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STRATEGIC DRIVERS AND SUSTAINABILITY OF FAMILY-OWNED SUPERMARKETS: A CASE OF KIAMBU COUNTY, KENYA

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ST. PAUL'S UNIVERSITY

A THESIS SUBMITTED TO THE SCHOOL OF BUSINESS AND LEADERSHIP STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION AND MANAGEMENT (STRATEGIC MANAGEMENT) OF ST. PAUL'S UNIVERSITY

OCTOBER, 2026

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DECLARATION

This thesis is my original work and has not been presented for consideration of any award to any other institution.

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Declaration by Supervisor

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DEDICATION

I thank God for how far he has brought me. I dedicate this research to my beloved family, my husband and children, Mum and Late Dad, whose unwavering support, guidance, and sacrifices have been the foundation of my long academic journey. Your encouragement has been my greatest motivation. Lastly, to my extended family, thank you for your love, understanding, and patience throughout this process.

This work would not have been possible without each of you. God bless you.

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OPERATIONAL DEFINITION OF TERMS

External Environmental Factors: Elements outside an organization that can influence its performance, behavior, or decision-making. In this study, external environmental factors are assessed through political and legal factors, economic factors, socio-cultural factors, technological factors, environmental factors, and competition.

Family-Owned Supermarkets: Retail businesses in Kiambu County owned and managed primarily by family members. These supermarkets are characterized by family involvement in key decision-making processes, ownership structures, and the transfer of management responsibilities across generations.

Governance: Refers to the structures, policies, and practices that guide decision-making and management in family-owned supermarkets. It is assessed through board independence, board diversity and effectiveness, ownership structure, accountability mechanisms, and transition management.

Management Skills: Refers to the ability of leaders in family-owned supermarkets to effectively plan, make decisions, delegate tasks, and adapt to market changes. In this study, management skills are assessed through strategic vision, decision-making quality, delegation effectiveness, and adaptability to change.

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Strategic drivers: Refers to key individuals, stakeholders, or factors that significantly impact the decision-making processes, growth strategies, and competitive positioning of family-owned supermarkets.

Succession Planning: Refers to the systematic process of identifying and preparing future leaders from within the family or externally to ensure continuity and long-term sustainability of family-owned supermarkets. It is assessed through succession rate, level of family involvement, training and development, and succession preparedness.

Supply Chain Management: Refers to the orchestration of end-to-end procurement, distribution, and logistics processes to optimize efficiency and reduce costs in family-owned supermarkets. It is assessed through supplier diversity, supply chain resilience, lead time optimization, supplier sustainability, and supplier relationships.

Sustainability: Refers to the ability of family-owned supermarkets to maintain long-term economic viability, achieve consistent profitability, and adapt to changes in the business environment. In this study, sustainability is assessed through financial performance, internal business processes, family culture, and leadership quality.

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ABSTRACT

The retail sector in Kenya, particularly family-owned supermarkets, plays a critical role in the economy. However, their sustainability is threatened by challenges such as poor management skills, inadequate succession planning, weak governance, inefficient supply chain management, and unfavourable external environmental factors. The general objective of this study was to investigate the effect of strategic drivers on the sustainability of family-owned supermarkets in Kiambu County, Kenya. Specifically, the study assessed the effect of management skills, succession planning, governance, and supply chain management on sustainability, and examined the moderating effect of external environmental factors on the strategic drivers-sustainability relationship. The study was anchored on Transformational Leadership Theory, Stewardship Theory, Upper Echelon Theory, and the Resource-Based View, and adopted a pragmatist research philosophy with a mixed-methods design that integrated quantitative and qualitative approaches. The study used a cross-sectional survey design and stratified random sampling to select 183 respondents from family-owned supermarkets registered with the Kiambu County Licensing Department; data were collected through structured questionnaires complemented by in-depth key informant interviews. The reliability and validity of the research instrument were established, and diagnostic tests confirmed the model was free of multicollinearity and heteroscedasticity concerns. Quantitative data were analyzed using structural equation modelling to test the direct and moderating relationships, while qualitative data were analyzed thematically to complement the quantitative findings. The study found that the strategic drivers had positive influence on sustainability of family-owned supermarkets; Management skills had a statistically significant positive effect on sustainability ($\beta = 0.148$, $t = 6.012$, $p = 0.016$); Succession planning had a statistically significant positive effect on sustainability ($\beta = 0.138$, $t = 2.458$, $p = 0.015$); Governance had the strongest individual positive effect on sustainability ($\beta = 0.652$, $t = 11.919$, $p < .001$) and supply chain management had a strong positive and statistically significant effect on sustainability ($\beta = 0.631$, $t = 11.349$, $p < .001$). Additionally, external environmental factors had a negative and significant moderating effect ($\beta = -.176$; $t = -2.885$; $p = .004$). The study concluded that strategic drivers contributed positively to family-owned business sustainability, even after accounting for the moderating effect of external environmental factors. The study recommends that family-owned supermarkets prioritize governance formalization, strengthen supply chain resilience, invest in management competency development, and establish formalized succession planning frameworks, while policymakers design regulatory environments that minimize compliance burdens while supporting long-term institutional capacity building. The study generates new empirical knowledge by establishing that governance is the single most powerful driver of sustainability. The study also contributes new knowledge by documenting the negative moderating effect of external environmental factors on the strategic drivers-sustainability relationship.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Family-owned businesses play an important role in East Africa's private-sector economy, yet their long-term sustainability remains a challenge, with fewer than 20% surviving beyond the second generation (Oikocredit, 2025). This high percentage underscores the need to examine the strategic drivers such as management skills, governance, succession planning, and supply chain efficiency that determine their continuity. Globally, family firms contribute 70% of employment and dominate SME sectors in both developed and emerging economies (Hiebl et al., 2018). However, their dual nature, balancing family interests (e.g., succession, equity distribution) and business demands (e.g., profitability, competitiveness), often leads to conflicts that threaten sustainability (Chang & Mubarik, 2022). Effective governance structures and adaptability to changing global environments are important strategic factors in the long-term sustainability and performance of family enterprises. Studies indicate that governance characteristics influence long-term orientation and sustainable longevity in family firms, while family businesses are increasingly adapting their strategies in response to globalization (Grissa & Lakhal, 2023; Wu et al., 2022).

In Africa, family businesses operate in volatile macroeconomic environments, requiring resilience to survive. Evidence from South Africa demonstrates that structured succession planning, inclusive governance, adaptability, and clear ownership and legal frameworks are important for strengthening continuity and resilience in family-owned businesses (Adekomaya & Schachtebeck, 2025). Similarly, in Ghana, research emphasizes the importance of structured succession planning and the preparation of capable successors for maintaining continuity and sustainability in family businesses (Ghamloush, 2021).

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In Kenya, family-owned businesses play an important role in employment and economic activity; however, their long-term continuity remains a significant challenge, with fewer than 20% of family-owned enterprises surviving beyond the second generation (Oikocredit, 2025). A notable example is Woolworths Kenya, which collapsed in 1997 due to management and governance failures, despite its initial success. Supermarkets in Kiambu County face competition from major retail chains, including Naivas, Carrefour, Tuskys and Choppies, with the Competition Authority of Kenya identifying several established retailers operating across the county (Competition Authority of Kenya, 2020). Rotich and Mungai (2022) report that supermarkets experience difficulties in meeting short-term obligations such as employee payments, rent, utilities, and other operating expenses.

In the family business context, Kuria (2018) demonstrates that succession planning significantly influenced the performance of small and medium-sized family-owned businesses in Kiambu County. These studies suggest that strategic and operational pressures influence the sustainability of family-owned supermarkets in Kiambu County, yet empirical evidence remains limited on how management competencies, governance structures, succession planning, and supply chain management jointly influence their sustainability, particularly under changing external environmental conditions. Therefore, this study provides empirical evidence on how these strategic drivers influence the sustainability of family-owned supermarkets in Kiambu County, Kenya.

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1.1.1 Sustainability

Sustainability in family businesses is widely conceptualized as their capacity to endure across generations while maintaining profitability, family harmony, and societal impact (Ferreira et al., 2021). However, scholarly perspectives diverge on key dimensions of sustainability. While some researchers emphasize financial performance as the primary indicator of family-owned

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business sustainability (Lubawa & Raphael, 2023), proponents of the socioemotional wealth (SEW) perspective argue that family firms prioritize non-financial objectives such as legacy preservation and family cohesion, which may either enhance resilience or hinder adaptability (Dávila et al., 2023; Reina et al., 2023). Similarly, debates persist about succession planning, with some scholars advocating formalized processes to ensure continuity while others argue that rigid succession structures may stifle innovation, particularly in dynamic markets (Olubiyi et al., 2022; Baltazar et al., 2023). In African family-owned businesses, succession approaches are influenced by family relationships, successor characteristics, and institutional context. Lack of formal succession planning and inadequate preparation of potential successors impedes successful leadership transitions (Okeke, 2025)

Governance structures also remain contested, with some studies highlighting the benefits of family-centric governance in aligning values and reducing conflict while cautioning that excessive family involvement in management may diminish competitive advantage and increase agency conflicts (Barbera et al., 2023). Empirical evidence from Kenya supports hybrid governance models that integrate external expertise with family leadership (Hinga et al., 2022). Furthermore, while some scholars stress the need for family businesses to adapt to external environmental shifts through diversification and innovation (Heider et al., 2022), others argue that preserving traditional values and long-term relationships can provide a competitive advantage (Grissa & Lakhal, 2023). These divergent perspectives underscore the complexity of achieving sustainability in family businesses and highlight the need for context-specific research, particularly in emerging economies such as Kenya, where institutional and cultural factors may mediate the effectiveness of different strategic approaches.

The sustainability of family-owned supermarkets was measured through a multi-dimensional framework that extends beyond financial metrics. Financial performance, a cornerstone of economic viability, was assessed as it provides the essential capital for reinvestment and

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resilience (Dávila et al., 2023). The operational efficiency and adaptability of internal business processes were evaluated, as they are critical for maintaining operational competitiveness and strategic agility (Heider et al., 2022). Furthermore, the unique fabric of family enterprises necessitates measuring family culture, including harmony, shared values, and commitment, which are proven indicators of socioemotional wealth and long-term orientation (Reina et al., 2023). Finally, effective leadership structure was assessed, as they are fundamental to steering the business, managing succession, and ensuring strategic decision-making aligns with sustainable goals (Grissa & Lakhal, 2023).

1.1.2 Strategic Drivers

Strategic drivers refer to the key forces and influences that guide and shape an organization's strategic decision-making processes (Cartwright et al., 2022). These factors play a Critical role in determining the direction an organization pursues, the strategic choices it makes, and the outcomes it ultimately achieves. Several scholars have recognized the significance of various indicators as strategic drivers in organizational contexts. Succession planning plays a crucial role in ensuring smooth leadership transitions, talent retention, and sustainable organizational growth (Hassan & Bichanga, 2022). Governance, as discussed by Barbera et al. (2023), influences decision-making processes, risk management, and overall corporate performance. Management competence, as emphasized by Hassan (2023), significantly influences the performance of managers in achieving sustainable projects. Additionally, supply chain management is a critical factor affecting efficiency, cost-effectiveness, and customer satisfaction (Nyakonu & Muli, 2024). These strategic drivers have been recognized for their significant impact on organizational success and are vital considerations in managerial decision-making processes.

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Management competency poses a significant threat to business sustainability by leading to reputational damage, ineffective strategies, and inadequate responses to environmental challenges. One of the most notable consequences of poor management is reputational damage. When companies fail to oversee their supply chains effectively, they may face public backlash and a loss of consumer trust. For instance, brands such as Joe Fresh and Primark experienced severe reputational harm after the Rana Plaza disaster, where inadequate supplier oversight contributed to a tragic factory collapse. Research indicates that poor management practices can result in an average market capitalization loss of 12%, underscoring the financial repercussions of reputational damage (Lee & Vachon, 2016).

Beyond reputational risks, ineffective business strategies also hinder sustainability efforts. Organizations that fail to integrate sustainability into their core strategies may prioritize immaterial Issues, diverting attention from critical challenges (Mwaura et al., 2023). Moreover, businesses that rely on outdated management approaches often struggle to adapt to evolving sustainability demands, ultimately leading to suboptimal performance (Sarfraz & Ivascu, 2023). This inability to effectively address sustainability concerns can put businesses at a competitive disadvantage.

A critical factor contributing to poor management is the skills gap in leadership. Many managers lack essential competencies such as emotional intelligence, self-awareness, and sustainability-oriented decision-making, which are crucial for long-term business success (Bosibori & Oduol, 2022). Future business leaders must develop a combination of hard, soft, green, and power skills to navigate environmental challenges and promote sustainable practices (Silva & Romaro, 2024). Without these capabilities, companies risk making short-sighted decisions that undermine their sustainability efforts.

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Succession planning is widely recognized as a critical determinant of sustainability in family-owned businesses. It refers to a deliberate, structured strategy through which organizations prepare to transfer leadership roles to designated individuals or groups, safeguarding operational continuity when key leaders retire, exit, or pass away (Nave et al., 2022). By anticipating leadership transitions, succession planning minimizes disruption, preserves organizational stability, and maintains strategic direction. In some cases, it can also facilitate liquidity events by enabling the smooth transfer of ownership to internal successors, ensuring that the enterprise remains a going concern.

Importantly, succession planning extends beyond simply filling top management roles. As Kenton (2022) notes, it provides a systematic approach to identifying, developing, and advancing talent at multiple levels within the organization, strengthening overall capacity and readiness. Its core Objective is to ensure that qualified individuals fill critical positions while preserving the firm's culture and developing the skills needed for long-term growth and competitiveness. When implemented effectively, succession planning enables seamless leadership transitions, continuity of vision, and organizational resilience (Hassan & Bichanga, 2022; Mwansa & Serumaga-Zake, 2023).

Governance constitutes a fundamental determinant of how family-owned enterprises are managed and sustained over time. According to Grissa and Lakhal (2023), an enterprising family, one that is collectively oriented toward the preservation and growth of family wealth, is more likely to establish formalized policies and governance frameworks that enhance organizational resilience. Well-designed governance systems benefit both the owning family and the enterprise, though their configuration is highly contextual and evolves with the firm's strategic priorities, generational transitions, and socio-cultural dynamics. Consequently, governance structures must be deliberately crafted to align with each family business's unique needs while maintaining a central focus on business continuity and long-term sustainability.

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Research by Muraguri (2025) further highlights ownership architecture and governance mechanisms as critical strategic drivers. Clearly articulated ownership policies, transparent decision-making procedures, and explicit accountability frameworks serve to delineate the roles and responsibilities of family members and professional managers. Governance instruments such as family councils, boards of directors, and family constitutions not only support effective strategic decision-making but also mitigate intra-family conflict and institutionalize a culture of stewardship, thereby anchoring the firm's longevity.

Empirical research substantiates the relationship between robust governance and sustainable business practice. Hinga et al. (20222) demonstrate that well-governed firms are more likely to integrate environmental and social considerations into their strategic planning, proactively minimizing adverse impacts and strengthening corporate responsibility. Collectively, these findings suggest that sound governance, particularly when it encompasses environmental and social dimensions, is a pivotal enabler of long-term sustainability in family-owned enterprises.

Supply chain management (SCM) plays a critical role in advancing the sustainability of organizations (Alwadani & Ndubisi, 2022). Broadly, SCM involves the planning, coordination, and oversight of the flow of goods, services, and information from suppliers to end customers. Well-executed SCM practices can significantly strengthen the long-term viability of family-owned businesses. Among the key contributions are the development and maintenance of strong supplier relationships, an essential aspect for firms seeking reliability and mutual growth; efficient inventory management to reduce waste and optimize resources; and the establishment of effective distribution and logistics networks that ensure timely and cost-efficient product delivery (Machira & Chege, 2025). SCM also supports adopting sustainable business practices. This may include environmentally conscious sourcing, minimizing packaging waste, and optimizing transportation to reduce carbon emissions (Mohamed, 2023). By integrating such practices, family-owned businesses can improve operational efficiency,

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enhance their market reputation, appeal to environmentally aware consumers, and reinforce their overall sustainability.

1.1.3 External Environmental Factors

Family-owned businesses contribute significantly to employment, innovation, and economic growth. However, these enterprises face distinct external environmental challenges in their pursuit of sustainability, shaped by regulatory, market, and socio-cultural factors. Regulatory pressures offer both an opportunity and a burden for organizations. While stringent environmental policies can drive green innovation, compliance often imposes financial and operational burdens, particularly on small and medium-sized family firms (Zheng & Xu, 2022). Market competition further complicates these efforts, as customer demands for sustainable products force family businesses to invest in eco-friendly practices, often without immediate financial returns (Kraus et al., 2020). These challenges are exacerbated by environmental dynamism, including climate change and resource scarcity, which introduce uncertainty into long-term sustainability planning (Chirico et al., 2021).

Beyond regulatory and market pressures, stakeholder expectations and financial constraints play a pivotal role in shaping the sustainability trajectories of family businesses. Stakeholders, including employees, communities, and investors, increasingly demand corporate social responsibility (CSR) commitments, pushing family firms to balance socio-emotional wealth (SEW) with profitability (Caputo et al.,2021). However, limited access to financial resources, especially in developing economies, often hinders the adoption of advanced sustainability technologies or practices (Haider et al.,2024). Globalization further intensifies these challenges, as family businesses must align with international sustainability standards to remain competitive, despite varying regional regulations and cultural priorities (Yang et al., 2022). Succession planning also emerges as a critical factor, with generational shifts potentially

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disrupting or advancing sustainability agendas depending on the incoming leadership's values and expertise (Rahim et al., 2024).

Technological advancements and cultural factors also shape family businesses' sustainability efforts. While innovations like digital tools and green technologies offer opportunities for efficiency gains, their adoption requires significant investments and expertise, which may be out of reach for resource-constrained family firms (Veiga, 2024). Cultural norms and community expectations can either motivate or hinder sustainability initiatives, particularly in regions where short-term economic gains are prioritized over long-term environmental goals (Durrani et al., 2024). Effective collaboration with stakeholders, including governments and supply chain partners, is essential to overcoming these barriers, yet building such alliances demands trust and institutional support, which may be lacking in certain contexts (Rahim et al., 2024). Together, these external challenges underscore the complex landscape family businesses must navigate to achieve sustainable growth.

1.1.4 Family-Owned Supermarket Businesses in Kenya

Family-owned supermarkets remain a significant component of Kenya's "modern retail" landscape, supplying essential goods, supporting household welfare, and creating employment across counties such as Kiambu that are closely integrated with Nairobi's consumer markets. However, Kenya's recent retail history shows that growth alone does not guarantee sustainability. Several supermarket failures and near-failures reveal recurring strategic and governance vulnerabilities, especially weak financial discipline, delayed supplier payments, overexpansion, inadequate internal controls, and slow adaptation to shifting consumer behaviour and technology-enabled competition. The collapse of Nakumatt in 2017 is widely linked to unsustainable debt, supplier arrears, and loss of supplier confidence that constrained product availability and ultimately undermined customer trust (KIPPRA, 2020; Nandonde,

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2020). In parallel, Uchumi's prolonged distress and court-supervised restructuring efforts illustrate how insolvency processes and creditor arrangements can reflect deeper operational fragilities and governance constraints that prevent recovery in highly competitive markets (Kenya law, 2020; Kenya law, 2025).

