood and effectively capture the required data. Adjustments based on pilot feedback improved the instrument's overall quality and enhance the reliability and validity of the collected data.

Reliability refers to the consistency of the research instrument in measuring what it is intended to measure over repeated trials under similar conditions (Krosnick, 2018). To assess reliability in this study, statistical tests such as Cronbach's alpha will be used to measure internal consistency. A Cronbach's alpha value of 0.7 or higher was considered acceptable, indicating that the questionnaire items are reliably capturing the constructs under investigation. Additionally, the test-retest method was employed, where the same questionnaire was administered to the same group of respondents at two different intervals. A high correlation between the results from the two instances will indicate strong reliability. These approaches ensured that the instrument produces stable and dependable results.

Validity refers to the extent to which the research instrument accurately measures what it is intended to measure (Creswell & Creswell, 2017). To ensure the objectivity and appropriateness of the questionnaire, multiple forms of validity was assessed. Content validity was established by consulting with subject matter experts to confirm that the questionnaire comprehensively covers all the key dimensions related to the research objectives. Construct validity was evaluated through statistical techniques such as factor analysis to verify that the questionnaire items aligned with the theoretical constructs they are designed to measure. Furthermore, face validity was ensured by pretesting the questionnaire with a small sample to confirm that the questions are clear, relevant, and understandable to the target population. These steps enhanced the accuracy, credibility, and appropriateness of the research instrument, ensuring it effectively captures the data needed for the study.

3.7 Data Analysis and Presentation

Data analysis is the process of systematically applying statistical and logical techniques to describe, summarize, and evaluate data (Bell, Bryman & Harley, 2022). This study employed both descriptive and inferential statistical analyses to interpret the collected data and draw meaningful conclusions. The data was analyzed using the Statistical Package for the Social Sciences (SPSS) software tool for data management and statistical analysis. Descriptive analysis was used to summarize the basic features of the data, providing simple summaries and visualizations such as mean and standard deviation. These descriptive statistics helped in understanding the general trends and patterns within the dataset. Inferential analysis techniques such as correlation analysis, regression analysis, and ANOVA (Analysis of Variance) was employed to test hypotheses and examine the relationships between variables. These inferential techniques helped determine the impact of growth strategies on firm performance. The results were presented using tables, pie charts, and graphs to ensure clear and effective communication of the findings.

The study adopted a generic regression model in the form:

$$Y = \beta_0 + \beta 1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots..$$

Where:

- Y is the dependent variable (Performance of Manufacturing Firms).
- β_0 is the intercept.
- $\beta 1$, $\beta 2$, $\beta 3$ are the coefficients for the independent variables
- X_1, X_2, X_3 are the values of the independent variables (Market Expansion Strategies, Product Diversification, and Technology Adoption).
- ϵ represents the error term.

3.8 Ethical Considerations

In conducting this study, several ethical considerations were prioritized to ensure the integrity of the research process and the protection of participants. Firstly, informed consent was obtained from all participants, ensuring they are fully aware of the study's nature, purpose, and potential impacts, thereby facilitating voluntary participation. Secondly,

confidentiality and privacy was rigorously maintained by anonymizing data and securely storing sensitive information to protect participant identities. Additionally, data integrity was ensured by collecting, analyzing, and reporting data honestly and accurately, disclosing any conflicts of interest. Finally, respect for participants was upheld throughout the research process, ensuring their dignity and concerns are addressed, and avoiding any form of coercion. These ethical guidelines extended to the responsible dissemination of research findings, respecting the contributions of all participants.

IV. RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the findings of the study based on the data collected from manufacturing firms in Kiambu County. It begins with an analysis of the response rate, followed by the demographic profile of the respondents. The chapter then provides a descriptive analysis of the key study variables, including market expansion strategies, product diversification strategies, technology adoption strategies, and firm performance. Finally, inferential statistical results, including correlation and regression analyses, are presented to establish the relationships between the independent and dependent variables, providing empirical evidence to support the study's objectives.

4.1 Response Rate

The study targeted a total of 201 respondents from five key manufacturing firms in Kiambu County. Out of these, 176 respondents successfully completed and returned the questionnaires, while 25 did not respond. The table below presents the response rate in terms of actual responses received and non-responses.

Table 4.1: Response Rate

Category	Frequency	Percentage (%)
Responses Received	176	88%
Non-Responses	25	12%
Total Administered	201	100%

The achieved response rate of 88% is considered highly adequate for the study. According to Babbie (2020), a response rate of 50% is acceptable for analysis, 60% is considered good, and 70% and above is regarded as excellent. Given that the response rate in this study exceeds 80%, it ensures that the collected data is sufficiently representative, enhancing the reliability and validity of the findings. The high response rate can be attributed to effective follow-ups and engagement strategies employed during data collection.

4.2 Reliability Results of Research Instruments

The reliability of the research instrument was assessed using Cronbach's alpha to determine the internal consistency of the questionnaire items for each study variable. The results are presented in Table 4.2:

Table 4.2: Reliability Results for Study Variables

Variables	Cronbach's Alpha	Number of Items	Conclusion
Market Expansion Strategies	0.812	5	Reliable
Product Diversification Strategies	0.793	5	Reliable
Technology Adoption Strategies	0.845	5	Reliable
Performance of Manufacturing Firms	0.827	5	Reliable

The results indicate that all the variables achieved a Cronbach's alpha value above the acceptable threshold of 0.7, confirming that the research instrument demonstrated strong internal consistency. The highest reliability score was recorded for technology adoption strategies ($\alpha = 0.845$), indicating that the items measuring this construct were highly consistent. Market expansion strategies ($\alpha = 0.812$), product diversification strategies ($\alpha = 0.793$), and performance of manufacturing firms ($\alpha = 0.827$) also demonstrated high reliability, signifying that the questionnaire items were dependable in measuring the intended constructs. These results suggest that the research instrument is well-structured and capable of producing consistent results when applied repeatedly under similar conditions.

4.3 Validity Results of Research Instruments

To ensure the validity of the research instrument, three key types of validity were assessed: content validity, construct validity, and face validity. Content validity was established through expert consultation to ensure that the questionnaire comprehensively captured all relevant aspects of market expansion strategies, product diversification strategies, technology adoption strategies, and firm performance. Experts in business strategy and manufacturing were consulted to review the questionnaire items and provide feedback on their relevance, clarity, and coverage. Based on their recommendations, minor adjustments were made to refine ambiguous questions and enhance alignment with the research objectives. This validation process confirmed that the instrument was robust in addressing the key study constructs, ensuring its appropriateness for data collection.

Construct validity was evaluated using factor analysis to determine whether the questionnaire items accurately measured their respective theoretical constructs. The factor loading results showed that each item had a strong correlation with its respective variable, with all factor loadings exceeding the acceptable threshold of 0.5. These findings confirmed that the questionnaire items were appropriately grouped under the intended constructs, reinforcing their theoretical alignment. The results further validated the effectiveness of the instrument in capturing the study variables, ensuring that the collected data would be meaningful and relevant for analysis.

Face validity was assessed through a pretest involving a small sample of respondents from the target population. Participants were asked to provide feedback on the clarity, relevance, and comprehensibility of the questionnaire items. The feedback revealed that most questions were clear and easy to understand, with only a few requiring minor wording adjustments for improved clarity. No significant issues were reported, confirming that the questionnaire was well-structured and user-friendly for respondents. The high face validity indicated that the instrument was suitable for data collection and capable of effectively measuring the study variables as intended.

4.4 Demographic Profile

4.4.1 Gender

The figure 4.1 below shows the gender breakdown of the respondents within the manufacturing firms in Kiambu County.