Similarly, the difficulties experienced by Tuskys, which culminated in court-linked insolvency proceedings and prolonged disputes, have been associated with family and ownership conflicts, control challenges, and weak governance mechanisms that eroded operational coherence and stakeholder confidence (Kenya law, 2021; Strathmore Business School, 2024). Kenya's retail sector has also observed exits by non-local chains, such as Choppies' withdrawal from the Kenyan market following financial strain and supplier/lender obligations, illustrating how retailer survival depends on disciplined strategy execution and resilient supply systems rather than ownership structure alone (The East African, 2021). Recent sector analyses further show that Kenya's retail spaces have been reshaped by the entry and expansion of more formalized chains and new retail formats, with competitive pressure intensifying for locally owned and family-managed supermarkets that do not professionalize management, strengthen governance, and modernize supply chain practices (Cytonn Investments, 2024a, 2024b). Against this backdrop, understanding how strategic drivers such as management skills, succession planning, governance, and supply chain management shape sustainability outcomes is critical for family-owned supermarkets seeking continuity and competitiveness in counties such as Kiambu.

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1.2 Statement of the Problem

Family businesses constitute a critical pillar of contemporary economies, contributing significantly to employment creation, capital formation, and long-term wealth accumulation. Their sustainability is therefore central to economic resilience and inclusive growth, particularly in emerging markets (Al-Qudah et al., 2022). In Kenya, family-owned

supermarkets form an important segment of the retail sector and are expected to leverage inherent strengths such as patient family capital, long-term strategic orientation, and strong community embeddedness to achieve intergenerational continuity while remaining competitive against large retail chains and emerging modern retail formats (Lockwood, 2023). However, their long-term continuity remains a significant challenge, with fewer than 20% of family-owned enterprises surviving beyond the second generation (Oikocredit, 2025).

Globally, family business continuity remains fragile, with fewer than one-third surviving into the second generation and only a small fraction reaching later generational transitions (Al-Qudah et al., 2022). In Kenya, the sustainability challenge has been particularly pronounced within the supermarket sub-sector, where high-profile failures and prolonged distress have underscored systemic weaknesses in strategic management and governance. Nakumatt's collapse was linked to excessive leverage, weak financial controls, and breakdowns in supplier relationships that eroded consumer confidence and operational viability (Nandonde, 2020; KIPPRA, 2020). Similarly, the prolonged insolvency and restructuring challenges experienced by Uchumi Supermarkets reveal persistent governance and recovery limitations in an increasingly competitive retail environment (Kenya law, 2020; Kenya law, 2025). Tuskys' distress further illustrates how ownership disputes, inadequate internal controls, and delayed professionalization can destabilize family-owned retail enterprises (Kenya law, 2021; Strathmore Business School, 2024). Collectively, these cases demonstrate that family ownership alone does not guarantee resilience, particularly where strategic drivers are weak or misaligned.

Consequently, the empirical gaps demonstrated in studies examining how strategic drivers jointly influence the sustainability of family-owned supermarkets (Hassan & Bichanga, 2022; Mutua, 2023). The need to conduct a study at the county level in Kenya, particularly in commercially dynamic regions such as Kiambu County that are closely linked to Nairobi's

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metropolitan retail market. This study addresses this gap by examining the combined effects of management competencies, governance structures, succession planning, and supply chain management, together with relevant external moderators on the sustainability of family-owned supermarkets in Kiambu County, Kenya.

1.3 Research Objectives

This study was guided by the following general and specific objectives.

1.3.1 General Objective of the Study

The general objective of this study was to investigate the effect of strategic drivers on the sustainability of family-owned supermarkets in Kiambu County, Kenya.

1.3.2 Specific Objectives of the Study

The specific objectives of this study are:

i. To assess the effect of management skills on the sustainability of family-owned supermarkets in Kiambu County, Kenya
ii. To assess the effect of succession planning on the sustainability of family-owned supermarkets in Kiambu County, Kenya
iii. To determine the effect of governance on the sustainability of family-owned supermarkets in Kiambu County, Kenya
iv. To determine the effect of supply chain management on the sustainability of family-owned supermarkets in Kiambu County, Kenya
v. To examine the moderating effect of external environmental factors on the relationship between strategic drivers and sustainability of family-owned supermarkets in Kiambu County, Kenya

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1.4 Research Hypotheses

H_{01}: Management skills have no significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya

H_{02}: Succession planning has no significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya

H_{03}: Governance has no significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya

H_{04}: Supply chain management has no significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya

H_{05}: External environmental Factors have no significant moderating effect on the relationship between strategic drivers and sustainability of family-owned supermarkets in Kiambu County, Kenya

1.5 Scope of the Study

The study investigated the effect of strategic drivers on the sustainability of family-owned supermarket businesses in Kiambu County, Kenya. The research focused on four key strategic drivers, namely management skills, succession planning, governance, and supply chain management. The study also considered external environmental factors as a moderating variable and sustainability as the dependent variable.

The data collection and analysis were conducted from September 2025 to November 2025. The units of analysis for this study were family-owned supermarkets in Kiambu County, while the units of observation were senior management employees and owners of these supermarkets. The unit of analysis was identified based on documented records obtained from the Licensing Department of the County Government of Kiambu County.

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1.6 Significance of the Study

The findings of this study yielded significant practical value for family-owned business managers by offering evidence-based guidance on actions necessary to ensure the survival and long-term sustainability of their enterprises. Specifically, the insights generated empowered family business owners to design well-informed sustainability plans and strategies that emphasize resilience, continuity, and long-term competitiveness. Moreover, the study highlighted how strategic drivers influence the sustainability of family-owned supermarkets, enabling managers to better align operational decisions with long-term growth objectives.

From a policy perspective, the outcomes were of particular relevance to key institutions such as the Government of Kenya, the Kenya Federation of Employers (FKE), the Central Organization of Trade Unions (COTU), and the Kenya Private Sector Alliance (KEPSA). The evidence will Inform these stakeholders about the ways in which strategic drivers affect the sustainability of family-owned enterprises, providing a basis for designing responsive policy frameworks and support mechanisms. Such frameworks can help address the persistently high failure rates of family firms and strengthen the entrepreneurial ecosystem necessary for sustainable economic development.

For the academic community, the study enriched the body of knowledge on family business sustainability, particularly within the context of developing economies. It served as a foundation for further research on the interplay between strategic factors and the long-term viability of family-owned enterprises.

1.7 Justification of the Study

While Section 1.6 addresses who benefits from the study and how, this section justifies why the study was necessary in the first place. Family business sustainability in Kenya is often examined primarily at the enterprise level, with less attention given to the unique characteristics

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of family ownership and its influence on firm longevity. This gap has contributed to the high mortality rate of family businesses, undermining their long-term viability and economic contribution. To address this challenge, family business owners require empirical insights into the critical elements of management, succession planning, governance, and supply chain practices that foster sustainability and prevent premature firm failure.

The high rate of discontinuity among family businesses is frequently masked at a macroeconomic level by positive indicators such as Kenya's high start-up activity and favorable ease-of-doing-business metrics, as reported by the World Bank. However, these statistics obscure the underlying challenge of sustaining family-owned enterprises over successive generations. In many developing contexts, including Kenya, the sustainability of family businesses remains underexplored despite its fundamental importance for economic stability, job creation, and intergenerational wealth transfer.

This study addresses that gap by examining strategies that protect family enterprises from failure and discontinuity. It also considers the influence of socio-emotional wealth and cultural practices in maintaining an enabling environment for sustainability. By doing so, the research offers actionable insights for practitioners and policymakers and enriches theoretical understanding of family business resilience in emerging economies.

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1.8 Organization of the Study

This thesis is structured into five chapters to provide a flow of the research. Chapter One introduces the study by presenting its background, problem statement, purpose, research objectives, significance, research questions, and the study's scope and limitations. Chapter Two reviews and synthesizes relevant theoretical and empirical literature. Chapter Three outlines the research methodology adopted for the study. It details the research design and philosophical orientation, defines the target population, describes the sample size and sampling procedures,

and explains the data collection instruments. Additionally, it discusses the processes undertaken to ensure reliability and validity, including pilot testing, as well as the data collection and analysis procedures. Chapter four discusses the empirical findings. It discusses in detail the questionnaire response rate, followed by sampling adequacy testing, reliability and construct validity, demographic characteristics, descriptive statistics, diagnostic tests and PLS-SEM analysis. Lastly, Chapter Five provides the summary of the findings, conclusions, contribution of the study findings, and recommendations made, as well as the limitations of the study.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the theoretical and empirical literature underpinning the study and presents the conceptual framework. It is organized into three sections: a theoretical review covering Transformational Leadership Theory, Stewardship Theory, Upper Echelon Theory, and the Resource-Based View; an empirical review organized around the study's five specific objectives; and a synthesis of the identified research gaps culminating in the conceptual framework.

Rather than relying on a single dominant theory, the study draws on four complementary theories, each anchoring a specific objective. Stewardship Theory anchors the management skills and governance objectives, given its focus on owner-manager stewardship behaviour; Upper Echelon Theory anchors the succession planning objective, given its focus on the attributes of top leadership; the Resource-Based View anchors the governance and supply chain management objectives, given its focus on how firms configure resources for competitive advantage; and Transformational Leadership Theory anchors the moderating role of external environmental factors, given its focus on how leaders adapt strategy to a changing environment. Together, these theories capture the behavioural, relational, cognitive, and resource-based dimensions of strategic management in family businesses operating within Kenya's competitive retail sector.

2.2 Theoretical Review of Literature

Several Theories formed the foundation of this study. These theories explain the concept of how the independent variables, including management skills, succession planning, governance,

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and supply chain management, relate to the sustainability of businesses. This study's theoretical framework was anchored in resource-based view theory and supported by transformational leadership theory, stewardship theory, and upper echelon theory.

2.2.1 Resource-Based View (RBV)

The Resource-Based View (RBV), developed by Birger Wernerfelt (1984) and later refined and popularized by Jay B. Barney (1991), is a strategic management framework that emphasizes internal resources and capabilities as the foundation for sustained competitive advantage. Unlike externally focused theories that prioritize industry structure or market conditions, RBV posits that the unique bundle of resources a firm possesses, if they are valuable, rare, inimitable, and non-substitutable (VRIN), can deliver long-term performance benefits (Okafor et al., 2021; Collins, 2021). The Resource-Based View is used here as an umbrella perspective rather than a single formalized theory, and this term is used consistently throughout the study in preference to the narrower label 'Resource-Based Theory' sometimes used interchangeably in the literature.

In the context of family-owned supermarkets, resources extend beyond tangible assets such as store locations and inventory to include intangible capabilities like strong family governance, trusted supplier relationships, and embedded community goodwill. When these resources meet the VRIN criteria, they can powerfully enable sustainability, helping such businesses remain competitive despite market fluctuations or larger retail entrants.

RBV has faced several criticisms. Kaufman (2015) argues that the theory offers limited guidance on evaluating resource value, particularly in strategic human resource management, making it difficult for managers to identify which capabilities truly confer competitive advantage. Similarly, Almarri and Gardiner (2014) point to definitional ambiguity, which can lead to inconsistent application, while Killen et al. (2012) note that RBV struggles to Account

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for dynamic market changes without modifications. These limitations have implications for this study. If the theory does not clearly guide managers in identifying valuable resources, family-owned supermarket managers might overestimate the strategic value of certain assets, such as legacy business practices that may actually hinder adaptability. Furthermore, the ambiguity in RBV definitions can make it challenging to consistently categorize family-specific resources, such as informal decision-making processes or long-standing supplier relationships, as true sources of competitive advantage. Finally, RBV's traditional focus on static resources could overlook the need for continuous capability development, which is critical for sustainability in Kenya's increasingly competitive retail sector.

Despite these criticisms, RBV offers a valuable framework for examining the sustainability of family-owned supermarkets in Kenya by shifting the focus to the internal strengths that can be leveraged for long-term viability. Through the VRIN lens, managers can assess resources such as effective succession planning, strong governance structures, and resilient supply chain networks to determine their role in sustaining competitiveness. For example, a supermarket with deeply embedded trust-based supplier relationships can maintain consistent inventory quality even during market disruptions. Similarly, governance systems that facilitate smooth generational transitions can preserve institutional knowledge and brand reputation, both valuable and non-substitutable resources.

A particularly salient application of RBV to this study concerns the heterogeneity of resource endowments across family-owned supermarkets of differing scale and operational history within Kiambu County. Supermarkets with longer operational histories are theorized, under RBV logic, to have accumulated harder-to-imitate relational resources, including entrenched supplier trust, accumulated customer loyalty, and tacit organizational knowledge passed down through successive family leadership generations, all of which constitute a stronger resource base than that available to newer market entrants. This temporal dimension of resource

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accumulation suggests that the relationship between strategic drivers and sustainability examined in this study may not be uniform across all sampled supermarkets but could vary according to the firm's resource maturity, a consideration that aligns with the demographic profiling of supermarket years in operation captured in the study's data collection instrument and analyzed descriptively in Chapter Four. Furthermore, RBV's emphasis on resource non-substitutability is directly relevant to the supply chain management construct examined in this study, since supplier relationships built over many years of trust and mutual accommodation cannot be easily replicated by newly established competitors, even those with substantially greater financial capital, thereby providing family-owned supermarkets with a durable, though not always formally recognized, source of competitive resilience against the encroachment of large retail chains.

2.2.2 Transformational leadership theory

Transformational Leadership Theory, developed by Burns (1978) and expanded by Bass (1985), explains how leaders inspire followers to exceed self-interest for organizational success. The theory comprises four dimensions including Idealized Influence which posits that Leaders act as ethical role models, earning trust through consistency and integrity (Bass & Riggio, 2006), Inspirational Motivation where Leaders articulate a compelling vision, fostering team commitment to shared goals (Korejan & Shahbazi, 2016), Intellectual Stimulation Which argues that Leaders encourage innovation by challenging assumptions (Khan et al., 2022) and Individualized Consideration: Leaders mentor followers based on unique needs, promoting growth (Koveshnikov & Ehrnrooth, 2018).

Critics argue the theory overemphasizes heroic leadership, potentially marginalizing follower agency (Northouse, 2007). However, Bass & Riggio (2006) counter that transformational leaders adapt styles (e.g., participative or directive) to contexts, with charisma being just one

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facet. The Multifactor Leadership Questionnaire (MLQ) further operationalizes these behaviors and addresses concerns about measurement validity (Lee, 2014). In this study, transformational leadership directly supports governance, succession planning and moderation of external factors. In Governance, leaders foster transparency and ethical decision-making (Nawaz & Koç, 2019), aligning family and business values. Further, by mentoring successors (individualized consideration) and inspiring long-term vision (inspirational motivation), leaders ensure smooth transitions (Ahmad et al., 2019). Transformational leaders enhance adaptability to market changes through intellectual stimulation (Khan et al., 2022), addressing competitive pressures.

In family-owned supermarkets, Transformational Leadership Theory takes on unique dynamics not always present in non-family organizations. Family business leaders frequently occupy dual roles as both organizational authority figures and senior family members, meaning that idealized influence and inspirational motivation are exercised not only through formal organizational channels but also through informal familial relationships, shared meals, and intergenerational dialogue that occur outside the boundaries of conventional workplace interaction. This dual-channel influence can amplify the impact of transformational behaviours, since family members may be more receptive to a parent or elder sibling's vision-setting than an unrelated subordinate would be to an external manager. At the same time, this blending of family and business roles can complicate accountability, as followers, including non-family employees, may perceive favoritism or inconsistency in how idealized influence and individualized consideration are extended to family versus non-family staff. This tension is particularly salient in the governance and succession planning domains examined in this study, where the credibility and perceived fairness of transformational leadership behaviours directly shape employee trust, retention, and the willingness of non-family staff to support family-

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driven strategic initiatives, all of which bear directly on the long-term sustainability of family-owned supermarkets in Kiambu County.

2.2.3 Stewardship theory

Stewardship theory, introduced by Donaldson and Davis (1991), emerged as a counterpoint to agency theory's assumptions. While agency theory views managers as self-interested agents who require strict monitoring and incentive structures, stewardship theory posits that managers, referred to as stewards, are inherently motivated to act in the best interests of the organization and its stakeholders. This orientation is rooted in collectivism, trust, and intrinsic motivation rather than opportunism (Davis et al., 1997; Muth & Donaldson, 1998).

In this study, the contrast with agency theory is particularly significant. Family firms often experience lower separation between ownership and management, with managers who are also owners or family members having personal, emotional, and reputational stakes in the business. This structure reduces the need for costly monitoring mechanisms and fosters decision-making guided by shared values, long-term strategic goals, and preservation of the business legacy.

Despite its appeal, stewardship theory faces several criticisms. Torfing and Bentzen (2020) argue that it presents an overly idealistic view of managerial behavior and lacks consistent empirical support across all organizational contexts. In competitive or highly volatile markets, the assumption that managers will always prioritize collective goals over personal gain may not hold. Furthermore, the theory's reliance on subjective value judgments and ethical motivations can make it difficult to operationalize in environments where performance is measured predominantly through short-term financial metrics.

In family-owned businesses, poor management skills can also undermine stewardship. For instance, even when managers are intrinsically motivated to act in the organization's interest, a lack of strategic planning skills, weak financial management, or limited knowledge of modern

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business practices can lead to unsustainable outcomes. Family firms often benefit from stewardship-oriented governance; they may underperform if management is not equipped with the necessary competencies to adapt to market changes or implement sustainable growth strategies. Another limitation concerns the potential for stewardship to degenerate into over-trust. Excessive reliance on trust, without appropriate checks, can allow managerial complacency, groupthink, or nepotism to go unchecked issues that have been documented in small, family-owned retail businesses in emerging markets (Chrisman et al., 2012).

In this research, stewardship theory offers a framework for understanding how management skills influence the sustainability of family-owned supermarkets. These enterprises often operate in environments where trust-based governance, shared family values, and a long-term orientation are critical for business continuity. Managers who are often family members may naturally adopt a stewardship role, prioritizing sustainable practices, ethical decision-making, and protecting the family's reputation over short-term profits (Davis et al., 1997). The theory, however, highlights the risks associated with poor management skills. For example, a steward with limited financial literacy may fail to implement effective cost-control measures, while one lacking marketing expertise may not respond adequately to competitive threats. The combination of intrinsic motivation and insufficient managerial competence can jeopardize sustainability, even with good intentions. Similar findings are observed in small-scale grocery retailers in South Africa, where stewardship attitudes were evident but business failures often stemmed from inadequate skills in inventory management, pricing strategy, and customer engagement (Nkosi et al., 2013). The consideration of this framework in the study underscores that internal governance mechanisms rooted in trust, ethical leadership, and shared goals must be complemented by robust managerial capabilities to ensure long-term success.