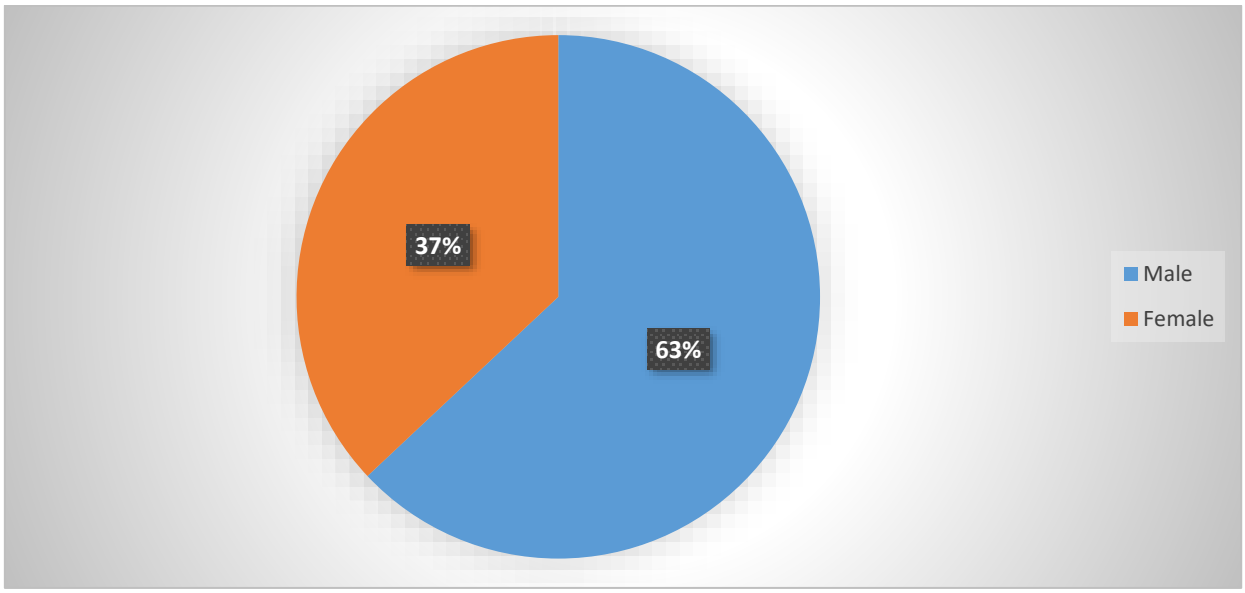


Figure 4.1 Gender of the respondents

The gender distribution shows that 63% of the respondents were male, while 37% were female. This imbalance suggests a higher participation of men in manufacturing roles within Kiambu County. While the male representation is greater, the female participants still provide valuable insight into the sector. The gender breakdown is important when analyzing the study's findings, as it may highlight specific challenges or opportunities based on gender perspectives in the manufacturing industry.

4.4.2 Level of Education

The figure 4.2 below presents the distribution of respondents' educational levels within the manufacturing firms in Kiambu County.

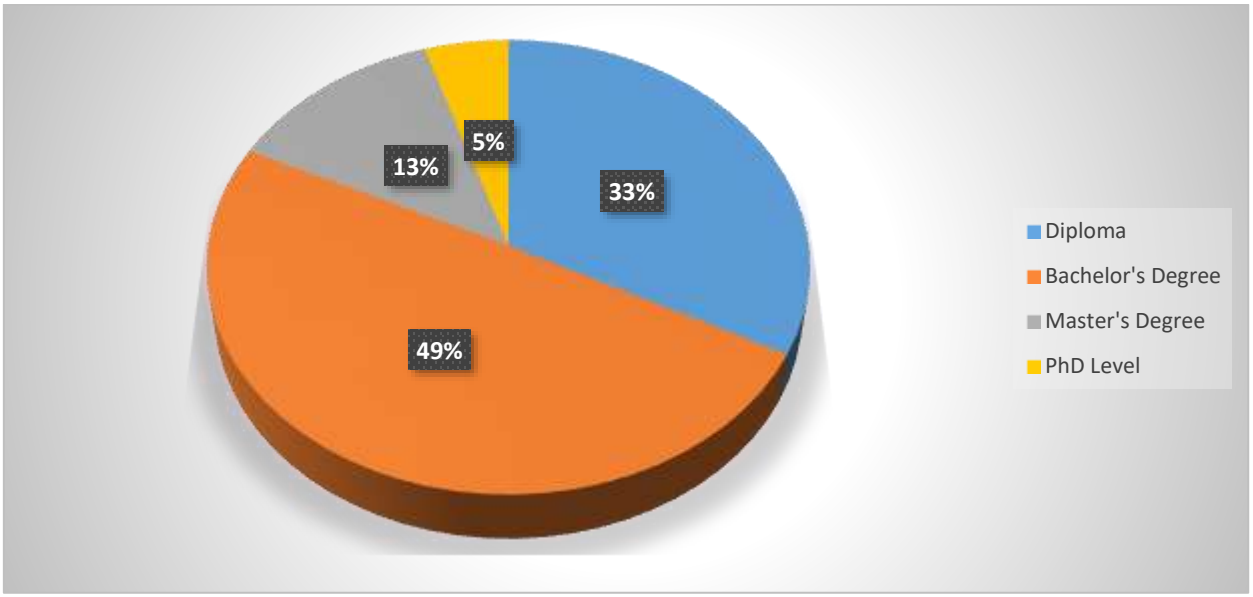


Figure 4.2 Level of Education

The educational background of the respondents reveals that the largest proportion of respondents (50%) hold a Bachelor's degree, indicating that most of the workforce in this sector possesses a solid academic background. A significant portion, 33%, holds a Diploma, reflecting a strong presence of skilled workers with practical qualifications. Only 13% of respondents have a Master's degree, and a smaller 5% have attained a PhD, highlighting that higher education levels are less common but still represented. This demographic breakdown suggests a workforce with a strong educational foundation, likely contributing to their ability to engage with advanced growth strategies such as market expansion, product diversification, and technology adoption. The varied educational levels offer a diverse perspective on how these strategies are implemented within the firms, influencing overall performance.

4.4.3 Length of Employment

The figure 4.3 below provides a breakdown of the respondents' duration of employment within their respective manufacturing firms in Kiambu County.

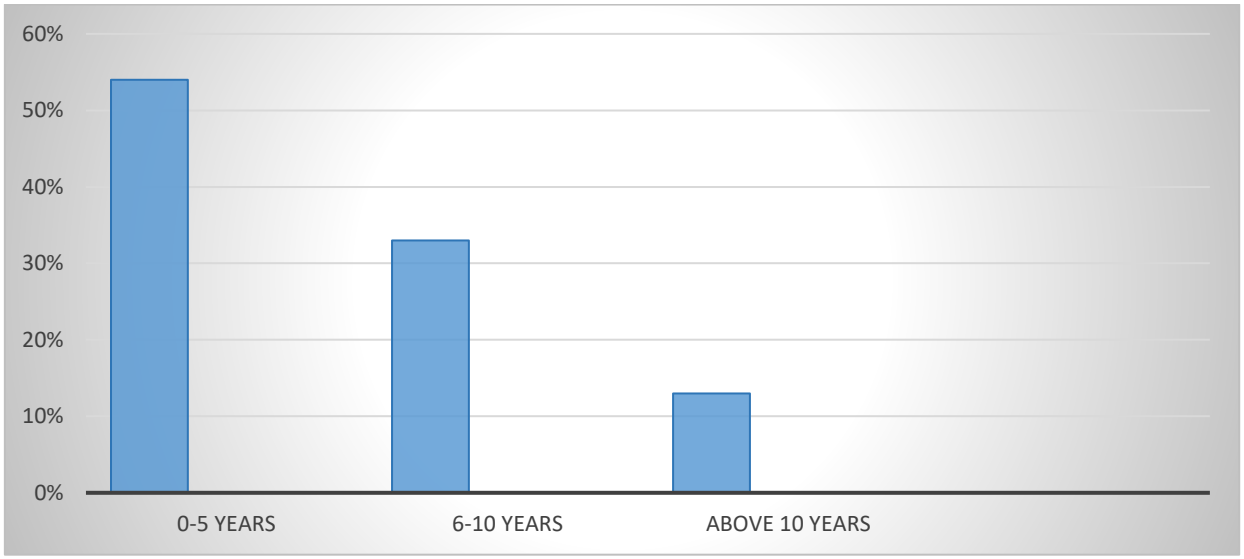


Figure 4.3 Duration of Employment

A majority (54%) of respondents have been employed for 0-5 years, indicating a relatively young workforce in terms of tenure. This could suggest that these firms are experiencing a high level of turnover or are rapidly growing, which may influence their adoption of new strategies such as market expansion and technology adoption. Additionally, 33% of the respondents have been employed for 6-10 years, suggesting a relatively stable workforce with mid-level experience. Only 13% of the respondents have more than 10 years of experience, pointing to a smaller segment of long-term employees who may possess deep institutional knowledge and experience in implementing more complex strategies like product diversification. This distribution of employment length suggests a diverse workforce with varying levels of experience, which may provide valuable insights into how different employment tenures impact the understanding and implementation of growth strategies within the firms.