Beyond its direct application to management skills, Stewardship Theory also offers valuable explanatory power for the governance and supply chain management dimensions examined in

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this study. With respect to governance, the theory suggests that family-owned supermarkets that institutionalize stewardship norms through formal accountability mechanisms, board oversight, and structured decision-making protocols are better positioned to convert the intrinsic motivation of family stewards into consistent, sustainable organizational outcomes rather than relying solely on informal trust, which can be vulnerable to interpersonal conflict or generational disagreement. With respect to supply chain management, stewardship-oriented family supermarket owners are theorized to cultivate long-term, trust-based relationships with suppliers that extend beyond transactional efficiency, often involving informal credit arrangements, flexible payment terms, and mutual accommodation during periods of economic hardship, all of which can enhance supply chain resilience in ways that purely contractual, arm's-length supplier relationships cannot easily replicate. This dual application of Stewardship Theory to both internal management practices and external supplier relationships reinforces the theory's centrality to the present study's conceptual framework, providing theoretical coherence across multiple strategic driver dimensions examined in subsequent chapters.

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2.2.4 Upper echelon theory

The Upper Echelon Theory, proposed by Donald C. Hambrick and Phyllis A. Mason in 1984, asserts that the characteristics of top executives such as their values, experiences, personalities, and demographics profoundly shape the strategic choices they make and, consequently, organizational performance. Unlike traditional models that focus primarily on external environmental factors or organizational structures, this theory shifts attention to the cognitive and psychological dimensions of leadership (Neely et al., 2020). A central tenet is that executive Characteristics are not superficial attributes; they influence how leaders interpret strategic challenges and opportunities. For instance, in family-owned supermarkets, a CEO who has risen through the business over decades may interpret competitive threats differently

from an externally hired executive with a background in multinational retail chains. The former might favor incremental change to preserve family traditions, while the latter could pursue aggressive market expansion.

The theory also emphasizes how diverse backgrounds and experiences shape executives' perspectives. Leaders with varied professional or cultural experiences may introduce fresh ideas into succession planning or business strategy. In family-owned enterprises, however, leadership teams often share similar backgrounds, sometimes within the same family, which can create strong cohesion but also limit exposure to alternative strategies. Another principle concerns cognitive frames: the mental models, beliefs, and worldviews that guide leaders' decision-making (Ali et al., 2022). For example, an executive who views the market as volatile and unpredictable may prioritize resilience and risk management in succession planning, while one who sees it as stable might focus on continuity and gradual leadership transitions.

Despite its contributions, Upper Echelon Theory has been critiqued for its reliance on demographic attributes as proxies for deeper cognitive and psychological traits. Priem, Douglas, and Gregory (1999) argue that while demographic indicators such as age, tenure, and education are easy to measure, they provide an incomplete picture of the true drivers of executive behavior. This creates a "black box" problem, where the causal pathways between executive traits and organizational outcomes remain unclear (Neely et al., 2020).

Additionally, demographics are largely fixed and often beyond managerial control, limiting their practical utility in improving leadership decision-making (Oppong, 2014). In family-owned businesses, this limitation is particularly pronounced, as family lineage often determines leadership roles rather than a competitive talent pool. This can result in situations where the chosen successor's demographic profile matches the incumbent leader's, reinforcing existing cognitive biases and limiting adaptability.

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Another critique concerns contextual applicability. In tightly knit family businesses, personal relationships and family politics may override rational strategic considerations, meaning that even leaders with diverse backgrounds or high-risk tolerance may still defer to entrenched traditions. This can dilute the theory's predictive power if it does not account for these interpersonal dynamics.

In this research, Upper Echelon Theory provides a lens for understanding how top leaders' personal attributes influence succession planning in family-owned supermarkets. Leadership transitions in these businesses are rarely just operational decisions they are deeply intertwined with family values, legacy preservation, and risk perceptions. For example, a leader with deep industry experience but limited formal education may favor informal, apprenticeship-style successor development, while one with advanced managerial training may implement structured, competency-based succession frameworks. Similarly, a leader's cognitive frame, whether future-oriented and innovative or tradition-bound and conservative, will influence the selection criteria for successors, the timeline for transition, and the integration of new business strategies during the leadership change.

This study examines succession planning by applying Upper Echelon Theory, not as a purely technical process but as one deeply shaped by the personal and professional makeup of top Decision-makers. This integrated perspective recognizes that in family-owned supermarkets, sustainable leadership transitions depend not only on formal succession plans but also on the interplay between leaders' characteristics, their perceptions of risk, and the cultural values embedded in the family enterprise.

An important extension of Upper Echelon Theory relevant to this study concerns the composition of the broader management team surrounding the principal family decision-maker, rather than the characteristics of a single top executive in isolation. In family-owned

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supermarkets, top management often comprises a mix of family members in senior positions by virtue of lineage and non-family functional managers appointed based on professional qualifications. This heterogeneous composition can either enrich strategic decision-making by introducing diverse cognitive frames and professional experiences into succession deliberations, or it can generate friction when family-based and merit-based decision logics conflict over who is best positioned to lead the next generation of the business. The theory thus directs attention not only to the demographic and psychological characteristics of the incumbent family leader but also to the degree of cognitive diversity within the top management team as a whole, a consideration that becomes particularly salient when succession planning decisions must balance family loyalty against demonstrated managerial competence, a tension repeatedly highlighted in the empirical literature reviewed in Section 2.3.2 of this chapter.

2.3 Empirical review

This section reviews existing literature related to the study. Particularly, it discusses empirical literature on individual strategic drivers and how they relate to the sustainability of businesses. Strategic drivers include management skills, succession planning, governance, supply chain management and external factors. This section also identifies existing gaps related to the study objectives.

The empirical review is structured around the study's five specific objectives, with each subsection critically examining studies that have investigated the relationship between a given strategic driver and organizational sustainability or performance, drawing on evidence from Kenya, the broader East African region, Sub-Saharan Africa, and other international contexts where comparable Kenyan evidence is limited. For each reviewed study, particular attention is paid to the stated purpose, target population and sampling approach, research design and

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analytical methodology, key empirical findings, and, critically, the contextual, conceptual, or methodological gap the study leaves unaddressed. This systematic approach to literature evaluation is consistent with established practice in business and management research, which emphasizes the cumulative, gap-driven nature of empirical inquiry (Creswell & Creswell, 2018). By explicitly identifying these gaps at the level of each individual study and then synthesizing them across the chapter, this review builds a cumulative and well-justified empirical case for the specific research problem, objectives, and conceptual framework that anchor the present study, ensuring that the methodology and analytical approach presented in Chapter Three respond directly to documented shortcomings in the existing body of knowledge on family-owned supermarket sustainability in Kenya.

2.3.1 Management Skills and Sustainability

Popescu et al. (2020) conducted a study titled The Role of Managerial Skills in the Sustainable Development of SMEs in Mehedinti County, Romania. The study aimed to investigate how managerial skills, specifically self-awareness, emotional intelligence, and interpersonal skills, influence the sustainable development of small and medium-sized enterprises (SMEs). The research focused on entrepreneurs in Mehedinti County, Romania, with a sample size of 362 participants. The study used a quantitative descriptive research design and anonymous questionnaires to collect data. The key findings showed that while entrepreneurs demonstrated high levels of emotional intelligence and interpersonal skills, self-awareness was notably low and identified as a potential barrier to sustainable SME development. The study emphasized the need for managerial skills development programs, particularly in self-awareness, to enhance business sustainability. However, the study's limitation was its focus on only three managerial skills, leaving room for future research to explore other competencies, such as technical and conceptual skills, and their impact on SME sustainability.

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Bushe (2017) conducted a study titled Empirical Review of SMME Failure in South Africa: Towards a Hypothetical Framework. The study aimed to examine the causes of small, micro, and Medium enterprise (SMME) failure in South Africa and propose a structured perspective to address the issue. The research drew on an empirical literature review, using an exploratory approach to analyze the impact and underlying causes of SMME failure. The study categorized the causes into three main factors: entrepreneur incapacity, an inauspicious environment, and enterprise incompetence. A key focus was on entrepreneur incapacity, which refers to an entrepreneur's lack of critical knowledge, skills, and aptitude necessary to establish and sustain a successful business. The findings highlighted deficiencies in management knowledge (planning, resourcing, leadership, and control), business knowledge, self-awareness, industry experience, and overall business acumen. The study concluded that SMME failure should be assessed on a case-by-case basis and that reversing failure requires strengthening entrepreneur capacity, enhancing enterprise competitiveness, and improving environmental alignment. While Bushe's macro-level analysis identifies broad patterns, it fails to offer granular insights into family-specific dynamics, such as how kinship pressures distort resource allocation or inhibit professionalization. This study addresses that gap by examining how management skills interact with family-specific constraints in Kiambu's supermarket sector.

Lekaldero et al. (2022) studied the Effect of Management Competence on the Financial Sustainability of Community Conservancies in Northern Kenya. The purpose of the study was to assess how management competence influences the financial sustainability of community conservancies in the region. The study focused on 199 managers from 31 community conservancies in Northern Kenya. Employing an explanatory research design and a cross-sectional approach, the researchers collected primary data through a semi-structured questionnaire. The study used descriptive and inferential statistics, applying regression analysis to assess the relationship between management competence and financial sustainability. The

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key findings indicated that management competence significantly and positively affects the financial sustainability of community conservancies, with factors such as managerial experience, leadership approaches, employee empowerment, and skills playing a crucial role. Their findings are highly transferable to family supermarkets. Both contexts face acute resource constraints, rely on local networks, and require adaptive leadership. However, their focus on non-profit conservancies overlooks profit-driven metrics vital for retail (e.g., inventory turnover, supplier credit terms). This study adapts their competence framework to include retail-specific skills. Additionally, the study identified gaps, including limited focus on external financial influences and broader environmental factors affecting sustainability, as well as a need to explore alternative funding strategies beyond managerial competence.

Njiru (2023) conducted a study titled Effect of Human Resource Management Competence Practices on Sustainability of Small and Medium Enterprises in Kenya. The study aimed to determine the impact of human resource management competence practices on the sustainability of SMEs in Kenya. The research targeted 1,015 registered SMEs in Embu County and its environs and used a descriptive survey design. The study used stratified random sampling to select a sample of 102 SMEs. Data collection used structured questionnaires and document analysis guides, and the analysis used both qualitative and quantitative methods, including SPSS for statistical analysis. The key findings indicated that while most SME owners had acquired human resource management competencies through training, many were not applying them in their business operations, creating challenges in achieving sustainability. The study highlighted that entrepreneurs measured sustainability based on profit trends, customer growth, and business longevity but lacked structured HRM policies. The study recommended enhanced training follow-ups, the development of HRM documentation, and increased government efforts to promote entrepreneurial competency literacy. However, a notable gap was its limited exploration of external factors influencing SME sustainability, such as market

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dynamics and regulatory challenges. Njiru's (2023) study of Kenyan SMEs highlighted a critical disconnect. While 70% of owners received management training, most failed to apply these skills operationally. This is especially relevant to family supermarkets, where informal cultures often resist structured practices. These findings underscore that skill acquisition alone is insufficient; sustainability requires embedding competencies into daily operations, which is a process potentially hindered by family-specific dynamics like nepotism or resistance to change.

Achieng and Omondi (2023) examined the effect of owner-manager competencies on the survival and growth of small retail businesses operating within Nairobi's Eastlands estates, an urban environment characterized by intense informal sector competition and high business turnover rates. The study aimed to determine how strategic planning competence, financial management competence, and customer relationship management competence influenced business survival beyond the critical first three years of operation, when most small retail businesses in the study area were observed to fail. The target population consisted of 412 small retail businesses operating within five Eastlands estates, from which a sample of 198 businesses was selected using systematic random sampling, with owner-managers serving as the unit of analysis. The study employed a descriptive survey research design and gathered primary data through structured questionnaires, which were analyzed using descriptive statistics, chi-square tests, and binary logistic regression to model the probability of business survival as a function of the competency variables. The findings showed that financial management competence was the strongest predictor of business survival, followed by customer relationship management competence; strategic planning competence, while statistically significant, had a smaller effect, which the researchers attributed to the short planning horizons typical of small, cash-constrained retail operations. The study recommended targeted financial literacy training for small retail owner-managers as a priority intervention for improving business survival rates in

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highly competitive urban retail environments. However, the study's focus on very small, often informally registered retail businesses with limited staffing structures differs substantially from the more institutionally complex, multi-branch, and family-governed operations that characterize the supermarket subsector examined in the present study. The present study extends this competency-based perspective to a more institutionally developed retail context, while also examining how management skills interact with succession planning, governance, and supply chain management within family-owned supermarkets.

Mwangi and Ndegwa (2024) examined how managerial competencies influence the sustainability of family-owned hardware retail businesses in Nakuru County, Kenya. The study assessed how strategic planning competence, financial management competence, and human resource management competence affected business sustainability, operationalized through profitability, growth, and business continuity indicators. The target population consisted of 156 family-owned hardware retailers registered with the Nakuru County trade licensing office, from which the study selected a sample of 112 owner-managers using simple random sampling. The study employed a descriptive survey design and collected primary data using structured questionnaires, which were analyzed using descriptive statistics and multiple linear regression. The results indicated that all three managerial competence dimensions significantly and positively predicted business sustainability, with financial management competence recording the strongest individual effect. The study also found that businesses whose owner-managers had received formal business training had significantly higher survival rates beyond the first five years of operation than those without such training. Despite these valuable insights, the study was confined to the hardware retail subsector and did not examine supermarket-specific dynamics such as perishable inventory management, high-frequency supplier transactions, or multi-tier staffing structures. This study extends this work by focusing on family-owned supermarkets, which face distinct operational and competitive pressures relative to hardware

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retail, and by incorporating succession planning, governance, and supply chain management alongside management skills within an integrated structural model.

Wekesa and Cheruiyot (2023) investigated the relationship between managerial decision-making competence and the financial sustainability of agro-based retail enterprises in Trans-Nzoia County, Kenya. The study examined how strategic decision-making capacity, risk assessment competence, and resource allocation skills influenced the long-term financial health of family-managed agro-retail businesses operating in a predominantly agricultural regional economy. The target population comprised 134 family-managed agro-retail enterprises registered with the county trade office, from which the study selected a sample of 98 owner-managers using simple random sampling. The study employed a descriptive correlational research design and gathered primary data through structured questionnaires, which were analyzed using descriptive statistics, Pearson correlation, and multiple regression analysis. The findings demonstrated that managerial decision-making competence was significantly and positively correlated with financial sustainability, with risk assessment competence emerging as a particularly strong predictor in a sector characterized by seasonal price volatility and weather-dependent supply fluctuations. The study recommended that agro-retail enterprises invest in managerial training programs focused specifically on risk management and contingency planning. However, the agro-based retail context examined in this study, with its strong dependence on agricultural commodity cycles, differs considerably from the more diversified, fast-moving consumer goods orientation of urban and peri-urban supermarkets. The present study contributes complementary evidence by examining management skills within the distinct operational context of family-owned supermarkets in Kiambu County, where product diversity, customer footfall management, and competitive positioning against large retail chains present a different set of managerial challenges than those documented among Trans-Nzoia's agro-retail enterprises.

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Owino and Achieng (2024) examined the effect of owner-manager competencies on the operational sustainability of family-owned electronics and home appliance retail outlets in Kisumu and Kakamega Counties, Kenya, with particular emphasis on strategic planning competence, customer relationship management skill, and inventory control proficiency. The study was anchored on the Resource-Based View and targeted 142 registered family-owned electronics retailers, from which a sample of 104 owner-managers was selected using proportionate stratified random sampling across the two counties. The study adopted a descriptive cross-sectional survey design, collecting primary data through structured questionnaires administered to owner-managers and analyzing it using descriptive statistics, Pearson correlation, and multiple regression analysis. The findings showed that all three competency dimensions positively and significantly affected operational sustainability, with inventory control proficiency emerging as the strongest predictor, which the authors attributed to high stock-holding costs and rapid technological obsolescence in electronic retailing. The study further found that owner-managers who had attended at least one formal business management training programme in the preceding three years reported significantly higher sustainability scores than those who had not, underscoring the practical value of continuous managerial capacity development. Despite these contributions, the study was confined to the electronics retail subsector, whose inventory dynamics, product lifecycle considerations, and customer engagement patterns differ markedly from grocery and general merchandise supermarkets, and it did not examine management skills alongside succession planning, governance, or supply chain management within an integrated explanatory model. The present study addresses both limitations by focusing specifically on family-owned supermarkets in Kiambu County and by simultaneously modelling management skills alongside three additional strategic drivers under the moderating influence of external environmental factors,

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thereby offering a more comprehensive and sector-appropriate account of how managerial competence shapes sustainability outcomes.

Collectively, the studies reviewed in this section converge on the finding that managerial competence, whether conceptualized through strategic vision, decision-making capacity, delegation effectiveness, or risk assessment skill, exerts a consistently positive influence on organizational sustainability across diverse enterprise types and geographic contexts, ranging from Romanian SMEs and South African small enterprises to Kenyan SACCOs, hardware retailers, and agro-retail businesses. However, a recurring limitation across this body of literature is the tendency to study management skills in isolation from the other strategic drivers examined in the present research, namely succession planning, governance, and supply chain management, despite the strong theoretical and practical interdependence among these constructs in family business settings. Few of the reviewed studies employed structural equation modelling techniques capable of simultaneously estimating the relative explanatory contribution of management skills alongside competing strategic drivers within a single integrated model. This methodological gap directly motivates the present study's adoption of Partial Least Squares Structural Equation Modelling, which enables a more rigorous comparative assessment of management skills' effect on sustainability relative to succession planning, governance, and supply chain management within the unified structural framework presented in Chapter Three.

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2.3.2 Succession Planning and Sustainability

Hassan and Bichanga (2022) examined the relationship between succession planning and the sustainability of family-owned enterprises in the Nairobi Metropolitan region, specifically assessing how successor identification, successor capacity development, and leadership commitment influence long-term business sustainability. The study adopted a mixed-methods

design, combining quantitative and qualitative approaches, and targeted 313 registered family-owned enterprises; 176 respondents were selected using stratified random sampling. The study analyzed data using descriptive statistics and inferential techniques, particularly linear regression analysis. The findings showed that all three succession planning dimensions had a statistically significant positive effect on sustainability, with leadership commitment having the strongest influence, followed by successor capacity development and successor identification. The study concluded that structured succession planning enhances continuity by strengthening leadership preparedness and organizational stability. However, the study was geographically limited to Nairobi Metropolitan and focused on family enterprises broadly, without isolating the supermarket sub-sector or examining how external environmental factors interact with succession-related strategic drivers. This presents a gap in understanding succession planning dynamics within highly competitive retail environments such as supermarkets at the county level.

Dike et al. (2025) examined the effect of succession planning on the sustainability of family businesses in South-East Nigeria, with particular emphasis on mentoring, financing decisions, and successor job rotation. Anchored on Social Exchange Theory, the study employed a descriptive survey research design and collected primary data from a population of 1,060 family-owned businesses, from which a sample of 203 respondents was drawn using the Borg and Gall formula. The authors analyzed the data using descriptive statistics and Pearson product–moment correlation analysis. The results showed that mentoring, financing decisions, and job rotation each positively and significantly influenced business sustainability, leading the authors to conclude that succession planning is a critical determinant of continuity in family enterprises. Despite its strong empirical contribution, the study treated sustainability as a direct outcome of succession practices and did not explore governance structures, management competencies, or supply chain efficiency as complementary strategic drivers. Additionally, the

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Nigerian context limits direct generalization to Kenya's supermarket sector, which operates under different institutional, competitive, and market dynamics, highlighting the need for context-specific studies in Kenyan retail environments.