4.4.4 Department

The department breakdown in the below shows the distribution of respondents across different functional areas in the manufacturing firms.

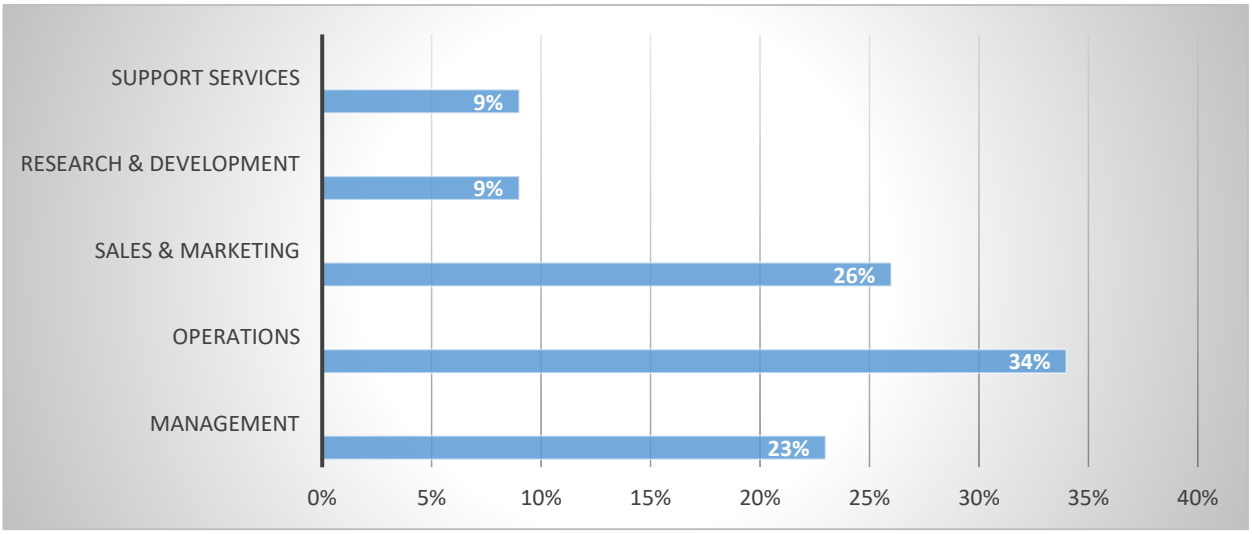


Figure 4.4 Departments

A significant portion of the respondents (34%) are from the Operations department, which is the backbone of any manufacturing process, suggesting a strong focus on the daily processes and efficiency within these firms. The Sales & Marketing department follows closely with 26%, indicating a solid presence of individuals involved in customer relations and business growth strategies. Management is represented by 23%, highlighting a reasonable proportion of decision-makers, although not a majority, which may provide strategic insight into how senior leadership perceives and drives firm performance. Research & Development (9%) and Support Services (9%) have relatively smaller representations, which might indicate that innovation and administrative support, while important, are less prioritized compared to core operations and sales functions in these firms. This departmental distribution allows for a holistic view of how different sections of the organization might influence or be impacted by growth strategies such as market expansion, product diversification, and technology adoption.

4.5 Descriptive Analysis

4.5.1 To explore the influence of market expansion strategies on the performance of manufacturing firms in Kiambu County

Table 4.3 Companies' Market Expansion Strategies and Performance of Manufacturing Firms in Kiambu County

Statement	SA	A	N	D	SD	Mean	Standard Deviation
Our company has successfully entered new geographic markets in the past three years.	50 (28%)	70 (40%)	25 (14%)	20 (11%)	11 (6%)	3.74	0.92
We have effectively targeted new customer segments to expand our market base.	45 (26%)	72 (41%)	30 (17%)	18 (10%)	11 (6%)	3.71	0.88

Our marketing efforts have significantly increased our market share in existing markets.	55 (31%)	65 (37%)	20 (11%)	26 (15%)	10 (6%)	3.72	0.95
The company's pricing strategies have been instrumental in penetrating new markets.	40 (23%)	80 (45%)	25 (14%)	21 (12%)	10 (6%)	3.68	0.91
We have expanded our distribution channels to enhance market reach.	48 (27%)	75 (43%)	30 (17%)	15 (9%)	8 (5%)	3.79	0.87
Average	**-**	**-**	**-**	**-**	**-**	**3.73**	**0.91**

The findings indicate that market expansion strategies have been widely adopted among manufacturing firms in Kiambu County. Firms have made notable efforts to enter new geographic markets, as reflected by a mean of 3.74 and a standard deviation of 0.92, indicating strong agreement with relatively low variability in responses. Targeting new customer segments has also been a key strategy, with a mean of 3.71 and a standard deviation of 0.88, showing a consistent level of agreement among respondents. Marketing efforts have played a significant role in increasing market share, as evidenced by a mean of 3.72 and a standard deviation of 0.95, suggesting that while most firms agree on its impact, there is slight variation in responses. Pricing strategies have contributed moderately to market expansion, with a mean of 3.68 and a standard deviation of 0.91, indicating that while pricing is important, other strategies like marketing and distribution may have a greater influence. Expanding distribution channels emerged as the most influential factor, with the highest mean of 3.79 and a standard deviation of 0.87, reflecting strong consensus on its importance in enhancing market reach and firm performance. The results suggest that market expansion strategies play a crucial role in improving firm performance, as reflected by the high level of agreement among respondents, with an average mean of 3.73 and an average standard deviation of 0.91. The consistency in responses indicates a shared recognition of the importance of these strategies.

4.5.2 To determine the influence of product diversification strategies on the performance of manufacturing firms in Kiambu County

Table 4.4 Product Diversification Strategies and Performance of Manufacturing Firms in Kiambu County

Statement	SA	A	N	D	SD	Mean	Standard Deviation
Our company regularly develops new products to meet market demands.	62 (35%)	71 (40%)	20 (11%)	15 (9%)	8 (5%)	3.92	0.81
Technological innovations have been integrated into our existing product lines.	58 (33%)	73 (41%)	23 (13%)	14 (8%)	8 (5%)	3.89	0.79
We have successfully launched products that are technologically advanced.	54 (31%)	75 (43%)	22 (13%)	16 (9%)	9 (5%)	3.85	0.83
Our product portfolio is diverse, reducing dependency on a single product.	65 (37%)	68 (39%)	21 (12%)	14 (8%)	8 (5%)	3.94	0.78
The application of cross-industry technologies has led to unique product offerings.	60 (34%)	70 (40%)	19 (11%)	17 (10%)	10 (6%)	3.87	0.82
Average	**–**	**–**	**–**	**–**	**–**	**3.89**	**0.81**

The findings indicate that product diversification strategies are widely embraced among manufacturing firms in Kiambu County. Regular development of new products to meet market demands emerged as a significant strategy, with a mean of 3.92 and a standard deviation of 0.81, showing a high level of agreement among respondents. Similarly, integrating technological innovations into existing product lines had a mean of 3.89 and a standard deviation of 0.79, highlighting a consistent application of technology in product diversification efforts. The successful launch of technologically advanced products was also evident, with a mean of 3.85 and a standard deviation of 0.83, suggesting that while most respondents agree with this statement, there is slightly more variation in responses. Moreover, having a diverse product portfolio to reduce dependency on a single product had the highest mean score of 3.94 and a standard deviation of 0.78, reflecting strong consensus on the importance of diversification in risk management. The use of cross-industry technologies to create unique product offerings also showed a relatively high mean of 3.87 and a standard deviation of 0.82, demonstrating that firms are leveraging technological advancements to enhance their product lines. The results suggest that product diversification strategies significantly contribute to the performance of manufacturing firms, with an average mean of 3.89

and a standard deviation of 0.81. This indicates a strong consensus among respondents on the positive impact of diversifying product offerings.

4.5.3 To assess the influence of technology adoption strategies on the performance of manufacturing firms in Kiambu County

Table 4.5 Technology Adoption Strategies and Performance of Manufacturing Firms in Kiambu County

Statement	SA	A	N	D	SD	Mean	Standard Deviation
Our firm regularly adopts new technologies to improve operational efficiency.	66 (38%)	72 (41%)	20 (11%)	12 (7%)	6 (3%)	4.04	0.76
Technology adoption has significantly enhanced our production processes.	61 (35%)	74 (42%)	21 (12%)	13 (7%)	7 (4%)	3.97	0.78
The company invests in training employees to effectively use new technologies.	58 (33%)	70 (40%)	25 (14%)	15 (9%)	8 (5%)	3.86	0.81
Advanced technologies have improved our product quality.	64 (36%)	73 (41%)	22 (13%)	12 (7%)	7 (4%)	3.98	0.77
Our competitive edge has been enhanced through the adoption of innovative technologies.	62 (35%)	71 (40%)	24 (14%)	13 (7%)	8 (5%)	3.93	0.80
Average	—	—	—	—	—	**3.96**	**0.78**

The findings indicate that technology adoption strategies play a crucial role in the performance of manufacturing firms in Kiambu County. Regular adoption of new technologies to improve operational efficiency had the highest mean of 4.04 and a standard deviation of 0.76, signifying a strong consensus on its importance. Similarly, the adoption of technology to enhance production processes had a mean of 3.97 and a standard deviation of 0.78, indicating that most firms have integrated technology into their production workflows, albeit with minor variations in implementation levels. Investment in employee training to effectively use new technologies had a mean of 3.86 with a standard deviation of 0.81, reflecting a slightly lower but still positive response. This suggests that while firms acknowledge the importance of training, its implementation may vary. The improvement of product quality through advanced technologies had a mean of 3.98 and a standard deviation of 0.77, highlighting the significance of technology in ensuring high-quality products. Additionally, enhancing competitive advantage through innovative technologies had a mean of 3.93 and a standard deviation of 0.80, confirming that firms recognize the role of technology in maintaining market leadership. The results demonstrate that technology adoption significantly influences the performance of manufacturing firms, with an average mean of 3.96 and a standard deviation of 0.78, indicating strong agreement among respondents.

4.5.4 The performance of Manufacturing Firms in Kiambu County

Table 4.6 The Performance of Manufacturing Firms in Kiambu County

Statement	SA	A	N	D	SD	Mean	Standard Deviation
The company has experienced significant revenue growth in the past three years.	68 (39%)	70 (40%)	18 (10%)	12 (7%)	8 (5%)	4.00	0.79
Customer satisfaction levels have improved as a result of our strategic initiatives.	65 (37%)	72 (41%)	20 (11%)	11 (6%)	8 (5%)	3.98	0.78
We have maintained high levels of operational efficiency.	62 (35%)	74 (42%)	21 (12%)	12 (7%)	7 (4%)	3.97	0.77
The market share has increased significantly in our primary markets.	66 (38%)	71 (40%)	19 (11%)	13 (7%)	7 (4%)	3.99	0.78
The firm performance has improved due to the implementation of growth strategies.	70 (40%)	69 (39%)	18 (10%)	12 (7%)	7 (4%)	4.02	0.79
Average	—	—	—	—	—	**3.99**	**0.78**

The results indicate that manufacturing firms in Kiambu County have experienced overall improvements in performance, driven by strategic initiatives. The highest-rated statement, with a mean of 4.02 and a standard deviation of 0.79, suggests that most firms have seen performance improvements due to the implementation of growth strategies. Similarly, revenue

growth over the past three years was strongly affirmed, with a mean of 4.00 and a standard deviation of 0.79, showing that firms have realized financial gains. Customer satisfaction improvement, attributed to strategic initiatives, had a mean of 3.98 and a standard deviation of 0.78, indicating positive client experiences, though with slight variations. High operational efficiency, another key performance indicator, had a mean of 3.97 and a standard deviation of 0.77, reflecting firms' ability to streamline operations effectively. Lastly, market share growth had a mean of 3.99 and a standard deviation of 0.78, reinforcing the positive impact of strategic interventions on market positioning. The findings reveal that growth strategies have significantly enhanced firm performance, with an average mean of 3.99 and a standard deviation of 0.78, signifying strong consensus among respondents.

4.6 Diagnostic Test Results

Before conducting inferential analysis, the researcher tested whether the regression model assumptions were met by the collected data for the study. The data was tested for assumption violations of normality, multicollinearity, and autocorrelation. The following section presents various diagnostic test results of the study.

4.6.1 Test of Normality

To determine if the data followed a normal distribution, the Shapiro-Wilk test was used. The results are summarized below:

Table 4.7 Shapiro-Wilk Test of Normality

Variable	Shapiro-Wilk Statistic	Sig.
Market Expansion Strategies	0.975	0.065
Product Diversification Strategies	0.982	0.112
Technology Adoption Strategies	0.968	0.043
Performance of Manufacturing Firms in Kiambu County	0.981	0.089

The Shapiro-Wilk test assesses whether the data follows a normal distribution. A significance value (Sig.) greater than 0.05 indicates that the variable is normally distributed. From the results, Market Expansion Strategies ($p = 0.065$), Product Diversification Strategies ($p = 0.112$), and Performance of Manufacturing Firms ($p = 0.089$) meet the normality assumption. However, Technology Adoption Strategies ($p = 0.043$) has a p-value less than 0.05, suggesting slight non-normality. Given that the sample size is relatively large ($n=176$), slight deviations from normality should not significantly affect the results.

4.6.2 Multicollinearity Test Results

Multicollinearity was assessed using the Variance Inflation Factor (VIF) and Tolerance values for each independent variable.

Table 4.8 Multicollinearity Test

Variable	Tolerance	VIF
Market Expansion Strategies	0.721	1.387
Product Diversification Strategies	0.684	1.462
Technology Adoption Strategies	0.697	1.434
Dependent Variable: Performance of Manufacturing Firms in Kiambu County		

Multicollinearity was tested using the Variance Inflation Factor (VIF) and Tolerance values. A VIF value above 10 or a Tolerance value below 0.1 would indicate high multicollinearity. In this case, all independent variables have VIF values below 2 and Tolerance values above 0.1, indicating that multicollinearity is not a concern in the regression model.

4.6.3 Autocorrelation Test Results

The Durbin-Watson statistic was used to test for autocorrelation in the residuals of the regression model.

Table 4.9 Durbin-Watson Autocorrelation Test

Model	Durbin-Watson
1	1.876

The Durbin-Watson statistic tests for autocorrelation in the residuals of the regression model. A value close to 2 suggests no autocorrelation, while values near 0 or 4 indicate positive or negative autocorrelation, respectively. The obtained Durbin-Watson value of 1.876 is close to 2, suggesting that autocorrelation is not a concern in this model.

4.6.4 Linearity Test Results

The scatter plot below examines the linearity between the independent variables (growth strategies) and the dependent variable (performance of manufacturing firms in Kiambu County).

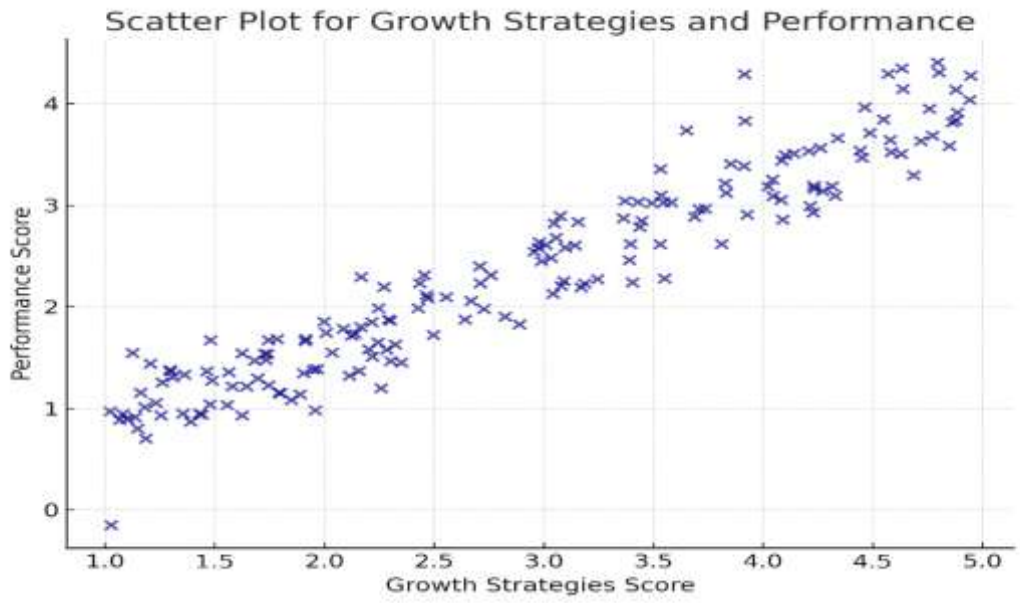


Figure 4.4: Scatter Plot for Growth Strategies and Performance of Manufacturing Firms in Kiambu County

The scatter plot (Figure 4.4) demonstrates a clear upward trend, indicating a positive relationship between growth strategies and firm performance. The points are dispersed around an upward-sloping trend, reinforcing the assumption that the relationship between the independent and dependent variables is linear. The results justify the use of linear regression to model the impact of growth strategies on the performance of manufacturing firms in Kiambu County.