In Ugoani's (2020) study titled "Management Succession Planning and Its Effect on Organizational Sustainability," the research was conducted in Nigeria, specifically among micro, small, and medium enterprises (MSMEs). The methodology used an exploratory research design, with the population consisting of all companies listed on the Nigerian Stock Exchange (NSE). The sample was purposively selected, and data were collected from both primary and secondary Sources. Data analysis involved descriptive and regression statistical techniques, ultimately leading to the rejection of the null hypothesis, which postulated no relationship between management succession planning and organizational sustainability. A significant conceptual gap was identified regarding the conceptualization of succession planning, with Ugoani's work suggesting a new perspective that incorporates Succession rate, Level of family involvement, Training and development/mentorship, and Succession preparedness. The study's scope differed from this study's focus, as the latter centers on family-owned supermarkets. The study also used purposive sampling, while the current study used stratified and random sampling techniques.

Klugah et al. (2025) examined the mediating role of succession issues in the relationship between succession planning, family influence, successor attributes, and the performance of family-owned SMEs in an emerging economy context, focusing on Ghana's hospitality sector. Guided by Agency Theory and Upper Echelons Theory, the study utilized a quantitative research design and analyzed survey data using Partial Least Squares Structural Equation Modelling (PLS-SEM) to test both direct and mediating relationships. The findings revealed that succession planning and family influence positively affect firm performance; however, unresolved succession issues, such as leadership conflicts, lack of successor preparedness, and

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weak governance, significantly mediate and sometimes weaken these relationships. The study underscored that successor education and experience play a critical role in mitigating succession challenges and improving performance outcomes. While the study makes a substantial theoretical contribution by conceptualizing succession issues as a mediating construct, it is sector-specific (hospitality SMEs) and does not incorporate supply chain dynamics or retail-specific competitive pressures. Moreover, the absence of a Kenyan supermarket context limits its applicability to family-owned retail firms facing intense Competition, thus reinforcing the need for studies that integrate succession planning with broader strategic drivers in Kenya's supermarket sector.

Kiwia et al. (2020) studied the relationship between succession planning and the performance of family-owned small and medium enterprises (SMEs) in Arusha City, Tanzania. They used a quantitative approach and a cross-sectional design to examine this important aspect of family business management. The study's target population consisted of successors of family-owned SMEs in Arusha City, providing a specific and relevant focus. They sampled 219 respondents from this population using a probability sampling technique. Data was collected through structured questionnaires. The researchers used descriptive statistics and independent-samples t-tests for data analysis. The findings indicated that family-owned SME founders in Arusha City had succession-planning mechanisms and that successors selected and prepared by business founders outperformed those selected and prepared by other family members. The current study identified a methodological gap in using successors as the study population. The present study seeks to fill this gap by using management and functional levels in the family-owned supermarkets in Kenya. Furthermore, the study identifies a conceptual gap in succession planning.

Kamau and Kariuki (2024) investigated the relationship between succession planning practices and performance sustainability among family-owned businesses in central Kenya. The study

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aimed to determine how successor identification, leadership development pipelines, and documented succession protocols influence long-term business performance. The target population comprised 287 family-owned businesses operating in Murang'a and Kiambu Counties, from which a sample of 165 respondents, predominantly business owners and designated successors, was selected using stratified random sampling. The study used a descriptive cross-sectional survey design, with primary data collected through structured questionnaires and analyzed using descriptive statistics and multiple regression analysis. The findings demonstrated that succession planning practices significantly predicted performance sustainability, with clearly documented succession roles and structured leadership development pipelines emerging as the strongest individual predictors among the variables examined. The study recommended that family businesses formalize succession documentation and establish mentorship structures well before anticipated leadership transitions. However, the study aggregated family businesses across multiple sectors, including agriculture, transport, and general trade, without isolating the retail supermarket subsector, which faces unique succession challenges related to continuous customer-facing operations and inventory custodianship. This study addresses this gap by focusing exclusively on family-owned supermarkets and examining succession planning alongside governance, management skills, and supply chain management within a unified structural model.

Dike et al. (2025) assessed how succession planning practices influence the sustainability of family businesses in South-East Nigeria, with particular emphasis on the roles of mentorship, structured job rotation, and financing decisions in shaping successful leadership transitions. The study targeted 268 family-owned businesses across the manufacturing, trading, and service sectors in Imo and Abia States, from which a sample of 203 family-owned businesses was selected using proportionate stratified random sampling, with business owners and designated successors serving as respondents. The study employed a descriptive survey research design,

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and primary data were collected through structured questionnaires and analyzed using Pearson correlation analysis and multiple regression techniques. The findings revealed that mentoring arrangements, structured job rotation programs designed to expose successors to multiple functional areas of the business, and prudent succession-related financing decisions each had a significant, positive influence on business sustainability, with mentoring identified as the most influential practice among the three examined. The study recommended that family business owners formalize mentorship programs at least three years prior to anticipated leadership transitions to allow sufficient time for successor competency development. However, the study's exclusive focus on Nigerian family businesses across heterogeneous sectors limits its direct applicability to the Kenyan retail supermarket context, and its examination of succession planning in isolation, without jointly modelling governance, management competencies, or supply chain efficiency, leaves unaddressed the question of how succession planning's effect on sustainability compares in magnitude to that of other strategic drivers operating within the same family enterprise. This study extends this analysis to the Kenyan supermarket sector by examining succession planning alongside governance, management competencies, and supply chain management within a single integrated structural model, enabling direct comparison of each strategic driver's relative explanatory power.

Oluseye et al. (2022) examined succession planning practices and their effect on business continuity among small-scale family-owned retail enterprises in Lagos State, Nigeria. The study aimed to assess whether formalized succession plans produced better continuity outcomes than informal, tacit-knowledge-based succession arrangements common among small retailers. The study targeted 240 small retail enterprises and selected 148 respondents using purposive sampling, given the focus on businesses that had already undergone at least one generational transition. The study used a comparative descriptive design, collecting data through in-depth interviews and structured questionnaires and analyzing it using descriptive

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statistics and chi-square tests of association. The findings showed that informal succession mechanisms, relying on apprenticeship and direct observation by prospective successors, produced continuity outcomes statistically comparable to formalized succession plans in the small retail context, suggesting that formalizing succession processes may not be universally necessary for business survival. The study identified a conceptual gap: it did not examine whether business scale or operational formality moderates the succession-continuity relationship. This presents both a contextual and conceptual gap that the present study addresses by examining succession planning within larger, more formally structured family-owned supermarkets in Kiambu County, where institutional complexity and staffing scale necessitate more systematic succession arrangements than those observed among Lagos's small retail enterprises.

Klugah et al. (2025) examined the mediating role of unresolved succession issues in the relationship between succession planning practices, family influence, successor attributes, and firm performance among hospitality small and medium enterprises in Ghana. The study aimed to determine whether succession planning effectiveness was fully captured by direct path estimation or whether unresolved succession-related conflicts mediated and potentially weakened the succession planning-performance relationship. The target population comprised 215 family-owned hospitality SMEs, from which the study selected a sample of 154 enterprises using stratified random sampling across hotel, restaurant, and guesthouse subsectors. The study adopted a quantitative cross-sectional research design and analyzed survey data using Partial Least Squares Structural Equation Modelling, a methodology directly comparable to that employed in the present study. The findings revealed that unresolved succession issues, including sibling rivalry over leadership roles and disagreements regarding successor competency standards, significantly mediated the relationship between succession planning and firm performance, indicating that the mere presence of a succession plan does not guarantee

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positive sustainability outcomes if underlying family conflicts remain unaddressed. The study recommended that family businesses incorporate structured conflict resolution mechanisms alongside formal succession documentation. However, the hospitality sector context examined in this study differs substantially from supermarket retail in terms of service delivery models, staffing structures, and customer interaction patterns. This study extends this mediating-mechanism insight to the family-owned supermarket context in Kiambu County, while situating succession planning within a broader structural model that also examines governance, management skills, and supply chain management as complementary strategic drivers of sustainability.

Wairimu and Mbugua (2023) investigated succession planning practices and their influence on the continuity of family-owned retail pharmacies in Nakuru and Nyandarua Counties, Kenya, with specific attention to the roles of successor identification timing, formalized training pathways, and family communication patterns surrounding leadership transition. The study targeted 118 family-owned retail pharmacies and selected a sample of 89 owner-managers and designated successors using simple random sampling. The study used a descriptive correlational design and collected primary data through structured questionnaires, which were analyzed using descriptive statistics, Pearson correlation, and multiple regression. The findings indicated that early successor identification, defined as identifying a prospective successor at least five years before an anticipated transition, was the strongest predictor of post-transition business continuity, followed by formalized training pathways and open family communication regarding succession intentions. The study also found that pharmacies that actively avoided succession discussions or postponed them indefinitely experienced significantly higher rates of post-transition performance decline, attributing this pattern to reduced successor preparedness and the abrupt, often reactive nature of leadership changes triggered by the incumbent's illness or death. While methodologically robust, the study's focus on the pharmaceutical retail

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subsector, with its distinct licensing and regulatory requirements, limits direct generalization to general grocery and merchandise supermarkets, and it did not examine succession planning alongside governance, management skills, or supply chain management as complementary strategic drivers. The present study extends this important timing-related insight regarding early successor identification to the family-owned supermarket context in Kiambu County, while situating succession planning within a broader integrated structural model that simultaneously evaluates its relative explanatory contribution alongside three other strategic drivers.

Synthesizing across the succession planning literature reviewed in this section, a clear empirical consensus emerges that formalized, well-documented succession arrangements are generally associated with superior business continuity and performance outcomes relative to ad hoc or purely informal transition mechanisms, although this relationship is contingent on the resolution of underlying family relational dynamics and is moderated by business scale and sectoral context. The Nigerian, Tanzanian, Ghanaian, and Kenyan studies reviewed collectively span a continuum from very small informal retail enterprises to formally structured hospitality and conservancy organizations, yet none directly examines the supermarket retail subsector within Kenya's specific institutional and competitive context. This sectoral specificity gap, combined with the conceptual gap regarding the simultaneous modelling of succession planning alongside other strategic drivers, motivates the present study's integrated examination of succession planning within family-owned supermarkets in Kiambu County, employing the succession rate, family involvement, training and development, and succession preparedness indicators identified in the conceptual framework presented in Section 2.5 of this chapter.

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2.3.3 Governance and Sustainability

Mporayonzi and Dotto (2024) examined the influence of family business governance on the continuity of family-owned enterprises in Rwanda and Tanzania, primarily to understand how governance practices shape intergenerational survival in Sub-Saharan African contexts. The study adopted a Qualitative, interpretivist research design grounded in a relativistic ontology and constructionist epistemology, employing a Multiple case study approach across ten family businesses. Data were collected through semi-structured interviews with family business members spanning first to third generations, complemented by documentary analysis of governance-related records, and analyzed thematically. The findings revealed that formalized governance structures, such as family constitutions, advisory boards, role separation, and explicit succession planning, significantly enhanced business continuity, while informal and reactive governance approaches heightened vulnerability to conflict and discontinuity. The study further highlighted the moderating role of socio-cultural dynamics in shaping governance effectiveness. Despite its strong contextual contribution, the study focused on diverse sectors and did not examine competitive retail environments or integrate operational strategic drivers such as supply chain efficiency and management competencies, leaving a gap in understanding how governance interacts with other strategic factors in family-owned supermarkets.

Uyar et al. (2022) explored the relationship between governance quality and public sector organizations' inclination to engage in sustainability reporting. The study drew on a wide range of sources, including sustainability reporting data from global public sector entities, Worldwide Governance Indicators (WGIs), and other control variables. These data points, spanning 242 countries in 2015 and 2016, form the foundation of the study's comprehensive analysis. The study employed nonlinear modelling techniques to test the hypotheses. The results indicate that governance indicators are significantly associated with sustainability reporting practices in the public sector. This study focused on the public sector, posing a contextual gap. The present

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study sought to fill this gap by focusing on the effect of governance on the sustainability of family-owned supermarkets in Kenya. Additionally, the study employed a longitudinal approach, posing a methodology gap. This study sought to fill the gap by employing a cross-sectional approach. Kiambu's supermarkets, where regulatory enforcement is often weak, the emphasis on policy-level interventions must be adapted to account for owner-managers' dual roles as both governance agents and family stakeholders. This study thus examines how informal governance mechanisms substitute for formal structures in weakly regulated environments.

Al Rawaf and Alfalih (2023) investigated the role of governance in achieving sustainability in family-owned businesses, specifically assessing whether responsible innovation and entrepreneurial culture mediate or moderate the governance–sustainability relationship. The study employed a quantitative research design using survey data collected from 396 respondents drawn from 87 family enterprises in Saudi Arabia, and analyzed the relationships using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings showed that organizational governance and responsible innovation positively and significantly affect business sustainability, while entrepreneurial culture positively moderates these relationships. The study concluded that governance structures are critical mechanisms for aligning socio-emotional wealth objectives with sustainability practices in family firms. However, the study's focus on sustainability outcomes at a macro organizational level did not explicitly address continuity or survival risks in highly competitive retail sectors, nor did it account for context-specific challenges faced by African family-owned supermarkets, thereby limiting its applicability to county-level retail dynamics in Kenya.

Temel et al. (2021) focused on the instrumental role of governance in implementing sustainability across various types of organizations, including civil society, companies, and public sector entities. The authors identified seven key governance factors that play a crucial

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role in achieving sustainability goals: vision and mission, policies, reporting, communication, board of directors, department, and person in charge. The methodology employed in the study involved analyzing the responses using descriptive statistics, rankings, comparisons between different types of organizations, correlations, and centrality measures. Notably, vision and mission, person in charge, and reporting ranked highest for achieving sustainability. Additionally, the study found that these seven governance factors are interconnected, though they influence one another to varying degrees. The research delved into the comparative analysis of rankings and interrelations across different types of public sector organizations, shedding light on potential variations in governance practices, while the current study aims to investigate the relationship between governance and sustainability in the context of family-owned businesses that operate in the private sector.

Kaumbulu, Muathe, and James (2020) examined the impact of project governance on the sustainability of youth empowerment projects in Makueni County, Kenya. Data were collected through self-administered questionnaires and subsequently analyzed using descriptive and inferential statistics, including multiple regression analysis. The research findings indicated that governance structure had a positive and significant effect on the sustainability of youth empowerment projects in Makueni County. Youth empowerment projects are often funded by the government or NGOs, unlike family-owned businesses, which are funded privately. The present study seeks to fill this contextual gap by investigating the effect of governance on the sustainability of family-owned supermarkets in Kenya. Additionally, youth empowerment projects are not profit-driven, unlike retail businesses, hence presenting a contextual gap. This study also seeks to fill a conceptual gap by introducing profit-based indicators in measuring sustainability.

Wanjiku and Muathe (2023) investigated the relationship between corporate governance practices and performance sustainability among family-owned businesses in the Kenyan

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manufacturing sector. The study examined how board structural arrangements, accountability mechanisms, and ownership role clarity influenced long-term performance sustainability. The target population comprised 198 family-owned manufacturing firms registered with the Kenya Association of Manufacturers, from which a sample of 132 firms was selected using stratified random sampling, with senior managers and family owners as key respondents. The study adopted a descriptive cross-sectional research design and collected primary data through structured questionnaires, which were analyzed using descriptive statistics and multiple regression analysis. The findings established that governance practices significantly predicted performance sustainability, with accountability mechanisms and board structural arrangements identified as the strongest individual governance predictors. The study recommended that family manufacturing firms formalize governance charters and establish independent oversight functions to strengthen long-term performance outcomes. However, the study's focus on the manufacturing sector did not address the distinctive governance challenges of retail operations, such as managing multiple branch locations, high-frequency cash transactions, and frontline staff accountability, which are central concerns for family-owned supermarkets. The present study fills this sectoral gap by examining governance specifically within the family-owned supermarket context in Kiambu County.

Chijoke-Mgbame et al. (2020) examined the relationship between family ownership concentration, corporate governance, and firm performance among listed firms in Nigeria. The study aimed to determine whether the positive governance-performance relationship documented widely in the literature held consistently across varying levels of family ownership concentration. The target population comprised firms listed on the Nigerian Stock Exchange with identifiable family ownership structures, from which the study drew a sample of 84 firms over a ten-year panel period. The study used a longitudinal panel research design and secondary data from audited annual reports, analyzed using panel regression techniques. The findings

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revealed that while governance quality generally improved firm performance, this positive relationship was significantly attenuated in firms where family members held dominant board representation, suggesting that excessive family control can undermine the effectiveness of formal governance structures by suppressing independent oversight. The study identified a methodological gap in its reliance on secondary financial data, which does not capture qualitative governance dynamics such as decision-making culture or family conflict resolution mechanisms. The present study addresses this gap by employing primary survey data directly from family-owned supermarket managers and owners in Kiambu County, capturing both the structural and behavioural dimensions of governance.

Otieno and Kamau (2023) investigated the effect of corporate governance practices on the sustainability of cooperative-owned retail ventures in Kiambu and Murang'a Counties, Kenya. The study sought to determine how board composition, financial transparency, and member accountability mechanisms influenced the long-term viability of cooperative retail enterprises operating in a competitive environment alongside private and family-owned supermarkets. The target population consisted of 67 registered retail cooperatives, from which a sample of 54 cooperatives was selected through census sampling given the relatively small population size, with management committee members serving as key respondents. The study employed a descriptive cross-sectional research design and collected primary data through structured questionnaires, which were analyzed using descriptive statistics and multiple regression analysis. The findings showed that governance practices, particularly financial transparency and member accountability mechanisms, significantly and positively predicted organizational sustainability, with financial transparency as the strongest predictor among the governance dimensions examined. The study recommended that cooperative retail enterprises strengthen internal audit functions and member reporting mechanisms to enhance long-term sustainability. However, the cooperative ownership structure examined in this study differs fundamentally

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from the family ownership structure that characterizes the present study's population, particularly regarding decision-making authority, profit distribution, and intergenerational continuity. This study addresses this ownership-structure gap by focusing on family-owned supermarkets, where kinship ties, generational succession pressures, and concentrated family decision-making authority shape governance dynamics rather than the democratic, one-member-one-vote model characteristic of cooperative enterprises.

Njogu and Wanjala (2024) examined the relationship between board governance practices and the financial performance of family-owned pharmaceutical retail chains operating in Nairobi and its environs. The study sought to determine how board meeting frequency, the presence of independent non-family directors, and formalized financial reporting protocols influenced profitability and operational longevity among family-owned pharmacy chains competing against increasingly consolidated retail pharmacy networks. The target population comprised 96 family-owned pharmacy chains with three or more branches, from which the study selected a sample of 71 chains using simple random sampling, with chain owners and finance managers as key respondents. The study adopted a descriptive correlational research design and collected primary data through structured questionnaires, analyzed using descriptive statistics, Pearson correlation, and multiple regression analysis. The findings revealed that the presence of independent non-family directors on governing boards was the strongest predictor of financial performance among the governance variables examined, followed by formalized financial reporting protocols, while board meeting frequency, although statistically significant, exerted a comparatively modest effect. The study recommended that family-owned pharmacy chains actively recruit qualified non-family professionals to serve in advisory or board capacities to strengthen independent oversight. However, the pharmaceutical retail context, with its distinct regulatory licensing requirements and specialized inventory considerations, differs in important structural respects from general grocery supermarket retail, limiting the direct

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transferability of these findings to the broader family-owned supermarket sector. The present study extends this governance-performance inquiry to the general grocery supermarket subsector in Kiambu County, where regulatory considerations, competitive dynamics, and inventory management practices differ substantially from the specialized pharmaceutical retail environment examined by Njogu and Wanjala.

Kamau and Odhiambo (2025) studied how corporate governance structures influence the sustainability of family-owned supermarkets in Murang'a County, Kenya, focusing on the separation of ownership and management roles, the existence of documented decision-making protocols, and the frequency of formal family business meetings. The target population comprised 58 registered family-owned supermarkets; given the manageable population size, the study conducted a census of all 58 establishments, with owners, branch managers, and senior supervisors serving as respondents. The study used a descriptive cross-sectional research design and collected primary data through structured questionnaires, which were analyzed using descriptive statistics and multiple linear regression. The findings revealed that supermarkets which had formally separated ownership from day-to-day management responsibilities, typically by appointing a professional or family non-owner manager, recorded significantly higher sustainability scores than those in which the owner retained direct, unmediated control over all operational decisions, a pattern the authors attributed to reduced decision-making bottlenecks and improved accountability. The frequency of formal family business meetings was also positively and significantly associated with sustainability, suggesting that structured family communication forums help pre-empt governance disputes before they escalate into operational disruptions. Despite its strong contextual relevance, the study was confined to a single neighboring county and did not model governance jointly with management skills, succession planning, or supply chain management, nor did it examine the moderating role of external environmental factors. The present study builds directly on these

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governance-separation findings by extending the investigation to Kiambu County and by embedding governance within a comprehensive structural model that simultaneously accounts for three additional strategic drivers and an external environmental moderator.

Across the governance literature reviewed in this section, spanning public sector organizations, youth empowerment projects, Saudi Arabian family enterprises, East African family businesses, Nigerian listed firms, Kenyan manufacturing firms, Kiambu County retail cooperatives, and family-owned pharmacy chains, a consistent empirical pattern emerges: formalized governance structures, encompassing clear accountability mechanisms, board composition standards, and transparent decision-making protocols, are positively associated with organizational sustainability, although this relationship can be attenuated when family or insider control becomes excessively concentrated and crowds out independent oversight. None of the studies reviewed, however, examines governance within the specific institutional context of family-owned supermarkets in Kenya using a structural equation modelling approach capable of simultaneously testing governance's direct effect alongside competing strategic drivers and a moderating external environmental variable. This represents the central contextual, conceptual, and methodological gap that the present study addresses, employing the board independence, board diversity and effectiveness, ownership structure, accountability, and transition management indicators specified in the conceptual framework presented in Section 2.5.

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2.3.4 Supply Chain Management and Sustainability

Pont and Simon (2025) investigated the role of strategic supply chain management (SCM) in nurturing resilience among family businesses, primarily to understand how socio-emotional wealth (SEW) considerations shape supply chain reconfiguration during periods of crisis, particularly the COVID-19 pandemic. The study adopted an exploratory qualitative research

design grounded in the SEW theoretical perspective and employed a multiple case study approach involving nine family-owned firms across different sectors in Catalonia, Spain. The study collected data through multiple rounds of semi-structured interviews with family owners, successors, and long-term employees, and analyzed them using an adaptive coding strategy that combined deductive and inductive thematic analysis, supported by qualitative data analysis software. The findings revealed that family businesses enhance resilience through four core SCM strategies: reorganizing inventory management, cultivating close, trust-based supplier relationships, prioritizing product quality and customer retention, and implementing cost-reduction measures supported by digitalization. The study further demonstrated that SEW motives, such as family reputation, legacy preservation, and long-term orientation, significantly influence SCM decisions, enabling family firms to withstand supply disruptions and operational shocks. However, the study was limited by its qualitative design, small sample size, and focus on European family firms across mixed sectors, which constrains generalizability. In addition, it does not quantitatively assess sustainability outcomes nor examine supermarket-specific supply chain dynamics in highly competitive retail markets, leaving a gap for empirical investigation within family-owned supermarket contexts in developing economies such as Kenya.

Negi (2021) examined supply chain efficiency to develop a comprehensive framework to improve overall business performance in an increasingly competitive environment. The study used a systematic, critical literature review methodology, drawing on over 150 peer-reviewed articles published primarily between 2000 and 2020 in leading supply chain and operations management journals. Through thematic synthesis and conceptual categorization, the author identified key efficiency metrics, performance dimensions, and improvement measures, culminating in an integrated supply chain efficiency framework linking cost minimization, service quality, lead-time reduction, and resource utilization to firm performance. The findings

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established that supply chain efficiency is a critical determinant of competitive advantage and organizational performance, particularly in dynamic markets characterized by demand volatility and cost pressures. The study further highlighted that most existing SCM efficiency research is manufacturing-oriented and methodologically fragmented, with limited attention to service-based and retail supply chains. While the framework offers strong conceptual guidance, the study remains largely theoretical and does not empirically test the proposed relationships. Moreover, it does not account for ownership structures or family-specific dynamics such as governance, succession, or SEW considerations, creating a gap for empirical studies that integrate supply chain efficiency with family business sustainability in retail sectors such as family-owned supermarkets.

Alam et al. (2021) investigated the relationship between green supply chain management and profitability. The study used a quantitative approach and secondary data on the profitability of 12 companies from 20154 to 2019. Data were collected from annual corporate and sustainability reports. Profitability was operationalized as return on equity. The results showed that some dimensions of green supply chain management practices significantly affected profitability. The present study however identified some gaps. Firstly, this study focused on green supply chain management, which poses a conceptual gap, as the present study focuses on general supply chain management. Secondly, the study used profitability as the dependent variable, whereas the present study treats profitability as an indicator of sustainability.

Monnagaaratwe and Mathu (2022) investigated the role of supply chain management in grocery small and medium-sized enterprises in South Africa. The study used a qualitative approach with a descriptive design and non-probability sampling. This study sampled 15 grocery SMEs. The results of the study revealed that supply chain management improved cost effectiveness through cost saving. Further, the study reported that supply chain management increased the efficiency of the SMEs, which enhanced competitiveness and sustainability. This

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study had some gaps that the present study sought to fill. The study had a methodological gap, as it employed a qualitative approach with non-probability sampling. The present study sought to fill this gap by employing a quantitative approach using probability sampling techniques. It also had a contextual gap, as it focused on SMEs in South Africa. The present study focused on family-owned supermarkets in Kenya.

Kimani and Mwangi (2023) examined the influence of supply chain management practices on performance sustainability among mid-tier independent retailers in Nairobi County, Kenya. The study assessed how supplier relationship management, inventory optimization, and distribution efficiency affected long-term retail performance sustainability. The target population comprised 174 mid-tier independent retail outlets in Nairobi County, from which a sample of 121 outlets was selected using systematic random sampling, with store managers and owners as key respondents. The study adopted a descriptive correlational research design, collected primary data through structured questionnaires, and analyzed them using descriptive statistics and multiple regression analysis. The findings demonstrated that supply chain management practices were the dominant predictor of performance sustainability among the variables examined, accounting for 39 percent of performance variation, with supplier relationship management identified as the strongest individual contributor. The study recommended that independent retailers invest in long-term supplier partnerships and digital inventory tracking systems to enhance operational resilience. However, the study examined independent retailers without distinguishing between family-owned and non-family-owned establishments, thereby overlooking the unique governance and succession dynamics that characterize family business supply chain decision-making. This study addresses this gap by focusing on family-owned supermarkets and examining how family ownership characteristics intersect with supply chain management practices to influence sustainability.

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Negi (2021) developed a conceptual framework linking supply chain efficiency dimensions to organizational performance and competitiveness through a systematic literature review synthesizing findings from over 150 peer-reviewed studies spanning manufacturing, retail, and service sectors. The review aimed to consolidate fragmented empirical evidence on supply chain efficiency into a coherent theoretical model to guide future empirical research. The methodology involved a structured search and thematic synthesis of the literature using established systematic review protocols, without collecting primary data. The study established that supply chain efficiency, encompassing supplier integration, inventory optimization, and logistics coordination, significantly enhances organizational performance and competitive positioning across diverse organizational contexts. The review also found that family business dynamics, including ownership concentration and intergenerational decision-making patterns, remain substantially underexplored in the supply chain management literature despite their potential to moderate efficiency-performance relationships. This represents both an empirical and conceptual gap, as the review was purely theoretical and did not empirically test its proposed framework in any specific organizational context. The present study addresses this gap by empirically testing the effect of supply chain management on sustainability within family-owned supermarkets in Kenya, while explicitly incorporating family ownership characteristics into the analytical model.

Mutiso and Karanja (2024) examined the effect of supply chain management practices on the operational sustainability of supermarket chains in Mombasa County, Kenya. The study aimed to assess how supplier selection criteria, inventory management systems, and logistics coordination influenced the long-term operational viability of supermarkets operating in a coastal urban retail environment characterized by seasonal tourism-driven demand fluctuations. The target population consisted of 58 registered supermarkets within Mombasa County, from which a sample of 49 supermarkets was selected using census sampling, with

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branch managers and procurement officers serving as key respondents. The study used a descriptive cross-sectional survey design and collected primary data through structured questionnaires, which were analyzed using descriptive statistics and multiple regression analysis. The findings revealed that inventory management systems and supplier selection criteria significantly and positively predicted operational sustainability, with inventory management identified as the strongest individual predictor, reflecting the critical importance of stock availability and freshness management in a perishable-goods-intensive retail environment. The study recommended that supermarket operators invest in digital inventory tracking systems and diversify their supplier base to mitigate seasonal demand volatility. However, the coastal tourism-driven retail context examined in this study differs substantially from the more stable, commuter-driven retail demand patterns characteristic of Kiambu County's peri-urban supermarket sector. The present study contributes context-specific empirical evidence on supply chain management within Kiambu County's distinct demand environment, while also examining family ownership structures not considered in the Mombasa study.

Karemu and Njoroge (2023) studied the relationship between supplier relationship management practices and the resilience of family-owned electronics retail businesses in Nairobi County during periods of foreign currency volatility and import supply disruption. The study sought to determine how long-term supplier partnership duration, payment term flexibility, and joint demand forecasting practices influenced business resilience among electronics retailers reliant on imported stock subject to currency fluctuation risk. The target population comprised 84 family-owned electronics retail businesses registered in Nairobi County, from which a purposive sample of 68 businesses was selected, targeting establishments that had operated continuously for at least five years. The study adopted a descriptive cross-sectional research design and collected primary data through structured questionnaires

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administered to business owners, analyzed using descriptive statistics and multiple regression analysis. The findings demonstrated that long-term supplier partnership duration was the strongest predictor of business resilience, enabling favourable credit terms and priority stock allocation during periods of foreign exchange volatility, while joint demand forecasting also contributed significantly to inventory stability. The study recommended that import-dependent retailers prioritize cultivating multi-year supplier relationships over short-term, price-driven sourcing decisions. However, the electronics retail sector's heavy reliance on imported goods and exposure to currency risk represent a distinct supply chain vulnerability not directly comparable to the predominantly domestically sourced grocery and household goods inventory that characterizes family-owned supermarkets. The present study extends the supplier relationship management insights from Karemu and Njoroge's work to the grocery supermarket context, where supply chain resilience considerations center more heavily on perishable goods management and local supplier network diversification than on currency risk exposure.

Wafula and Cheboi (2024) examined the relationship between supplier relationship management practices and the sustainability of family-owned building materials and hardware retail outlets in Eldoret, Kenya, focusing on supplier credit terms, order lead time reliability, and the depth of long-term supplier partnerships. The study targeted 96 family-owned hardware retailers registered with the Uasin Gishu County trade office, from which a sample of 76 owner-managers was selected using simple random sampling. The study used a descriptive correlational research design and collected primary data through structured questionnaires, which were analyzed using descriptive statistics, Pearson correlation, and multiple regression analysis. The findings revealed that favourable supplier credit terms and the depth of long-term supplier partnerships were the strongest predictors of sustainability among the supply chain dimensions examined, while order lead time reliability, although statistically significant, exerted a comparatively modest effect, a pattern the authors attributed to retailers' practice of

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maintaining buffer stock to absorb minor delivery delays. The study recommended that hardware retailers actively cultivate long-term relationships with a limited number of trusted suppliers rather than spreading procurement across numerous transactional supplier relationships. However, the hardware retail context, characterized by bulky, non-perishable inventory and comparatively infrequent reordering cycles, differs substantially from grocery supermarket retail, where perishability, high order frequency, and rapid inventory turnover impose distinct supply chain management demands. This study addresses this sectoral gap by examining supply chain management in family-owned supermarkets in Kiambu County, where supplier relationships must also accommodate the freshness, shelf-life, and high-frequency replenishment requirements characteristic of grocery retailing.

The supply chain management literature reviewed in this section, spanning green supply chain practices in publicly listed firms, grocery SMEs in South Africa, family business crisis resilience in Spain, a systematic theoretical review, mid-tier retailers in Nairobi, coastal supermarkets in Mombasa, and family-owned electronics retailers in Nairobi, consistently demonstrates a positive relationship between supply chain management practices and organizational performance or sustainability outcomes. A recurring theme across these studies is the centrality of supplier relationship quality and inventory optimization as the most consistently significant predictors among the various supply chain management dimensions examined, a pattern that directly informs the operationalization of the supply chain management construct in the present study through the supplier diversity, supply chain resilience, lead time, supplier sustainability, and supplier relationships indicators specified in the conceptual framework. Notably, very few of the reviewed studies examine supply chain management specifically within family-owned retail enterprises, and none situates the construct within a comprehensive structural model alongside management skills, succession

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planning, and governance under the moderating influence of external environmental factors, a gap that the present study is specifically designed to address.

2.3.5 Strategic Drivers, External Environmental Factors and Sustainability

Amoako and Boateng (2022) studied factors leading to the sustainability of small and medium enterprises (SMEs) in Ghana, specifically in Kumasi. The purpose of their study was to solve problems faced by SMEs such as high employee pay and difficulty accessing loans, enumerate sources of funds, examine causes contributing to sustainability, identify factors leading to collapse, ascertain the impact of various factors on sustainability, and evaluate the effect of the PESTEL framework on SMEs in Ghana. The study used a descriptive research design and a quantitative approach to collect statistics, generalize findings, and explain factors related to SME sustainability using PESTEL and entrepreneurship theories. Data were primarily collected through questionnaires administered to managers and entrepreneurs in Kumasi. The study also conducted interviews with five entrepreneurs and managers in the Ashanti Region. Secondary data was gathered from various literature sources, including reports, journals, books, and websites. The majority of respondents agreed that poor policies are the primary political challenge faced by SMEs. Tax increments and over-taxation were also noted as challenges. Interviewed managers highlighted that changes in government and its policies can affect business survival and sustainability. The researchers recommended that entrepreneurs embrace and take advantage of good government policies. Recommendations included reducing inflation and lowering loan interest rates to encourage investment. This study presents a contextual gap. While the study focused on SMEs in Ghana, the present study focused on the retail sector, specifically supermarkets, in Kenya. Further, the present study used a different conceptual framework: while external factors were a combination of PESTEL factors.

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Mutua and Kerongo (2023) investigated the moderating effect of the external business environment on the relationship between strategic management practices and supermarket performance in Nairobi County, Kenya. The study sought to determine how political, economic, social, and technological factors influenced the strength of the strategic management-performance relationship amid the rapid expansion of large retail chains and the entry of e-commerce platforms into the Kenyan grocery retail sector. The target population consisted of 187 registered supermarkets operating within Nairobi County, from which a sample of 127 supermarkets was selected using stratified random sampling across small, medium, and large retail categories. The study used a descriptive cross-sectional survey design and collected primary data through structured questionnaires administered to branch managers, which were analyzed using hierarchical moderated regression analysis. The findings revealed that the external business environment, particularly the entry of multinational retail chains and the rapid diffusion of mobile money and digital payment technologies, significantly moderated the strategic management-performance relationship, with technological factors exerting the strongest moderating influence among the dimensions examined. The study recommended that supermarket operators continuously monitor the competitive and technological landscape and adapt their strategic management practices accordingly. However, the study examined supermarkets in Nairobi County broadly without distinguishing between family-owned and corporately managed establishments, a distinction that is conceptually central to the present study given that family ownership introduces additional governance and succession considerations that may interact with external environmental pressures in ways not captured by Mutua and Kerongo's study. The present study fills this gap by focusing exclusively on family-owned supermarkets in neighboring Kiambu County and explicitly modeling external environmental factors as a moderator of the relationship between four internal strategic drivers and sustainability.

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Bou Hatoum et al. (2023) studied the external factors driving change in capital project organizations. Their study aimed to identify these external factors and examine whether they affect organizations differently based on age maturity (contemporary, transitional, and legacy) and type of work (owners, contractors, and service providers). This research aimed to address a gap in the literature on the internal and external factors that lead capital project organizations to undertake change efforts, focusing specifically on external factors that are more global and common across the industry. The study employed a mixed four-step methodology, beginning with a comprehensive literature review to identify potential PESTEL factors driving change. The study initially identified 25 factors, which a panel of 14 subject matter experts (SMEs) validated, resulting in a final list of 22 PESTEL factors. The authors redefined these factors in the context of the literature. Data were collected via an online survey distributed using a snowball sampling technique, targeting individuals involved in organizational change within capital project organizations. Respondents selected the factors driving their organizational change initiatives. Two demographic Variables were collected: the organization's total years of experience (categorized as contemporary: 11–25 years, transitional: 25–50 years, and legacy: 50+ years) and the type of work they perform (owner, contractor, or service provider). Out of 159 responses received, 61 were complete for analysis. The PESTEL framework, commonly used to examine external pressures driving organizational change, was used because it effectively analyzes the macro-business environment outside an organization's control. The study concluded that PESTEL factors drive change differently depending on organizational age and type. Contemporary organizations and service providers showed a different pattern of PESTEL-driven change than owners and contractors, likely reflecting their focus on survivability versus long-term sustainability. Owners and contractors were more closely aligned in the PESTEL factors driving change. The present study seeks to fill a contextual gap identified in the study. While the study focused on capital project organizations, this study

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focused on family-owned supermarkets in Kenya. Further, this study focused on investigating how these PESTEL factors relate to the strategic drivers and their combined effect on the sustainability of these supermarkets.

Mostafa (2025) assessed the efficiency and sustainability of natural in-stream wetlands (ISWs) within two Egyptian drains, the Tellin Drain and Faraa Al Bahwo Drain, for improving drainage water quality. The study used SWOT (Strengths, Weaknesses, Opportunities, Threats) and PESTEL (Political, Economic, Social, Technological, Environmental, Legal) analyses to evaluate internal and external factors affecting the sustainability of these wetlands. The research aimed to integrate these analyses into a comprehensive strategic framework for stakeholders implementing ISWs. Addressing water quality challenges through nature-based solutions such as in-stream wetlands is essential to achieving the United Nations Sustainable Development Goals (SDGs), specifically Goal 6 (Clean Water and Sanitation) and Goal 13 (Climate Action). The methodology involved a comprehensive assessment using SWOT and PESTEL analyses. Data collection included primary data from site observations and stakeholder interviews conducted between June 2023 and March 2024, and secondary data from government reports, scientific studies, and water quality databases. The study conducted semi-structured interviews with 40 individuals from diverse stakeholder groups, including policymakers, EPADP staff, research entities, NGOs, and local farmers. This consultation process was managed to ensure it was meaningful and targeted.