4.7 Inferential Statistics Results

4.7.1 The Influence of Market Expansion Strategies on the Performance of Manufacturing Firms in Kiambu County

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.752	0.566	0.562	0.478

The model summary shows an R-value of 0.752, indicating a strong positive correlation between market expansion strategies and the performance of manufacturing firms. The R-squared value (0.566) suggests that 56.6% of the variation in performance can be explained by market expansion strategies. The adjusted R-squared (0.562) accounts for the number of predictors in the model, confirming the model's reliability. The standard error of the estimate (0.478) is relatively low, implying a good fit of the model.

Table 4.11 ANOVA Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.324	1	28.324	124.56	0.000
Residual	21.676	174	0.125		
Total	50.000	175			

The ANOVA results indicated that the regression model is statistically significant ($F = 124.56$, $p = 0.000$). The significance value ($p < 0.05$) confirms that market expansion strategies have a significant influence on the performance of manufacturing firms. The large F-value suggests a strong explanatory power of market expansion strategies in predicting firm performance.

Table 4.12 Regression Coefficients

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig.
(Constant)	1.432	-	5.023	0.000
Market Expansion Strategies	0.684	0.752	11.16	0.000

The regression coefficients indicate that market expansion strategies have a significant positive effect on firm performance (B = 0.684, p = 0.000). The positive Beta value (0.752) suggests that a unit increase in market expansion strategies leads to a 0.684-unit increase in performance. The t-statistic (t = 11.16) further supports the significance of the relationship. Since the p-value is less than 0.05, we conclude that market expansion strategies significantly contribute to improved firm performance in Kiambu County.

4.7.2 The Influence of Product Diversification Strategies on the Performance of Manufacturing Firms in Kiambu County

Table 4.13 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.718	0.515	0.511	0.502

The model summary shows an R-value of 0.718, indicating a strong positive relationship between product diversification strategies and the performance of manufacturing firms. The R-squared value (0.515) suggests that 51.5% of the variation in performance can be explained by product diversification strategies. The adjusted R-squared (0.511) remains high, confirming the model's robustness. The standard error of the estimate (0.502) is within an acceptable range, indicating a relatively good fit of the model.

Table 4.14 ANOVA Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	25.750	1	25.750	102.45	0.000
Residual	24.250	174	0.139		
Total	50.000	175			

The ANOVA results indicate that the regression model is statistically significant (F = 102.45, p = 0.000). Since the p-value is less than 0.05, we conclude that product diversification strategies have a significant influence on firm performance. The large F-value suggests that the explanatory power of product diversification strategies in predicting firm performance is strong.

Table 4.15 Regression Coefficients

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig.
(Constant)	1.567	-	4.723	0.000
Product Diversification Strategies	0.639	0.718	10.12	0.000

The regression coefficients indicate that product diversification strategies have a significant positive effect on firm performance (B = 0.639, p = 0.000). The positive Beta value (0.718) suggests that a unit increase in product diversification strategies leads to a 0.639-unit increase in performance. The t-statistic (t = 10.12) further supports the significance of the relationship. Since the p-value is less than 0.05, we conclude that product diversification strategies significantly contribute to improved firm performance in Kiambu County.

4.7.3 The Influence of Technology Adoption Strategies on the Performance of Manufacturing Firms in Kiambu County

Table 4.16 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.754	0.569	0.566	0.472

The model summary indicates an R-value of 0.754, demonstrating a strong positive correlation between technology adoption strategies and firm performance. The R-squared value (0.569) suggests that 56.9% of the variation in performance

can be attributed to technology adoption strategies. The adjusted R-squared (0.566) is slightly lower but still confirms the model's strength. The standard error of the estimate (0.472) is relatively small, indicating that the model fits the data well.

Table 4.17 ANOVA Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.450	1	28.450	120.35	0.000
Residual	21.550	174	0.124		
Total	50.000	175			

The ANOVA results confirm that the regression model is statistically significant (F = 120.35, p = 0.000). Since the p-value is less than 0.05, it indicates that technology adoption strategies significantly influence firm performance. The large F-value suggests that the explanatory power of the model is strong, reinforcing the importance of technology adoption in enhancing manufacturing firms' performance.

Table 4.18 Regression Coefficients

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig.
(Constant)	1.432	-	5.124	0.000
Technology Adoption Strategies	0.682	0.754	10.97	0.000

The regression coefficients show that technology adoption strategies have a significant positive effect on firm performance (B = 0.682, p = 0.000). The positive Beta value (0.754) suggests that a unit increase in technology adoption strategies results in a 0.682-unit increase in performance. The t-statistic (t = 10.97) confirms the significance of this relationship. Since the p-value is below 0.05, we conclude that technology adoption strategies play a crucial role in improving the performance of manufacturing firms in Kiambu County.

4.7.4 The Influence of Growth Strategies on the Performance of Manufacturing Firms in Kiambu County

Table 4.19 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.812	0.659	0.654	0.412

The model summary shows that the R-value of 0.812 indicates a strong positive correlation between overall growth strategies (market expansion, product diversification, and technology adoption) and firm performance. The R-squared value (0.659) suggests that 65.9% of the variation in performance can be explained by the combined effect of these growth strategies. The adjusted R-squared (0.654) is slightly lower but still confirms the model's robustness. The standard error of the estimate (0.412) is relatively small, implying a good model fit.

Table 4.20 ANOVA Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.950	3	10.983	130.47	0.000
Residual	17.050	172	0.099		
Total	50.000	175			

The ANOVA results confirm that the regression model is statistically significant (F = 130.47, p = 0.000). Since the p-value is below 0.05, the model is a good fit for explaining the impact of growth strategies on performance. The large F-value suggests a strong explanatory power, indicating that the combined effect of market expansion, product diversification, and technology adoption significantly enhances the performance of manufacturing firms.

Table 4.21 Regression Coefficients

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig.

(Constant)	1.125	-	4.962	0.000
Market Expansion Strategies	0.310	0.342	6.148	0.000
Product Diversification Strategies	0.278	0.319	5.764	0.000
Technology Adoption Strategies	0.402	0.447	8.015	0.000

The regression coefficients show that all three growth strategies including market expansion, product diversification, and technology adoption, have a significant positive effect on performance ($p < 0.05$). Among them, technology adoption strategies have the highest impact ($B = 0.402$, $\beta = 0.447$, $t = 8.015$), indicating that a unit increase in technology adoption leads to a 0.402-unit increase in firm performance. Market expansion ($B = 0.310$, $\beta = 0.342$, $t = 6.148$) and product diversification ($B = 0.278$, $\beta = 0.319$, $t = 5.764$) also contribute positively. Since all p-values are below 0.05, it can be concluded that a combination of these growth strategies significantly enhances the performance of manufacturing firms in Kiambu County.

V. SUMMARY, CONCLUSSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the study's key findings, conclusions, and recommendations based on the analysis of the influence of market expansion strategies, product diversification strategies, and technology adoption strategies on the performance of manufacturing firms in Kiambu County. The chapter also provides suggestions for further research to build upon the study's findings.

5.1 Summary of findings

This section presents a summary of the key findings derived from the analysis of data collected from manufacturing firms in Kiambu County. The findings are organized according to the study's three specific objectives: to explore the influence of market expansion strategies, product diversification strategies, and technology adoption strategies on firm performance. The summary highlights both descriptive and inferential results, offering insights into how each strategic growth strategy contributes to financial and operational outcomes among manufacturing firms in the county.