The PESTEL analysis is a strategic mechanism for evaluating macro-environmental factors outside an organization's control that can affect project outcomes. It examines factors across six domains: Political, Economic, Social, Technological, Environmental, and Legal. The study assessed the impact of these external factors on wetland performance through PESTEL analysis to support decision-making. A stakeholder-consultation-based weighting method was used to determine the relative significance and overall weight of different PESTEL factors affecting

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wetland sustainability. The integrated PESTEL-SWOT analysis revealed how external factors influence internal capabilities and strategic options. For example, supportive policies (Political) enhance the cost-effectiveness (Strength) of ISWs. Economic inequality (Economic) may limit access to resources (Weakness). Funding and grants (Economic) provide key opportunities (Opportunity). Regulatory changes (Legal/Political) could disrupt ISW projects (Threat).

Ondieki and Wanjira (2024) examined the moderating role of external environmental factors on the relationship between strategic management practices and performance sustainability among small retail enterprises in Kisumu County, Kenya. The study aimed to determine whether competitive intensity, regulatory compliance burdens, and technological disruption strengthened or weakened the strategic management-performance relationship in a volatile retail environment. The target population comprised 312 registered small retail enterprises in Kisumu County, with a sample of 175 enterprises selected using stratified random sampling across formal and informal retail subsectors. The study used a descriptive cross-sectional survey design, collected primary data through structured questionnaires, and analyzed them using hierarchical moderated regression analysis. The findings revealed that external environmental factors, particularly intensifying competition from large-format retail chains, significantly and negatively moderated the strategic management-performance relationship, weakening the strength of internal strategic capabilities under conditions of heightened market pressure. The study recommended that policymakers design regulatory frameworks that reduce compliance burdens on small and medium retail enterprises while supporting their competitive resilience. However, the study examined retail enterprises broadly without isolating supermarkets or addressing family ownership dynamics, both of which shape how organizations absorb and manage external environmental pressures. The present study extends this analysis by examining the moderating role of external environmental factors specifically within family-owned supermarkets in Kiambu County, providing a more precise understanding

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of how competitive intensity, regulatory compliance, and technological change interact with family business strategic drivers to influence sustainability.

Mutiso and Langat (2025) studied the moderating effect of regulatory and macroeconomic conditions on the relationship between internal strategic capabilities and the sustainability of family-owned retail enterprises in Machakos and Kitui Counties, Kenya, with specific attention to inflationary pressure on procurement costs, county-level business licensing burdens, and fluctuations in the exchange rate affecting imported merchandise. The study targeted 104 family-owned retail enterprises operating across the two counties, from which a sample of 81 enterprises was selected using stratified random sampling by business size. The study used a descriptive cross-sectional survey design and collected primary data through structured questionnaires administered to owner-managers, which were analyzed using hierarchical moderated regression analysis. The findings showed that macroeconomic volatility, particularly currency depreciation affecting the cost of imported stock items, significantly weakened the positive relationship between internal strategic capabilities and sustainability, while county-level licensing burdens exerted a smaller but still statistically significant moderating effect. The study recommended that retail enterprises diversify their supplier base to include a greater proportion of locally sourced and manufactured goods as a hedge against currency-related cost shocks. However, the study's focus on two predominantly rural and peri-urban counties with limited exposure to large-format retail competition differs from the more urbanized, competitively saturated retail environment characteristic of Kiambu County, where proximity to Nairobi exposes family-owned supermarkets to distinct competitive and regulatory pressures. The present study extends this macroeconomic-moderation insight to the Kiambu County context, where it examines the moderating role of external environmental factors alongside the additional competitive pressure from the rapid expansion of large national and multinational retail chains into the county's commercial centers.

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Taken together, the empirical literature reviewed across Sections 2.3.1 to 2.3.5 reveals a consistent pattern across diverse organizational contexts, sectors, and geographies, namely that internal strategic capabilities encompassing management competence, structured succession arrangements, formalized governance, and resilient supply chain practices are positively and significantly associated with organizational sustainability and performance outcomes. At the same time, the reviewed studies consistently demonstrate that this relationship is neither automatic nor unconditional; it is substantially shaped by contextual factors such as ownership structure, organizational scale, sectoral characteristics, and the volatility of the external operating environment. Notably, several studies reviewed in this chapter, including those conducted in Ghana, Nigeria, South Africa, and Tanzania, point to the moderating influence of external environmental conditions on the strategic drivers-performance relationship, lending strong empirical support to the inclusion of external environmental factors as a moderating variable in the present study's conceptual framework. Furthermore, a recurring methodological pattern across the reviewed literature is the predominant use of descriptive and correlational research designs with limited application of structural equation modelling techniques capable of simultaneously testing direct, indirect, and moderated relationships among multiple strategic drivers. This represents a significant methodological gap that the present study addresses through its use of Partial Least Squares Structural Equation Modelling, enabling a more rigorous and comprehensive assessment of how management skills, succession planning, governance, and supply chain management jointly and individually influence the sustainability of family-owned supermarkets in Kiambu County, Kenya, under the moderating influence of external environmental factors.

A further observation arising from this comprehensive review concerns the geographic distribution of the reviewed literature. While a substantial proportion of the studies examined originate from Kenya, including investigations conducted in Nairobi, Mombasa, Nakuru,

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Trans-Nzoia, Kisumu, and Murang'a Counties, none of these Kenyan studies focus specifically on Kiambu County's family-owned supermarket subsector, nor do they integrate all four strategic drivers examined in the present study within a single comprehensive structural model. This geographic and conceptual specificity gap is particularly significant given that Kiambu County represents a unique retail environment shaped by its proximity to Nairobi's metropolitan market, its rapidly urbanizing peri-urban character, and the intense competitive pressure exerted by the expansion of large national retail chains such as Naivas, Carrefour, and Quickmart into previously underserved commercial centres within the county. These distinctive contextual features mean that findings from studies conducted in other Kenyan counties, or indeed in other countries entirely, cannot be assumed to generalize directly to Kiambu County's family-owned supermarket sector without empirical verification. The present study therefore makes a distinct contribution to the literature by providing context-specific, statistically rigorous evidence on the determinants of sustainability among family-owned supermarkets operating within this particular socio-economic and competitive environment, while simultaneously advancing methodological practice in the field through its application of Partial Least Squares Structural Equation Modelling to a mixed-methods research design that integrates both quantitative hypothesis testing and qualitative key informant corroboration.

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2.4 Summary of Research Gaps

Table 1 below consolidates the contextual, conceptual, and methodological gaps identified across the empirical literature reviewed in Section 2.3 into a structured summary. For each cited author, the table presents the stated research objective, the methodological approach adopted, the principal findings reported, the specific gap or limitation identified in the study, and how the present study addresses that gap. This tabulated synthesis serves two purposes

within the chapter. First, it provides a transparent, evidence-based justification for the conceptual framework and research hypotheses formulated for this study, demonstrating that each strategic driver and the moderating variable examined herein responds to a documented shortcoming in the existing literature rather than being arbitrarily selected. Second, it offers a consolidated reference point that readers can revisit when interpreting the empirical findings presented in Chapter Four, allowing direct comparison between the present study's results and the patterns, contradictions, and limitations identified in prior research.

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Table 1: *Summary of Research Gaps*

Author(s)	Objective	Methodology	Findings	Knowledge Gap	Focus of This Study
Popescu et al. (2020)	The study aimed to investigate how managerial skills specifically self-awareness, emotional intelligence, and interpersonal skills influence the sustainable development of small and medium-sized enterprises (SMEs).	The study used a quantitative descriptive research design and anonymous questionnaires to collect data.	The study emphasized the need for managerial skills development programs, particularly in self-awareness, to enhance business sustainability.	Conceptual gap: This study builds on different management dimensions. The context of the study covers SMEs	This study focused on key management dimensions such as: lack of strategic vision, poor decision-making, Ineffective delegation, and Failure to adapt to change. Additionally, the focus of this study was on family-owned businesses, specifically supermarkets.
Njiru (2023)	The study aimed to determine the impact of entrepreneurial competence practices on the sustainability of SMEs in Kenya, focusing on human resource management practices.	A descriptive survey design was used. The study used a stratified random sampling technique to select a sample of 102 SMEs. Data collection was conducted through structured questionnaires and document analysis guides, and the analysis was performed using both qualitative and quantitative methods,	The key findings indicated that while most SME owners had acquired human resource management competencies through training, many were not applying them in their business operations, leading to challenges in achieving sustainability.	Conceptual gap: the study focused on human resource management Context gap: the study focused on SMEs Methodology Gap: The study employed a descriptive approach	This study focused on general management practices. Further, the research was on family-owned supermarkets in Kiambu. Additionally, an inferential approach was employed to test the study hypotheses.
Ugoani (2020)	Examine the effect of	Exploratory research	Rejection of the null	Conceptual gap:	Succession planning

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	management succession planning on organizational sustainability in Nigerian MSMEs.	design. Data collected from all companies listed on the Nigerian Stock Exchange. Descriptive and regression statistical techniques used.	hypothesis regarding no relationship between management succession planning and organizational sustainability.	Ugoani's work suggests a new perspective on succession planning. Scope difference: Focus on MSMEs.	focused on succession rate, family involvement, training and development, and succession preparedness.
Kiwia et al. (2020)	Investigate the relationship between succession planning and performance of family-owned SMEs in Arusha City, Tanzania.	Quantitative research approach. Cross-sectional research design. Structured questionnaires. Descriptive statistics and independent samples t-tests used for data analysis.	Founders' mechanisms for succession planning. Founders' successors outperformed those selected by other family members.	Methodological gap: Use of t-tests; Conceptual gap: Identified in the context of succession planning.	The methodology of This study focused on predictive models as opposed to comparative techniques.
Uyar et al. (2022)	Explore the relationship between governance quality and public sector organizations' inclination for sustainability reporting.	Non-linear modeling techniques. Comprehensive analysis using sustainability reporting figures, Worldwide Governance Indicators (WGIs), and control variables.	Governance indicators are significantly associated with sustainability reporting in the public sector.	Contextual gap: Focus on the public sector. Methodological gap: Longitudinal approach.	This study focused on the retail industry, specifically family supermarkets. Additionally, The study focused on board independence, Board diversity/ effectiveness, Ownership structure, Accountability and Transition management. Further cross-sectional data was used
Temel et al. (2021)	Focus on the instrumental role of governance in	Descriptive statistics, rankings, comparisons,	Vision and mission, person in charge, and reporting identified	Contextual gap: Comparative analysis across different types	Investigation of the relationship between governance and

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	implementing sustainability across various types of organizations.	correlations, and centrality measures. Analysis of seven key governance factors.	as highest-ranked factors for achieving sustainability. The factors are interconnected, with varying degrees of influence.	of public sector organizations.	sustainability in Kenyan family-owned supermarkets in the private sector.
Kaumbulu et al. (2020)	Examine the impact of project governance on the sustainability of youth empowerment projects in Makueni County, Kenya.	Self-administered questionnaires. Descriptive and inferential statistics, including multiple regression analysis.	Governance structure has a positive and significant effect on the sustainability of youth empowerment projects.	Contextual gap: Focus on youth empowerment projects funded by the government or NGOs. Conceptual gap: use of profit-based indicators in measuring sustainability.	Investigation of the effect of governance on the sustainability of family-owned supermarkets in Kenya. The study focused on smooth transition, brand reputation, vision continuity, long tenure/ employees and founder's legacy to measure sustainability.
Alam et al. (2021)	Investigate the relationship between green supply chain management and profitability.	Quantitative approach. Secondary data measuring profitability of 12 companies from 2015 to 2019. Profitability operationalized as return on equity.	Some dimensions of green supply chain management practices significantly affected profitability.	Conceptual gap: Focus on green supply chain management practices.	This study focused on general supply chain management focusing on Supplier diversity, Supply chain resilience, Lead time, Supplier sustainability and Supplier relationships. Additionally, sustainability focused on other dimensions other than profitability
Monnagaaratwe and Mathu	Investigate the role of supply chain	Qualitative approach. Descriptive design.	Supply chain management	Methodological gap: Qualitative approach	This study focused on probability sampling

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(2022)	management in grocery small and medium-sized enterprises in South Africa.	Non-probability sampling. 15 grocery SMEs sampled.	improved cost effectiveness, efficiency, competitiveness, and sustainability for grocery SMEs in South Africa.	and non-probability sampling. Contextual gap: The study is set in South Africa.	techniques. Further, a quantitative approach was used to test the study hypotheses. Additionally, The study focused on the Kenyan scope.
Amoako and Boateng (2022)	To solve problems faced by SMEs such as employee pay and access to loans, examine causes and factors influencing sustainability, and evaluate PESTEL impact on SMEs.	Descriptive research design using a quantitative approach. Data collected via questionnaires and interviews with SME managers in Kumasi, Ghana. Secondary data from literature sources.	Found that poor policies, tax increments, and political instability are key political challenges. Managers cited government changes as impacting sustainability. Recommended that the government reduce inflation and loan interest rates; entrepreneurs should embrace good policies.	Contextual gap: Study focuses on SMEs in Ghana. Conceptual gap: Uses PESTEL and entrepreneurship theory but doesn't assess interaction with internal strategic drivers.	This study focused on the retail sector, specifically family-owned supermarkets in Kenya. It also employed a different conceptual framework, where external factors were analyzed as a composite of PESTEL, in relation to strategic drivers and sustainability.
Bou Hatoum et al. (2023)	To identify external PESTEL factors driving change in capital project organizations and assess their impact based on organization age and type of work.	Mixed-method, four-step approach: literature review, validation with 14 experts, survey using snowball sampling, data analysis of 61 completed responses from 159 collected.	Identified 22 PESTEL factors influencing organizational change. Noted differences in factor influence based on organization type and maturity.	Contextual gap: Focuses on capital project organizations. Conceptual gap: Does not explore interplay between PESTEL and strategic drivers.	This study investigates how PESTEL factors relate to strategic drivers and their combined effect on sustainability of family-owned supermarkets in Kenya, filling both contextual and

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			Contemporary Organizations emphasized survivability; owners and contractors emphasized long-term sustainability.		conceptual gaps.
Hassan & Bichanga (2022)	The study examined the effect of succession planning on the sustainability of family-owned enterprises in the Nairobi Metropolitan region.	The study adopted a mixed-methods research design combining descriptive and explanatory approaches. Data were collected from 176 family-owned enterprises using structured questionnaires and interviews and analyzed using regression analysis.	The study established that succession planning practices;successor identification, successor development, and leadership commitment;have a positive and significant influence on business sustainability.	Contextual gap: The study focused on general family enterprises and was limited to Nairobi Metropolitan. Sectoral gap: It did not focus on supermarkets. Conceptual gap: External environmental moderators were not examined.	This study focused on family-owned supermarkets in Kiambu County and integrated succession planning with other strategic drivers while examining the moderating effect of external environmental factors.
Dike et al. (2025)	The study sought to assess the influence of succession planning practices on the sustainability of family businesses in South-East Nigeria.	The study employed a descriptive survey research design. Data were collected from 203 family-owned businesses using questionnaires and analyzed using Pearson correlation analysis.	The findings revealed that mentoring, job rotation, and financing decisions significantly and positively influence business sustainability.	Contextual gap: Conducted in Nigeria, limiting applicability to Kenya. Conceptual gap: The study examined succession planning in isolation without incorporating governance, management competencies, or supply chain	This study extends the analysis to the Kenyan supermarket sector by examining succession planning alongside governance, management competencies, and supply chain management.

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				efficiency.	
Klugah et al. (2025)	The study examined the mediating role of succession issues in the relationship between succession planning, family influence, successor attributes, and SME performance.	A quantitative research design was adopted, and data were analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM).	The study found that unresolved succession issues mediate the relationship between succession planning and firm performance, potentially weakening sustainability outcomes.	Sectoral gap: Focused on hospitality SMEs rather than retail. Conceptual gap: Sustainability was not examined as a multidimensional outcome.	This study focused on sustainability outcomes in family-owned supermarkets and integrates succession issues with broader strategic drivers.
Mporayonzi & Dotto (2024)	The study aimed to examine how family business governance influences continuity in family-owned enterprises in Rwanda and Tanzania.	The study adopted a qualitative multiple case study design using semi-structured interviews and thematic analysis.	The study found that formal governance mechanisms such as family constitutions, advisory boards, and role separation enhance business continuity.	Methodological gap: Qualitative design limits generalizability. Sectoral gap: Did not focus on retail or supermarkets.	This study adopts a quantitative approach to examine governance structures and their effect on sustainability in family-owned supermarkets.
Al Rawaf & Alfalih (2023)	The study examined the relationship between governance and sustainability in family-owned businesses, with entrepreneurial culture as a moderator.	The study employed a quantitative research design and analyzed survey data using PLS-SEM.	The findings revealed that governance positively influences sustainability and that entrepreneurial culture strengthens this relationship.	Contextual gap: Conducted in Saudi Arabia. Sectoral gap: Did not address competitive retail environments.	This study contextualizes governance within the Kenyan supermarket sector and integrates competitive and environmental pressures.
Pont & Simon (2025)	The study aimed to investigate how family businesses reconfigure supply chains to	The study adopted an exploratory qualitative multiple case study approach	The study found that strong supplier relationships, inventory	Methodological gap: Qualitative and small sample size. Conceptual gap:	This study quantitatively examines supply chain management and its

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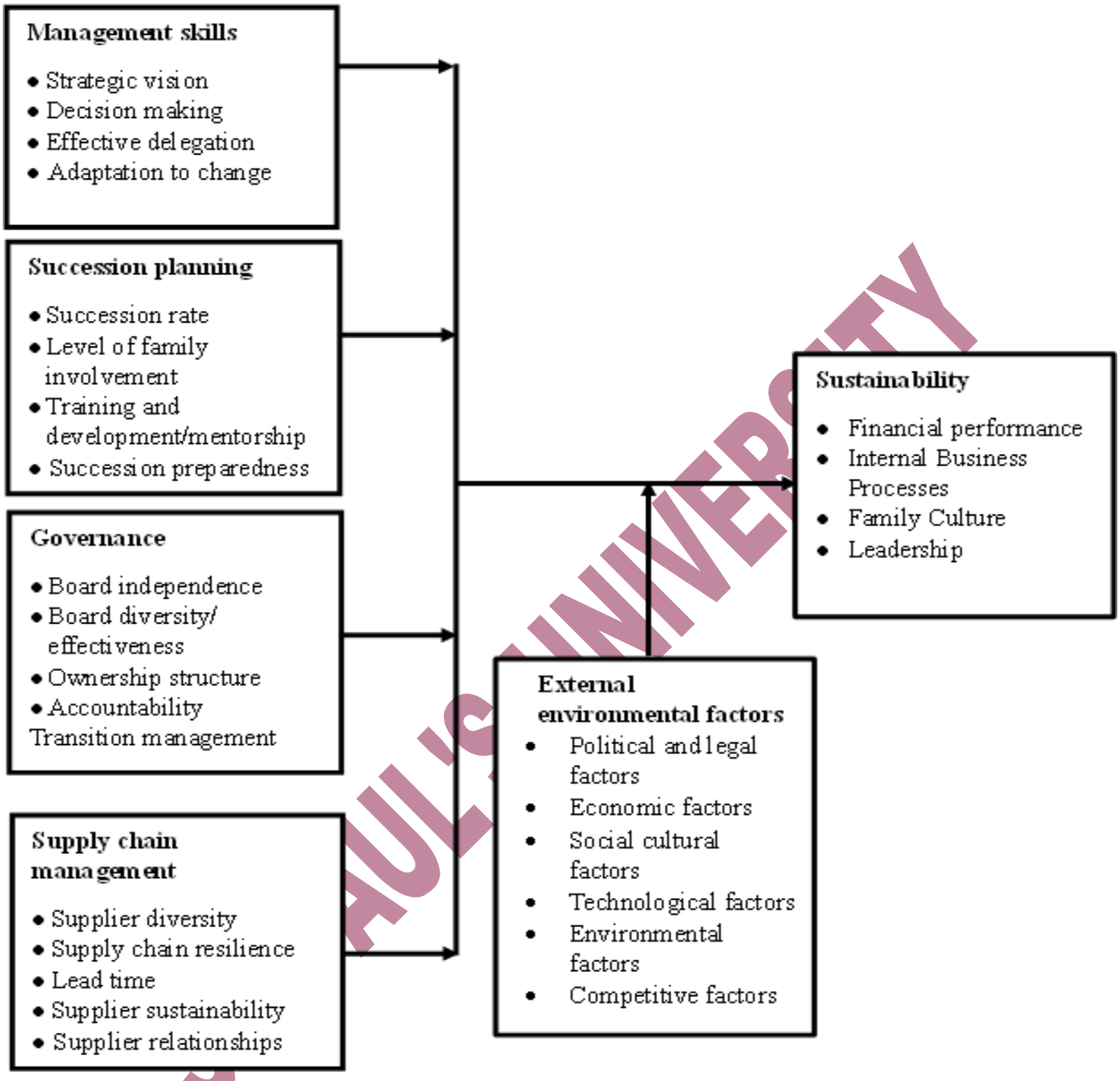
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	enhance resilience during crises.	using in-depth interviews and thematic analysis.	reorganization, and digitalization enhance resilience and continuity.	Sustainability outcomes were not quantitatively tested.	influence on sustainability in family-owned supermarkets.
Negi (2021)	The study aimed to develop a conceptual framework linking supply chain efficiency to business performance.	The study adopted a systematic literature review methodology synthesizing over 150 peer-reviewed studies.	The study established that supply chain efficiency significantly enhances organizational performance and competitiveness.	Empirical gap: Conceptual study with no empirical testing. Ownership gap: Family business dynamics were not considered.	This study empirically tests supply chain efficiency within family-owned supermarkets while incorporating family business characteristics.

Source: (Author, 2026)

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2.5 Conceptual framework



Independent variables **Moderating variable** **Dependent Variable**

Figure 1: *Conceptual Framework*

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This study sought to investigate the sustainability of family-owned supermarkets in Kenya, emphasizing the interplay of key strategic factors and the moderating role of external factors. The conceptual framework centers on independent variables, namely Management skills, succession planning, governance and supply chain management. Management skills evaluated through strategic vision, decision making, delegation and adaption to change. Succession planning, evaluated through succession rate, family involvement, training, and preparedness, is crucial for shaping leadership and resilience. Governance, assessed by board independence, diversity, ownership structure, accountability, and transition management, influences organizational dynamics and decision-making. Supply chain management, examined through supplier diversity, resilience, lead time, sustainability, and relationships, ensures operational efficiency. The framework acknowledged the moderating impact of external environmental factors, considering the PESTEL framework. The study's dependent variable is the sustainability of family-owned supermarkets, assessed by financial performance, internal business processes, Family culture, Leadership.

The conceptual framework presented in Figure 1 is theoretically anchored in the four theories reviewed in Section 2.2 of this chapter. Management skills draws its theoretical justification from Stewardship Theory, which posits that managers operating from a stewardship orientation channel their competencies towards the long-term collective good of the enterprise rather than narrow self-interest. Succession planning is theoretically grounded in Upper Echelon Theory, which explains how the cognitive orientations, values, and experiences of incumbent leaders shape the selection, preparation, and eventual transition of successors within family-owned enterprises. Governance draws jointly from Transformational Leadership Theory and Stewardship Theory, reflecting the dual emphasis on ethical, visionary leadership and trust-based institutional accountability

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mechanisms. Supply chain management is anchored in the Resource-Based View, which conceptualizes supplier relationships, distribution networks, and inventory systems as valuable, rare, and difficult-to-imitate organizational resources that can generate sustained competitive advantage in the retail sector.

The conceptual framework's hypothesized relationships proceed in two analytical stages. In the first stage, each of the four strategic drivers, namely management skills, succession planning, governance, and supply chain management, is hypothesized to exert a direct, statistically testable effect on the sustainability of family-owned supermarkets, consistent with the study's first four specific objectives and corresponding null hypotheses (H01 to H04). In the second stage, external environmental factors are hypothesized to moderate the strength and direction of the aggregate relationship between the strategic drivers and sustainability, consistent with the study's fifth objective and corresponding null hypothesis (H05). This two-stage conceptualization allows the study to first establish the baseline explanatory power of internal strategic capabilities before examining how the external operating environment, characterized by political, economic, social, technological, environmental, and legal pressures, conditions the effectiveness of those internal capabilities. The framework thus reflects a contingency perspective on family business sustainability, recognizing that strategic drivers do not operate in a vacuum but are continuously shaped by the dynamism of the broader retail operating environment in Kiambu County and the wider Kenyan economy.

In summary, this chapter has traced the theoretical and empirical foundations underpinning the present study, beginning with a review of four complementary theories, namely Transformational Leadership Theory, Stewardship Theory, Upper Echelon Theory, and the Resource-Based View, each illuminating a distinct facet of how family-owned supermarkets navigate questions of

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leadership, trust, succession, and resource-based competitive advantage. The chapter then critically reviewed the empirical literature on management skills, succession planning, governance, supply chain management, and external environmental factors, drawing on studies conducted across Kenya, the broader East African region, and other international contexts to identify the specific contextual, conceptual, and methodological gaps that this study is designed to address. These gaps were consolidated in Table 2.1 before being translated into the conceptual framework presented in this section, which visually and narratively depicts the hypothesized direct and moderated relationships among the study's five strategic drivers, the moderating variable, and the dependent variable of sustainability. With this theoretical and empirical foundation established, Chapter Three turns to the research methodology used to empirically test the relationships specified in the conceptual framework, covering the study's philosophical orientation, research design, target population, sampling procedures, data collection methods, diagnostic tests, and analytical techniques.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodological framework adopted to address the research hypotheses effectively. The contents of this chapter are structured as follows to provide a comprehensive understanding of the research process: Research Philosophy, Research Design, Target Population, Sampling Procedure, Data Collection Methods, Validity and Reliability, Operationalization of Variables, Data Presentation and Analysis, and Ethical Issues. This chapter served as the foundation upon which the research findings were built, ensuring that the methodology employed is rigorous, ethical, and well-suited to unravel the complexities of the research questions.

3.2 Research Philosophy

Research philosophy encompasses the ontological, epistemological, and axiological assumptions that guide a study's strategy and methods (Mbanaso et al., 2023). Of the common research paradigms, constructivism and interpretivism generally rely on qualitative methods to explore subjective, contextually embedded realities, whereas pragmatism emphasizes the practical application of knowledge to address real-world problems and is flexible in combining quantitative and qualitative methods depending on the research question (Saliya, 2023).

This study adopted a pragmatist research philosophy, since it does not confine research to a single ontological or epistemological stance but instead prioritizes problem-solving and actionable outcomes (Creswell & Creswell, 2018). Because sustainability in family-owned supermarkets involves both measurable outcomes, such as financial performance, and subjective factors, such

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as family dynamics and managerial decision-making, a pragmatist orientation supported a mixed-methods design in which quantitative surveys tested the study hypotheses while qualitative interviews explained the mechanisms underlying the observed relationships (Tashakkori & Teddlie, 2010).

3.3 Research design

The research design provides the essential structure or blueprint that guides the implementation of a chosen research method and the subsequent analysis of collected data (Bryman, 2012, p. 45). As Bhattacherjee (2012) asserts, selecting a research design depends on the intrinsic characteristics of the phenomenon under investigation. This study utilized a sequential explanatory research design, structured as a cross-sectional survey. This is a mixed-methods research approach that involved quantitative and qualitative analyses to describe the characteristics of the study's variables. It enables the collection of large amounts of data, which can then be analyzed statistically (Schoonenboom & Johnson, 2017). This approach captured the characteristics of the variables under investigation, providing detailed explanations of the study's findings (Ragab & Arisha, 2017). Further this research design investigated the effects of one variable on another, helping to establish cause-and-effect relationships. Guided by a pragmatist philosophy, this aspect of the design explored relationships between variables, using qualitative data to explain the "how" and "why" behind the research hypotheses. Since the study gathered data from multiple supermarkets at a single point in time, it followed a cross-sectional survey approach.

3.4 Target Population

The target population refers to the entire group of individuals or objects a researcher is interested in studying (Mweshi & Sakyi, 2020). This research focuses on family-owned supermarkets

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because they are significant in Kenya's retail industry and relevant to the study's focus on the factors contributing to their sustainability. The unit of analysis was 70 family-owned supermarkets in Kiambu County as registered by the business registration service in Kiambu County (Appendix IV). The unit of observation was 350 respondents, drawn from the top, middle, and lower management staff. From the top management, the study targeted the Owner, Director, Chief Executive Officer, and General Manager; at the middle level, the study targeted three functional managers in operations, finance, and human resources departments; while at the lower level, the supervisor was included in the target population. This is shown in the table below.

Table 2: *Study Population*

Management Category	Target Respondents	Percentage
Top Level Management (Owner, Director, Chief Executive Officer, General Manager)	70	20%
Middle Level Management (Functional Managers)	210	60%
Lower-Level Management (Supervisor)	70	20%
Total	350	100%

Source: Author (2026)

These establishments constitute the domain of formally registered family-owned supermarkets in the study area (Business Registration Service, Kiambu County, 2023), ensuring population Exhaustiveness. The 3-tier respondent structure (top/middle/lower management) captures decision-making hierarchies critical for assessing strategic drivers (Mweshi & Sakyi, 2020). The respondent structure was considered to avoid limiting data to a single respondent, which would ignore implementation realities across management tiers, since sustainability depends on organization-wide alignment of governance (top), operational execution (middle), and frontline

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practices (lower levels) (Hiebl et al., 2018). Triangulating responses mitigates owner bias and captures systemic barriers to sustainability.

3.5 Sampling Design

Sampling design is the process of selecting a subset of individuals from a population to represent the entire group. It allows researchers to make inferences about the population without examining every member. The sampling frame of the study was the 70 family-owned supermarkets in Kiambu County. Ahmad and Maalim (2017) assert that determining sample size is crucial to ensure the confidence interval is sufficient for decision-making. Therefore, sampling was done at the level of observation using Cochran's (1977) formula to calculate the sample size as follows.

$$N=\frac{N*Z^2*p(1-p)}{e^2(N-1)+Z^2p(1-p)}$$

Where;

N= population size

E= error given as 0.05

P= the estimated proportion of an attribute that is present in the population

Z= 95% confidence interval standard variate

Calculation adopted the formula by Cochran (1977).

$$N=\frac{350*1.96^2*0.5(1-0.5)}{0.05^2(350-1)+1.96^2 0.5(1-0.5)}=183$$

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Table 3: *Sample Calculation*

	Target population	Target Respondents	Proportion
Top Level Management (Owner, Director, Chief Executive Officer, General Manager)	70	37	20%
Middle Level Management (Functional Managers)	210	109	60%
Lower-Level Management (Supervisor)	70	37	20%
Total	350	183	100%

Source: Author (2026)

The study employed a multistage stratified sampling to ensure geographic and operational diversity. First, the family supermarkets in Kiambu County were clustered by subcounty, stratified into three tiers (large, medium, and small). Within each stratum, simple random sampling was then applied to select representative supermarkets, ensuring proportional inclusion of management levels (top/middle/lower) for comprehensive data collection." This sampling technique is important for this study because it ensures respondents are selected in a way that accounts for differences across categories, allowing for a more comprehensive and unbiased understanding of the issues under investigation (Campbell et al., 2020).

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3.6 Types of data

This study employed a cross-sectional research design which entailed collecting data through a survey. A survey aims to gather information about the opinions, attitudes, or behaviors of the target population on a specific topic (Clark et al., 2021). Primary data was mainly utilized in this research. Primary data is information that is collected firsthand by the researcher for the specific purpose of their research project. To ensure the data collected fully addressed the research objectives, this study used primary data collected through a survey.

3.7 Data collection methods

This study employed a mixed-methods approach where the aim was to gather qualitative and quantitative data. The study used a survey method to initiate direct communication with respondents. In this survey, a closed–ended questionnaire was used to gather the attitudes of the respondents regarding the issue under investigation. The questionnaire was designed in sections to obtain detailed information from the top, middle, and low-level managers in the sampled supermarkets.

Qualitative data was collected using structured interviews. Interviews were conducted using the most convenient methods, such as face-to-face interviews, phone interviews, or virtual meetings, according to respondents' preferences. Interviews were conducted with top-level management personnel until data saturation was achieved.

3.7.1 Reliability Testing

Reliability, as conceptualized by Sekaran and Bougie (2010), denotes the extent to which a measurement instrument produces stable and replicable outcomes across repeated administrations under similar conditions. It fundamentally reflects the precision and dependability of the measurement process. An instrument with strong reliability minimizes systematic and unsystematic measurement errors that could undermine the trustworthiness of research conclusions. Within the PLS-SEM analytical framework adopted in this study, Composite Reliability (CR) was used as the primary indicator of internal consistency because it better accounts for varying indicator weights in reflective models than traditional metrics (Hair et al., 2021). CR is computed using the squared outer loadings of all indicators assigned to each latent variable, providing a more nuanced reliability estimate (Ringle et al., 2020). Acceptable CR values

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range from 0.60 to 0.70 for exploratory research, while values surpassing 0.70 are conventionally regarded as indicative of satisfactory reliability. As Dijkstra and Henseler (2015) contend, constructs with CR values below 0.60 fail to demonstrate adequate internal consistency for meaningful structural analysis.

The degree of inter-item homogeneity within each latent construct was assessed using Cronbach's alpha, a standard psychometric index widely used in scale validation research across the social and management sciences. Pallant (2020) stipulates that alpha values of 0.70 and above are conventionally regarded as demonstrating satisfactory internal reliability for confirmatory measurement instruments, while values between 0.60 and 0.69 may be tolerated in exploratory research designs where construct definitions remain provisional. In this study, Cronbach's alpha was computed separately for each construct, and the outcomes are reported alongside composite reliability and average variance extracted in Table 15. All values were expected to exceed the 0.70 criterion. Any alpha below this threshold would have been addressed through item deletion or scale refinement prior to structural model estimation.

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3.7.2 Validity Testing

Additionally, the questionnaire's practical clarity and interpretive transparency were evaluated through a face validity assessment during the pilot phase, in which respondents rated the comprehensibility of the instructions and assessed whether each item appeared to address its intended measurement domain; reviewer feedback was incorporated into the final instrument revision before main fieldwork commenced.

Two inter-related psychometric procedures were then employed to assess the construct validity of all measurement scales used in this investigation. Kline (2016) characterizes construct validity as

the systematic empirical determination of whether a measurement instrument reliably captures the multidimensional boundaries of the theoretical construct it is designed to represent, including both the scope and the granularity of its operationalized indicators. This study evaluated construct validity through convergent and discriminant validity assessments. Convergent validity examines the degree to which items assigned to the same construct share sufficiently high inter-correlations, confirming they collectively measure a single underlying dimension. Convergent validity was assessed using confirmatory factor analysis. Discriminant validity confirms that constructs are empirically distinguishable, assessed through the Fornell-Larcker criterion and HTMT ratios.

3.7.3 Pilot Testing

A pilot study was conducted before the main data collection exercise to assess the clarity, validity, and reliability of the quantitative questionnaire and the practicality of the qualitative interview guide. For the quantitative instrument, 18 respondents from family-owned supermarkets in Nairobi County completed the questionnaire, and their responses were subjected to sampling adequacy, sphericity, and reliability checks to identify items requiring revision before the main survey. For the qualitative instrument, the interview guide was pre-tested with a small number of respondents to assess question clarity, sequencing, and whether the probes elicited sufficiently rich responses; feedback from this exercise informed revisions to the phrasing and ordering of interview questions. We excluded respondents who participated in the pilot study from the main study sample to avoid contaminating the final dataset.

We computed the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity for each construct's pilot item set to assess whether the data were suitable for factor-analytic procedures before the main study (Kaiser, 1974). Table 4 presents the results. Management Skills (KMO = 0.665), Governance (KMO = 0.643), and Supply Chain Management

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(KMO = 0.642) recorded KMO values within the acceptable range, while Succession Planning (KMO = 0.420) and External Environmental Factors (KMO = 0.431) fell below the conventional 0.60 threshold, and Sustainability (KMO = 0.506) was marginal. Bartlett's test was statistically significant for all six constructs ($p < .001$), confirming sufficient inter-item correlation to support factor analysis despite the modest KMO values recorded for some scales. The comparatively low KMO values for Succession Planning and External Environmental Factors, both piloted with a larger item pool than was retained in the main study eight and eleven items, respectively, reduced to six and five items after the pilot, indicated a need for item reduction and rewording, which was carried out before the main data collection exercise.

Table 4: *Pilot Validity Test – KMO and Bartlett's Test of Sphericity (n = 18)*

Variable	N	KMO Measure	Bartlett's Chi-Square	Sig.
Management Skills	18	0.665	121.4	0.000
Succession Planning	18	0.420	95.0	0.000
Governance	18	0.643	157.4	0.000
Supply Chain Management	18	0.642	99.2	0.000
External Environmental Factors	18	0.431	108.0	0.000
Sustainability	18	0.506	674.0	0.000

Source: Pilot Data (2025).

Cronbach's alpha was computed for each construct's pilot item set to assess internal consistency. Table 5 presents the results. Governance ($\alpha = 0.929$), Sustainability ($\alpha = 0.929$), and Management Skills ($\alpha = 0.899$) demonstrated excellent internal consistency, Supply Chain Management ($\alpha = 0.843$) and External Environmental Factors ($\alpha = 0.766$) were satisfactory, while Succession

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Planning (α = 0.684) fell marginally below the conventional 0.70 threshold. Consistent with the sampling adequacy results above, the Succession Planning items were revised and reduced before the main study to improve both psychometric performance and respondent comprehension.

Table 5: *Pilot Reliability Test – Cronbach's Alpha (n = 18)*

Variable	N	No. of Items	Cronbach's Alpha
Management Skills	18	8	0.899
Succession Planning	18	8	0.684
Governance	18	10	0.929
Supply Chain Management	18	9	0.843
External Environmental Factors	18	11	0.766
Sustainability	18	16	0.929

Source: Pilot Data (2025).