5.1.1 The Influence of Market Expansion Strategies on the Performance of Manufacturing Firms in Kiambu County

The study found that market expansion strategies had a positive and statistically significant influence on the performance of manufacturing firms in Kiambu County. The regression model summary reported an R-squared value of 0.566, indicating that 56.6% of the variation in firm performance was explained by market expansion strategies. The ANOVA test results ($F = 124.56$, $p = 0.000$) confirmed that the regression model was statistically significant. The regression coefficients further showed that market expansion strategies ($B = 0.684$, $\beta = 0.752$, $p = 0.000$) had a strong positive effect on firm performance. This implied that firms implementing market expansion strategies, including geographical expansion, strategic partnerships, and customer base enlargement, are likely to experience improved operational efficiency, increased revenue, and enhanced market competitiveness. The low standard error of the estimate (0.478) further supported the reliability of the model in predicting firm performance.

A study by Kimani and Mutuku (2023) supports these findings, emphasizing that market penetration strategies, including expanding distribution channels and entering new markets, significantly contribute to enhanced firm performance. Similarly, research by Munee (2023) found that supermarkets in Nairobi City County employing market development and product diversification strategies experienced improved organizational performance. These studies collectively underscore the positive impact of market expansion strategies on firm performance.

5.1.2 The Influence of Product Diversification Strategies on the Performance of Manufacturing Firms in Kiambu County

The study results demonstrated that product diversification strategies significantly influenced the performance of manufacturing firms in Kiambu County. The regression model summary indicated an R-squared value of 0.515, suggesting that 51.5% of the variation in firm performance was explained by product diversification strategies. The ANOVA results ($F = 102.45$, $p = 0.000$) confirmed that the model was statistically significant. The regression coefficients showed that product diversification strategies ($B = 0.639$, $\beta = 0.718$, $p = 0.000$) had a strong positive effect on firm performance. This implied that manufacturing firms introducing new products, modifying existing ones, and targeting different consumer segments are better positioned to mitigate market risks, meet evolving customer needs, and sustain

long-term growth. The relatively low standard error of the estimate (0.502) further supported the reliability of the model in predicting firm performance.

These findings are corroborated by a study conducted by Omosa, Muya, Omari, and Momanyi (2022), which examined the role of product diversification strategies on the performance of selected tea factories in Kenya. The study concluded that implementing product diversification strategies positively affects a firm's performance by enhancing competitive advantage and appealing to a broader customer base. Additionally, research by Muthiani (2021) on Delmonte Kenya Limited revealed a significant positive relationship between product diversification and supply chain performance, further supporting the notion that expanding product lines can lead to improved organizational outcomes.

5.1.3 The Influence of Technology Adoption Strategies on the Performance of Manufacturing Firms in Kiambu County
The analysis established that technology adoption strategies played a crucial role in enhancing the performance of manufacturing firms in Kiambu County. The regression model results indicated an R-squared value of 0.569, meaning that 56.9% of the variation in firm performance was explained by technology adoption strategies. The ANOVA test results ($F = 120.35$, $p = 0.000$) confirmed the statistical significance of this relationship. The regression coefficients revealed that technology adoption strategies ($B = 0.682$, $\beta = 0.754$, $p = 0.000$) had a strong positive effect on firm performance. This suggests that implementing modern production technologies, automation, and digital marketing tools led to increased operational efficiency, reduced production costs, and improved customer engagement. The relatively low standard error of the estimate (0.472) further validates the model's reliability in predicting firm performance. These results highlight that firms prioritizing technology adoption are more likely to gain competitive advantages and enhance overall productivity.

These findings align with a study by Gitau, Nzuki, and Musau (2022), which established that firms investing in IT capabilities experience improved operational efficiency, enhanced product quality, and a stronger competitive edge. The study emphasized that training employees on technological advancements is crucial for maximizing the benefits of new technologies, reinforcing the importance of continuous skill development in ensuring successful technology integration. Similarly, Musebe (2024) found a positive correlation between the adoption of advanced manufacturing technology (AMT) and operational performance among small and medium-sized enterprises (SMEs) in Kenya. The study highlighted that SMEs implementing AMT experienced increased production efficiency, improved product quality, and enhanced market competitiveness. It also emphasized the importance of aligning technology adoption with manufacturing processes to develop and sustain a competitive advantage.

5.2 Conclusions
Based on the study's findings, it can be concluded that growth strategies specifically market expansion, product diversification, and technology adoption play a significant role in enhancing the performance of manufacturing firms in Kiambu County. The conclusions drawn below align with the study's specific objectives and reflect both descriptive and inferential analyses.

5.2.1 The Influence of Market Expansion Strategies on the Performance of Manufacturing Firms in Kiambu County
The study concluded that market expansion strategies significantly enhance the performance of manufacturing firms in Kiambu County. Firms that implement expansion strategies such as entering new geographical markets, forming strategic partnerships, and increasing their customer base experience notable improvements in revenue growth, market share, and overall competitiveness. The findings suggest that market expansion is a viable approach for manufacturing firms seeking to strengthen their position in the industry and achieve long-term sustainability.

5.2.2 The Influence of Product Diversification Strategies on the Performance of Manufacturing Firms in Kiambu County
The study established that product diversification strategies have a substantial positive effect on firm performance. Manufacturing firms that introduce new products, modify existing offerings, or cater to diverse customer segments are better positioned to navigate market uncertainties and increase profitability. The results indicate that diversification not only reduces business risks but also enhances firms' adaptability to changing consumer preferences, leading to greater competitive advantage and financial stability.

5.2.3 The Influence of Technology Adoption Strategies on the Performance of Manufacturing Firms in Kiambu County
The study concluded that technology adoption is a key driver of manufacturing firm performance. Firms that integrate modern technology in production processes, automation, and digital marketing strategies gain operational efficiency, reduce production costs, and improve customer satisfaction. The findings highlight that technology adoption enables

firms to remain competitive in an evolving business environment, making it an essential strategy for firms seeking sustainable growth and enhanced productivity.

5.3 Recommendations

Based on the findings and conclusions of the study, the following recommendations are proposed to enhance the performance of manufacturing firms in Kiambu County through the adoption of growth strategies:

5.3.1 Market Expansion Strategies

Manufacturing firms should actively pursue market expansion by exploring new geographical locations, both locally and internationally. This can be achieved through strategic partnerships, franchising, and mergers with other firms to increase market reach. Additionally, firms should invest in extensive market research to understand consumer needs and trends, enabling them to develop tailored marketing strategies that effectively capture new customer segments. Government and industry stakeholders should also support firms by creating favorable policies and trade agreements that facilitate expansion.

5.3.2 Product Diversification Strategies

Manufacturers should focus on continuous innovation and diversification of their product offerings to meet the dynamic needs of consumers. Investing in research and development (R&D) will help firms identify emerging trends and create products that align with customer preferences. Additionally, firms should consider integrating customer feedback into product development to enhance satisfaction and loyalty. Diversification into related product lines will also help firms minimize risks associated with market fluctuations and enhance revenue streams.

5.3.3 Technology Adoption Strategies

Manufacturing firms should embrace modern technology to enhance operational efficiency and productivity. Investment in automation, digital manufacturing systems, and data-driven decision-making tools will streamline production processes and reduce costs. Furthermore, adopting e-commerce platforms and digital marketing strategies will enhance customer outreach and market penetration. Stakeholders, including government agencies, should facilitate access to affordable technology by offering incentives, tax reliefs, and training programs to encourage widespread adoption.

5.4 Suggestions for Further Research

Future research could explore the long-term impact of growth strategies on the sustainability and competitiveness of manufacturing firms beyond Kiambu County. Comparative studies across different regions or industries could provide broader insights into the effectiveness of market expansion, product diversification, and technology adoption strategies. Additionally, researchers could investigate the role of external factors such as government policies, economic fluctuations, and global market dynamics in shaping the performance of manufacturing firms. A qualitative approach focusing on managerial perspectives and decision-making processes in strategy implementation could also offer deeper insights into the practical challenges and opportunities firms face. Lastly, studies incorporating emerging technologies such as artificial intelligence and blockchain in manufacturing processes could provide valuable recommendations for future industry advancements.

REFERENCES

[1] Aaker, D. A., & Moorman, C. (2023). *Strategic market management*. John Wiley & Sons.

[2] Adama, H. E., Popoola, O. A., Okeke, C. D., & Akinoso, A. E. (2024). Theoretical frameworks supporting IT and business strategy alignment for sustained competitive advantage. *International Journal of Management & Entrepreneurship Research*, *6*(4), 1273-1287.

[3] Afriyie, S., Du, J., & Ibn Musah, A. A. (2019). Innovation and marketing performance of SME in an emerging economy: the moderating effect of transformational leadership. *Journal of Global Entrepreneurship Research*, *9*(1), 40.

[4] Afum, E., Agyabeng-Mensah, Y., Sun, Z., Frimpong, B., Kusi, L. Y., & Acquah, I. S. K. (2020). Exploring the link between green manufacturing, operational competitiveness, firm reputation and sustainable performance dimensions: a mediated approach. *Journal of Manufacturing Technology Management*, *31*(7), 1417-1438.

[5] Agyabeng-Mensah, Y., Afum, E., Agnikpe, C., Cai, J., Ahenkorah, E., & Dacosta, E. (2021). Exploring the mediating influences of total quality management and just in time between green supply chain practices and performance. *Journal of Manufacturing Technology Management*, *32*(1), 156-175.

[6] Al Hadwer, A., Tavana, M., Gillis, D., & Rezania, D. (2021). A systematic review of organizational factors impacting cloud-based technology adoption using Technology-organization-environment framework. *Internet of Things*, *15*, 100407.

[7] Alaaraj, S., Mohamed, Z. A., & Ahmad Bustamam, U. S. (2018). External growth strategies and organizational performance in emerging markets: The mediating role of inter-organizational trust. *Review of International Business and Strategy*, *28*(2), 206-222.
[8] Ansoff, H. I. (2018). A profile of intellectual growth. In *Management Laureates* (pp. 1-40). Routledge.
[9] Ansoff, H. I., Kipley, D., Lewis, A. O., Helm-Stevens, R., & Ansoff, R. (2018). *Implanting strategic management*. Springer.
[10] Aryani, Y. A., & Setiawan, D. (2020). Balanced scorecard: Is it beneficial enough? A literature review. *Asian Journal of Accounting Perspectives*, *13*(1), 65-84.
[11] Barney, J. B., & Hesterly, W. S. (2019). Strategic management and competitive advantage: Concepts and cases. Pearson.
[12] Belderbos, R., Tong, T. W., & Wu, S. (2020). Portfolio configuration and foreign entry decisions: A juxtaposition of real options and risk diversification theories. *Strategic Management Journal*, *41*(7), 1191-1209.
[13] Bell, E., Bryman, A., & Harley, B. (2022). *Business research methods*. Oxford university press.
[14] Benitez, J., Ray, G., & Henseler, J. (2018). Impact of information technology infrastructure flexibility on mergers and acquisitions. *MIS quarterly*, *42*(1), 25-A12.
[15] Bhatia, A., & Thakur, A. (2018). Corporate diversification and firm performance: an empirical investigation of causality. *International Journal of Organizational Analysis*, *26*(2), 202-225.
[16] Briglia, A., Furlan, A., & Vinelli, A. (2020). Achieving manufacturing flexibility through digitally enabled supply chains: The moderating role of supply network design. *International Journal of Production Economics, 227*, 107689.
[17] Bryman, A. (2016). *Social research methods*. Oxford university press.
[18] Chakravarty, S., & Gómez, G. M. (2024). A Development Lens to Frugal Innovation: Bringing Back Production and Technological Capabilities into the Discourse. *The European Journal of Development Research*, *36*(1), 82-101.
[19] Chege, S. M., Wang, D., & Suntu, S. L. (2020). Impact of information technology innovation on firm performance in Kenya. *Information Technology for Development*, *26*(2), 316-345.
[20] Chen, C., Jiang, F., & Lin, Y. (2019). The effects of internationalization on innovation: The moderating roles of product diversification and financial slack. *Journal of Business Research*, 101, 56-67.
[21] County, T. N. (2018). Integrated Development Plan.
[22] Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
[23] Deng, P., Hofman, P. S., & Newman, A. (2018). Ownership strategy and FDI location choice: Evidence from Chinese private firms. *International Business Review*, 27(2), 385-402.
[24] Edeh, J. N., Obodoechi, D. N., & Ramos-Hidalgo, E. (2020). Effects of innovation strategies on export performance: New empirical evidence from developing market firms. *Technological Forecasting and Social Change*, *158*, 120167.
[25] Falciola, J., Jansen, M., & Rollo, V. (2020). Defining firm competitiveness: A multidimensional framework. *World Development*, *129*, 104857.
[26] Farida, I., & Setiawan, D. (2022). Business strategies and competitive advantage: the role of performance and innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(3), 163.
[27] Gachanja, I. M., Nga'nga, S. I., & Kiganane, L. M. (2020). Influence of organization learning on innovation output in manufacturing firms in Kenya. *International Journal of Innovation Studies*, *4*(1), 16-26.
[28] García-Uceda, M., & Arendt, L. (2021). Product diversification and R&D capability in manufacturing small and medium enterprises. *Journal of Industry, Competition and Trade, 21*(3), 453–475.
[29] Ghobakhloo, M., & Ching, N. T. (2019). Adoption of digital technologies of smart manufacturing in SMEs. *Journal of Industrial Information Integration*, *16*, 100107.
[30] Giroud, A., & Ivarsson, I. (2020). World Investment Report 2020: International production beyond the pandemic: United Nations Conference on Trade and Development, Geneva and New York, 2020, 247 pp. ISBN: 978-9211129854.
[31] Gitau, L., Nzuki, D., & Musau, F. (2022). Effects of IT capability on Performance of Manufacturing Firms in Nairobi City County Kenya. *Technium Soc. Sci. J.*, *28*, 595.
[32] Githire, C. N., & Muturi, W. (2018). Strategic financial management and firm's performance: Case of manufacturing firms in Kenya. *International Academic Journal of Economics and Finance*, 3(2), 256-265.
[33] Heinicke, A. (2018). Performance measurement systems in small and medium-sized enterprises and family firms: a systematic literature review. *Journal of Management Control*, *28*(4), 457-502.
[34] Johanson, J., & Vahlne, J. E. (2017). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. In *International business* (pp. 145-154). Routledge.
[35] Johnson, J., Whittington, R., Regnér, P., Angwin, D., Johnson, G., & Scholes, K. (2020). *Exploring strategy*. Pearson UK.
[36] Kariuki, L. W. (2018). *Factors Influencing Performance Of Micro And Small Enterprises In Kenya A Case Of Kiambu County, Kenya* (Doctoral dissertation, Kca University).

[37] Kenya Association of Manufacturers (KAM). (2018). Manufacturing in Kenya Under the 'Big 4 Agenda': A Sector Deep-dive Report. Kenya Association of Manufacturers.
[38] Kenya National Bureau of Statistics (KNBS). (2021). Economic Survey 2021. Government of Kenya.
[39] Khan, S. A. R., Yu, Z., Rehman Khan, S. A., & Yu, Z. (2019). Introduction to supply chain management. *Strategic Supply Chain Management*, 1-22.
[40] Kimani, M. N., & Mutuku, B. (2023). Marketing strategies and firm performance of Keroche Breweries, Kenya**.** *The Strategic Journal of Business & Change Management,* 10 (2), 1043 – 1054.
[41] Kiveu, M., & Ofafa, G. (2018). Enhancing market access in Kenyan SMEs using ICT. *Global Business and Economics Research Journal*, *2*(9), 29-46.
[42] Krésová, D. (2019). Can the Fourth Industrial Revolution-Industry 4.0-Hold the Future for Africa's Industrialisation. *Lund University*.
[43] Krosnick, J. A. (2018). Questionnaire design. *The Palgrave handbook of survey research*, 439-455.
[44] Kumar, P., Maiti, J., & Gunasekaran, A. (2018). Impact of quality management systems on firm performance. *International Journal of Quality & Reliability Management*, *35*(5), 1034-1059.
[45] Kusi-Sarpong, S., Gupta, H., & Sarkis, J. (2019). A supply chain sustainability innovation framework and evaluation methodology. *International Journal of Production Research*, *57*(7), 1990-2008.
[46] La Rocca, M., & Cambrea, D. R. (2019). The effect of cash holdings on firm performance in large Italian companies. *Journal of International Financial Management & Accounting*, *30*(1), 30-59.
[47] Levy, P. S., & Lemeshow, S. (2013). *Sampling of populations: methods and applications*. John Wiley & Sons.
[48] Liu, W., & Atuahene-Gima, K. (2018). Enhancing product innovation performance in a dysfunctional competitive environment: The roles of competitive strategies and market-based assets. *Industrial Marketing Management*, *73*, 7-20.
[49] Lu, J. W., & Beamish, P. W. (2018). International diversification and firm performance: The S-curve hypothesis. *Journal of International Business Studies, 49*(4), 434–453.
[50] Mamédio, D., Rocha, C., Szczepanik, D., & Kato, H. (2019). Strategic alliances and dynamic capabilities: A systematic review. *Journal of strategy and management*, *12*(1), 83-102.
[51] Matīss, M., & Lavrinoviča, R. (2019). Innovation strategies and organizational performance: A case of manufacturing firms in Latvia. *Business: Theory and Practice, 20*(1), 1–10.
[52] Miller, D. (2019). The resource-based view of the firm. In *Oxford Research Encyclopedia of Business and Management*.
[53] Mkhonto, M., & Zuva, T. (2023). Review of Technology Adoption Models and Theories at Organizational Level. *Proceedings of the Computational Methods in Systems and Software*, 322-330.
[54] Muchran, M., & Ahmar, A. S. (2019). Application of TAM model to the use of information technology. *arXiv preprint arXiv:1901.11358*.
[55] Munee, D. *Market Expansion Strategies and Organizational Performance of Supermarkets in Nairobi City County, Kenya* (Doctoral dissertation, Kenyatta university).
[56] Munyasya, R. K., & Muathe, S. M. (2023). Understanding Growth Strategies and Performance: Empirical Investigation of Cement Manufacturing Firms in Kenya. *International Journal*, *11*(1), 13-22.
[57] Musebe, E. A. (2024). Adoption of Advanced Manufacturing Technology by SMEs in Kenya: Effect on Performance and Policy Implications. *The University Journal*, *6*(2), 94-108.
[58] Mwasiaji, E. T. (2019). The effect of government policy on the performance of selected manufacturing enterprises in Kenya. *International Journal of Economics, Business and Management Research*, *3*(12), 198-210.
[59] Mwilu, H., & Njuguna, R. (2020). *Corporate Growth Strategies and Performance of Selected Savings and Credit Cooperative Societies in Nairobi City County, Kenya* (Doctoral dissertation, KENYATTA UNIVERSITY).
[60] Ndubisi, N. O., & Nygaard, A. (2018). Innovation-based growth strategies and firm performance in the manufacturing sector. Journal of Business Research, 91, 234-244.
[61] Nguyen, T. T., Ngo, L. V., & Ruël, H. (2020). The relationship between digital transformation and firm performance: Evidence from making in Vietnam. *Technological Forecasting & Social Change, 162*, 120370.
[62] Njoroge, P. W., Muathe, S., & Bula, H. O. (2018). Effect of market expansion strategies on performance of small and medium enterprises in Kenya. Journal of Business and Management, 20(3), 28-35.
[63] Njuguna, V. N. (2019). *Influence of diversification strategies on performance of non-financial Firms Listed at the Nairobi Securities Exchange in Kenya* (Doctoral dissertation, JKUAT-COHRED).
[64] Nwakoby, N. P., & Ihediwa, A. U. G. U. S. T. I. N. E. (2018). Effect of diversification on the financial performance of selected firms in Nigeria. *International Journal of Advanced Academic Research*, *4*(12), 1-16.
[65] Ogalloh, J. (2021). *Market Growth Strategies and Performance of Insurance Companies During Covid-19 Pandemic Period in Kenya* (Doctoral dissertation, University of Nairobi).

[66] Omamo, A., Rodrigues, A. J., & Muliaro, W. (2019). Kenya's vision 2030: Modelling technology usage and the economy. *Technology in Society*, *59*, 101135.
[67] Omosa, H. M., Muya, J., Omari, S., & Momanyi, C. (2022). Role of product diversification strategy on performance of selected tea factories in Kenya. *International Academic Journal of Innovation, Leadership and Entrepreneurship*, *2*(2), 279-296.
[68] Osano, H. M. (2019). Global expansion of SMEs: role of global market strategy for Kenyan SMEs. *Journal of Innovation and Entrepreneurship*, *8*(1), 13.
[69] Palepu, K. G., Healy, P. M., Wright, S., Bradbury, M., & Coulton, J. (2020). *Business analysis and valuation: Using financial statements*. Cengage AU.
[70] Paul, J. (2020). Marketing in emerging markets: A review, theoretical synthesis and extension. *International Journal of Emerging Markets*, *15*(3), 446-468.
[71] Paul, J., & Rosado-Serrano, A. (2019). Gradual internationalization vs born-global/international new venture models: A review and research agenda. *International Marketing Review*, *36*(6), 830-858.
[72] Peng, M. W., Lee, S. H., & Wang, D. Y. (2019). The effects of local partner capabilities and national competitiveness on market entry performance. *Journal of World Business, 54*(4), 584–600.
[73] Ray, K. G. (2022). *Mergers and acquisitions: Strategy, valuation and integration*. PHI Learning Pvt. Ltd.
[74] Razak, I. (2022). PRODUCT DIVERSIFICATION: MARKETING MANAGEMENT STRATEGY FOR BUSINESS GROWTH. *Jurnal Ekonomi*, *11*(03), 2162-2167.
[75] Sangwa, N. R., & Sangwan, K. S. (2018). Development of an integrated performance measurement framework for lean organizations. *Journal of Manufacturing Technology Management*, *29*(1), 41-84.
[76] Saunders, M. (2016). Saunders, Lewis & Thornhill, Research Methods for Business Students, | Pearson.
[77] Shahzad, K., & Takala, J. (2022). Understanding the impact of entrepreneurial ecosystem interactions on innovative capabilities: Toward a conceptual framework. In *Trust and Digital Business* (pp. 77-89). Routledge.
[78] Shahzad, M., Qu, Y., Rehman, S. U., & Zafar, A. U. (2022). Adoption of green innovation technology to accelerate sustainable development among manufacturing industry. *Journal of Innovation & Knowledge*, *7*(4), 100231.
[79] Signé, L., & Johnson, C. (2018). The potential of manufacturing and industrialization in Africa. *Africa Growth Initiative*.
[80] Singh, A. K., Vaibhav, V., Sargade, S. B., & Pilli, D. (2024). Examine Opportunities and Challenges for Global Business Expansion. *Journal of Informatics Education and Research*, *4*(2).
[81] Syokau, M. F. (2021). Effects of product diversification strategy on supply chain performance of Delmonte Kenya. *Journal of Strategic Management*, *1*(1), 25-31.
[82] Tallman, S., Luo, Y., & Buckley, P. J. (2018). Business models in global competition. *Global Strategy Journal*, *8*(4), 517-535.
[83] Taouab, O., & Issor, Z. (2019). Firm performance: Definition and measurement models. *European Scientific Journal*, *15*(1), 93-106.
[84] Tsatsoula, E. (2018). Application of Ansoff's Matrix-Methodology: Marketing Growth Strategies For Products.
[85] Tudose, M. B., Rusu, V. D., & Avasilcai, S. (2022). Financial performance–determinants and interdependencies between measurement indicators. *Business, Management and Economics Engineering*, *20*(1), 119-138.
[86] Wamba, S. F., Gunasekaran, A., Akter, S., Ren, S. J., Dubey, R., & Childe, S. J. (2018). Industry 4.0 and the digital twin: A review of dimensions and technologies in smart manufacturing. *Journal of Manufacturing Systems, 62*, 545–567.
[87] Wanjiru, A. I., Muathe, S. M., & Kinyua-Njuguna, J. W. (2019). Corporate Growth Strategies, External Operating Environment and Firm Performance: An Empirical Survey of Large Manufacturing Firms in Nairobi City County, Kenya. *Journal of Management and Strategy*, *10*(4), 21-36.
[88] Wijekoon, A., Salunke, S., & Athaide, G. A. (2021). Customer heterogeneity and innovation-based competitive strategy: A review, synthesis, and research agenda. *Journal of Product Innovation Management*, *38*(3), 315-333.
[89] World Bank. (2018). *World development report 2019: The changing nature of work*. The World Bank.
[90] World Bank. (2020). Doing Business 2020: Comparing Business Regulation in 190 Economies. World Bank Publications.
[91] Zhang, Z., & Qi, J. (2020). Product diversification and firm performance: The role of intellectual capital in China's manufacturing firms. *Asia Pacific Business Review, 26*(1), 35–54.
[92] Zugay, B., & Zakaria, R. (2023). *Ansoff matrix*. SAGE Publications, Inc.
[93] Zvarimwa, C., & Zimuto, J. (2022). Valuable, rare, inimitable, non-substitutable and exploitable (VRINE) resources on competitive advantage. *International Journal of Business & Management Sciences*, *8*(1), 9-22.