Overall, the pilot results confirmed that the research instrument was sufficiently valid and reliable to proceed to the main study, subject to the item revisions described above. Appendix II presents the refined instrument administered in the main study, and Chapter Four reports the corresponding item-level statistics for the full sample of 183 respondents.

3.7.4 Sampling Adequacy and Measurement Model Assessment

Prior to reliability and validity assessment, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were applied to establish whether the data were suitable for factor analytic procedures, with KMO values above 0.60 indicating adequate sampling (Kaiser, 1974) and a significant Bartlett's test ($p < 0.05$) confirming sufficient shared variance among variables to support factor extraction (Rasoolimanesh, 2022). In addition, outer model loadings, which quantify the bivariate correlation between each observed indicator and its designated latent

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construct in the reflective measurement model, were assessed against the accepted minimum threshold of 0.70, below which an indicator is considered to contribute insufficient representational strength to its construct (Hair et al., 2019). Both assessments were conducted as preliminary diagnostic checks ahead of the substantive reliability, validity, and structural model analyses presented in Chapter Four.

3.8 Data collection procedure

Data collection is a fundamental component in generating valuable insights and empirical information for this research study. In line with ethical and methodological standards, the researcher implemented a systematic data collection procedure. The researcher initiated the process after securing the necessary permissions and clearances, including obtaining an introductory letter from the university, obtaining ISERC approval, and obtaining a research permit from NACOSTI, thus ensuring adherence to ethical and legal research guidelines. The chosen data collection method for this study was a structured questionnaire. This questionnaire was thoughtfully crafted to capture pertinent information concerning the strategic drivers that play a fundamental role in the sustainability of family-owned supermarkets. Before participating, all participants received an informed consent form, allowing them to participate willingly while fully understanding the research objectives and implications. The questionnaire was administered in person to respondents at their respective supermarket premises. Qualitative data were collected through in-depth interviews with 12 key informants from 12 family-owned supermarkets in Kiambu County.

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3.9 Diagnostic Tests

Despite PLS-SEM's distributional robustness, multicollinearity diagnostics remained essential to safeguard the interpretive integrity of path coefficient estimates and to confirm that predictor constructs contributed independent, non-redundant information to the structural model specification. Formal tests of normality and linearity were not conducted, since PLS-SEM is a distribution-free estimation technique that does not assume multivariate normality of the observed data, and it accommodates non-linear and complex relationships more flexibly than covariance-based structural equation modelling (Hair et al., 2019). Multicollinearity and homoscedasticity were nonetheless tested, since these diagnostics remain relevant to the stability and interpretability of PLS-SEM path estimates regardless of the underlying data's distributional assumptions.

3.9.1 Multicollinearity Test

The presence of unacceptably high inter-correlations among predictor constructs, termed multicollinearity, poses a serious threat to the precision of structural path estimates by inflating standard errors and rendering individual coefficient interpretations unstable and statistically unreliable. Ringle et al. (2020) establish that Variance Inflation Factor magnitudes exceeding 5.0 constitute empirical evidence of harmful multicollinearity that compromises the stability of latent variable path estimates and undermines the inferential validity of PLS-SEM model outputs. The Variance Inflation Factor statistic was computed for each predictor construct to quantify the proportional increase in coefficient variance attributable to collinear relationships. VIF values below 3.0 suggest negligible multicollinearity; values between 3.0 and 5.0 indicate moderate multicollinearity warranting caution; and values exceeding 5.0 signal substantial multicollinearity necessitating corrective action. Accordingly, VIF diagnostics were systematically evaluated across all four strategic driver constructs- management skills, succession planning, governance, and

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supply chain management- to empirically confirm that inter-construct correlations remained within statistically acceptable bounds and did not introduce estimation distortions into the structural model.

3.9.2 Homoscedasticity Test

The assumption that model prediction errors maintain uniform variance across all levels of the independent variables, referred to as homoscedasticity, was empirically tested to establish the residual distributional properties of the structural model. Field (2013) cautions that although PLS-SEM's relatively robust to residual non-normality, systematic patterns of heteroscedasticity can still compromise standard error estimation and distort the reliability of inferential conclusions from significance testing. We assessed homoscedasticity using the Breusch-Pagan test, which formally evaluates whether residual variance is systematically associated with the predicted values of the dependent variable. A non-significant test result ($p > 0.05$) confirms homoscedasticity.

3.10 Empirical Model

While CB-SEM remains the preferred analytical approach for strictly confirmatory theory testing with large normally distributed samples and reflective measurement structures, PLS-SEM is the superior choice for predictive and explanatory research contexts where maximizing endogenous construct variance explanation takes precedence over achieving exact model-data correspondence (Hair et al., 2020).

Variance-based Structural Equation Modelling through the Partial Least Squares algorithm was adopted as the analytical engine for this investigation, chosen for its demonstrated effectiveness in estimating rich networks of direct, indirect, and conditional effects spanning observed measurement indicators and unobserved latent variables within a unified computational framework

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(Hair et al., 2019). Unlike traditional multivariate regression, PLS-SEM explicitly accounts for measurement error across all constructs simultaneously, enabling more precise and theoretically coherent parameter estimation in complex models. Whereas CB-SEM demands large representative samples and strict multivariate normality to generate stable model-fit statistics, PLS-SEM optimizes explained variance in endogenous constructs and is therefore methodologically well-calibrated for this study's sample size and research design, comprising 183 respondents and a complex five-construct structural model with a moderation term.

Non-parametric bootstrapping resampling within PLS-SEM generates distribution-free standard errors and bias-corrected confidence intervals, thereby circumventing the stringent multivariate normality requirements that limit CB-SEM's applicability in management and social science research contexts where normality violations are common (Fornell & Bookstein, 1982). The adoption of PLS-SEM is also philosophically consistent with this study's pragmatic epistemological orientation, which privileges the strategic alignment of analytical methods with research objectives over adherence to technique-specific distributional prerequisites. All structural model estimations were executed using the plssem command in STATA 17, with 5,000 bootstrap replications employed to derive bias-corrected confidence intervals for all reported path coefficients. Jointly, the standardized path coefficients, bootstrap-derived t-statistics, and predictive relevance Q^2 statistics provided a comprehensive interpretive architecture for evaluating both the statistical significance and the practical explanatory power of the estimated structural model.

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3.10.1 Total Effects Model

The total effects model in data analysis measures the overall impact of each strategic driver on sustainability, considering both direct and indirect pathways. It was crucial in this study as it

provided a comprehensive understanding of how management skills, succession planning, governance, and supply chain management jointly influenced the sustainability of family-owned supermarkets in Kiambu County. In this study, the first four objectives examined the direct links between each strategic driver and sustainability. The total effects model for strategic drivers on sustainability was specified as:

$$Y = \beta 0 + \beta 1MS + \beta 2SP + \beta 3G + \beta 4SCM + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

Y = Sustainability (dependent variable)

MS = Management Skills

SP = Succession Planning

G = Governance

SCM = Supply Chain Management

$\beta 0$ = Constant term

$\beta 1, \beta 2, \beta 3, \beta 4$ = Standardized path coefficients

ε = Error term

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Jointly, the standardized path coefficients, bootstrap-derived t-statistics, and predictive relevance Q^2 statistics provided a comprehensive and mutually reinforcing interpretive architecture for evaluating both the statistical significance and the practical explanatory power of the estimated structural model.

3.10.2 Moderation Analysis Model

The study's fifth objective examined whether the external operating environment acts as a contingency factor governing the intensity of the strategic drivers-sustainability relationship in family-owned supermarkets across Kiambu County. Boundary conditions in empirical research, embodied by moderating variables, are theoretically essential because they show that the explanatory power of predictor constructs is neither fixed nor universal but varies systematically across different contextual configurations (Sharma et al., 1981). The present study adopted hierarchical moderated regression within the PLS-SEM framework to operationalize this moderation test, enabling direct evaluation of whether the external environment amplifies or attenuates the strategic drivers-sustainability relationship. The interaction term (SD × EEF) was constructed by multiplying mean-centered composite scores of the strategic drivers index and external environmental factors. A statistically significant and negative coefficient would confirm that unfavorable external environmental conditions systematically diminish the magnitude of the positive relationship between strategic drivers and sustainability, establishing the external environment as a constraining boundary condition on strategic effectiveness.

$$Y = \beta 0 + \beta 1SD + \beta 2EEF + \varepsilon 1 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2a) \ \{\text{basic model}\}$$

$$Y = \beta 0 + \beta 1SD + \beta 2EEF + \beta 3SD \times EEF + \varepsilon 1 \quad \ldots\ldots\ldots\ldots \quad (2b) \ \{\text{interaction model}\}$$

Where:

Y = Sustainability

SD = Strategic Drivers Composite (mean-centred)

EEF = External Environmental Factors (mean-centered moderator)

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$\beta 0$ = Constant term

$\beta 1, \beta 2, \beta 3$ = Standardized beta coefficients

$\varepsilon 1$ = Error term

A statistically significant and negative $\beta 3$ coefficient would confirm that unfavorable external environmental conditions systematically diminish the magnitude of the positive relationship between strategic drivers and sustainability, establishing the external environment as a constraining boundary condition on strategic effectiveness in the family supermarket sector.

3.11 Operationalization of variables

This section describes how the study variables were operationalized. The variables were adapted from the empirical review and tailored to fit this study.

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Table 6: *Operationalization of Study Variables*

Variable	Operationalization	Indicators	Measurement scale
Management skills	Management skills refer to leaders' ability to plan effectively, make decisions, delegate tasks, and adapt to market changes, which can lead to inefficiencies and business instability.	● Lack of strategic vision ● Poor decision-making ● Ineffective delegation ● Failure to adapt to change	Likert scale 1 to 5 in section 2 of the questionnaire (appendix 1)
Succession planning	Succession planning involves systematically identifying and developing key talents within an organization to ensure a smooth transition of leadership roles when needed.	● Succession rate ● Level of family involvement ● Training and development/mentorship ● Succession preparedness	Likert scale 1 to 5 in section 3 of the questionnaire (appendix 1)
Governance	Governance entails establishing and implementing structured processes, policies, and mechanisms to ensure effective decision-making, accountability, and ethical conduct within an organization.	● Board independence ● Board diversity/ effectiveness ● Ownership structure ● Accountability ● Transition management	Likert scale 1 to 5 in section 4 of the questionnaire (appendix 1)
Supply chain management	Supply chain management involves orchestrating the end-to-end processes of procurement, production, distribution, and logistics to optimize efficiency, reduce costs, and enhance overall performance within an organization's supply network.	● Supplier diversity ● Supply chain resilience ● Lead time ● Supplier sustainability ● Supplier relationships	Likert scale 1 to 5 in section 5 of the questionnaire (appendix 1)

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External factors	External factors are elements outside an organization, individual, or system that can influence its performance, behavior, or decision-making. They are often uncontrollable, but understanding them is crucial for making informed decisions and developing effective strategies.	● Political and legal factors ● Economic factors ● Socio-cultural factors ● Technological factors ● Environmental factors ● Competition	Likert scale 1 to 5 in section 6 of the questionnaire (appendix 1)
Sustainability	Sustainability in supermarkets involves implementing and managing economically viable strategies to ensure long-term Resilience, ethical operation, and positive societal impact of the supermarket industry.	● Financial performance ● Internal business processes ● Family culture ● Leadership	Likert scale 1 to 5 in section 7 of the questionnaire (appendix 1)

Source: Author (2026)

3.12 Data analysis and presentation

In this research, the researcher implemented thorough measures to uphold the validity and reliability of the collected data. Before the analysis, a comprehensive validation process was conducted to review and improve the data obtained from the field. Data validation involved scrutinizing the questionnaires to ensure the precision, legibility, relevance, and appropriateness of responses. The review identified inconsistencies or ambiguities and led to questionnaire adjustments to maintain consistency and completeness. The quantitative data underwent rigorous analysis using both descriptive and inferential statistical methods to address the research questions and test hypotheses. Descriptive statistics, including percentages, frequencies, means, and standard deviations, were used to summarize the data

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and clarify central tendencies and variation within the dataset. Inferential statistical techniques such as regression and correlation analyses were used to test hypotheses and identify associations among study variables. This study examined relationships between variables using correlation analysis, specifically Pearson product-moment correlation. This method reveals how strongly variables are linked, with values ranging from -1 (perfectly negative) to +1 (perfectly positive), at a significance level of 0.05. Negative values indicate an inverse relationship, while positive values suggest a direct relationship (Field, 2013).

Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis was suitable for this research, effectively explaining, identifying, and quantifying relationships between variables. It allows for the assessment of the quantitative impact of predictor variables on the response variable, offering insights into the nature and strength of these relationships. The analysis was conducted using STATA with the plssem command. Qualitative data analysis involved organizing and interpreting non-Numeric data to uncover patterns, themes, and meanings. The study used a combination of thematic and verbatim analysis. In thematic analysis, data were reviewed to identify recurring themes that capture key ideas and experiences expressed by the key informants. This process involved coding the data, grouping similar codes, and then refining them into themes that provided insight into the research question. Verbatim analysis, by contrast, focused on the exact words participants used. It involved extracting and analyzing direct quotes to preserve the authenticity of the participants' voices, offering a deeper understanding of their perspectives and experiences.

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3.13 Ethical considerations

In conducting this research, the researcher rigorously adhered to ethical principles to ensure ethical conduct and protect participants' rights. The researcher sought ISERC approval and NACOSTI license to conduct the research.

Confidentiality was a top priority, and all sensitive information, including respondents' identities and specific business names, was kept confidential. To maintain anonymity, unique codes represented respondents from various retail businesses. Before they participate in the study, all individuals involved received clear and comprehensive information about the research's objectives, the strict confidentiality measures in place to protect their data, and the voluntary nature of their involvement. Each participant provided informed consent, indicating their willingness to take part in the research.

The study strictly observed voluntary participation, and no coercion was applied to any potential participant. The study was conducted efficiently to minimize the time and resources required from respondents while ensuring that the research adhered to its schedule and resource allocation. The research adopted a quantitative approach to ensure objectivity, reliability, and independence, while upholding rigorous research ethics to strengthen the study's reliability and ethical standing. Data privacy and confidentiality were maintained throughout the study, and Participants had the assurance that their data were used solely for academic purposes.

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CHAPTER FOUR

EMPIRICAL RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the empirical findings of the study on strategic drivers and sustainability of family-owned supermarkets in Kiambu County, Kenya. The chapter begins with the questionnaire response rate, followed by sampling adequacy testing. The chapter assesses reliability and construct validity for each of the six study constructs before evaluating the full outer measurement model. Demographic characteristics and descriptive statistics are reported next. We present pre-analysis diagnostic tests for multicollinearity and homoscedasticity before the PLS-SEM structural model estimates and hypothesis-testing results. Each hypothesis result is followed immediately by a discussion section drawing on empirical studies that align with, contradict, support, or differ from the findings. All analyses were performed in STATA using the plssem command with 5,000 bootstrap replications. Tables are numbered sequentially from Table 7.

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4.2 Questionnaire Response Rate

We distributed 183 questionnaires to eligible respondents across family-owned supermarkets in Kiambu County. Of these, 181 were returned fully and correctly completed, yielding a usable response rate of 98.9 percent. Two questionnaires were excluded during data cleaning due to systematic non-responses across multiple construct items, leaving 181 valid questionnaires for all subsequent analyses. This response rate substantially exceeds the 50 percent threshold widely regarded as adequate for survey-based research and approaches the

benchmark Mugenda and Mugenda (2003) describe as excellent for generalizing findings to the wider target population. The high completion rate is attributable to the researcher's direct engagement with branch managers during distribution, the relatively short administration time required for the structured instrument, and collecting completed questionnaires on the same day wherever feasible to minimize attrition. The negligible exclusion rate further suggests that respondents across the three management tiers understood the instrument, lending confidence that the data retained for analysis adequately represent the perspectives of owners, functional managers, and supervisors within the sampled family-owned supermarkets.

4.3 Sampling Adequacy and Sphericity Test

Before reliability and validity assessments were conducted, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were applied to establish whether the data were suitable for factor analytic procedures. The KMO statistic evaluates whether partial correlations among variables are sufficiently small to support factor extraction, with values above 0.60 indicating adequate sampling (Kaiser, 1974). Bartlett's test examines whether the correlation matrix departs significantly from an identity matrix, with a significant p-value ($p < 0.05$) confirming adequate shared variance among variables to support factor extraction (Rasoolimanesh, 2022). Table 7 presents the results. Conducting these preliminary diagnostic checks before proceeding to substantive reliability and validity analysis is standard practice in survey-based structural equation modelling research, since failure to establish adequate sampling and correlational structure at this early stage would render any subsequent factor-analytic or measurement model conclusions statistically unreliable. Both tests were computed using the full set of 35 reflective indicators spanning the six study constructs prior

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to any item-level exclusion, ensuring that the diagnostic assessment reflects the complete measurement instrument as administered to respondents.

Table 7*: KMO Measure and Bartlett's Test of Sphericity*

Test Statistic	Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.847
Bartlett's Test of Sphericity: Approx. Chi-Square	2,283.61
Degrees of Freedom	435
Significance (p-value)	< 0.001

Note. Source: Field Data (2026). Computed from STATA plssem output.

The KMO statistic of 0.847 placed the data in the meritorious range (0.80 to 0.89), confirming that the sampling was well suited for factor analytic procedures. Bartlett's Test of Sphericity was highly significant (chi-square = 2,283.61, df = 435, $p < 0.001$), rejecting the null hypothesis that the correlation matrix was an identity matrix. According to the classification scale proposed by Kaiser (1974), a KMO value in the meritorious range indicates that the proportion of variance among the measured variables that might be caused by underlying latent factors is substantially higher than the proportion attributable to measurement error or unique variance, providing strong statistical justification for proceeding with construct-level factor extraction. The large and highly significant chi-square statistic associated with Bartlett's test further confirms that the 35 observed indicators are sufficiently intercorrelated to support the assumption that they collectively reflect a smaller number of underlying latent constructs rather than representing 35 statistically independent variables.

Taken together, these diagnostic outcomes provided robust confirmation of adequate inter-variable correlation structure, validating the appropriateness of the PLS-SEM analytical framework for the present dataset. The factor solution was found to be structurally stable, and the measurement indicators demonstrated adequate suitability for latent variable

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operationalization, thereby establishing a methodologically defensible foundation for all measurement and structural model evaluations undertaken in subsequent sections of this chapter. These preliminary results are consistent with similar sampling adequacy diagnostics reported in comparable PLS-SEM studies of family business sustainability in the Kenyan and broader East African retail context, where KMO values in the 0.80 to 0.90 range are routinely documented (Hair et al., 2021). Having established that the dataset satisfies the foundational statistical prerequisites for factor-analytic and structural equation modelling procedures, the analysis proceeds in the following sections to examine the reliability and construct validity of each of the six study constructs individually, before advancing to the full outer measurement model evaluation and, ultimately, the structural path analysis presented in Section 4.9.

4.4 Reliability and Construct Validity Assessment

This section presents item-level reliability and construct validity information for each of the six study constructs: management skills, succession planning, governance, supply chain management, external environmental factors, and sustainability. For each construct, a table reports item means, standard deviations, corrected item-total correlations, and CFA loadings. Internal consistency reliability is assessed using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE). The acceptance thresholds are: Cronbach's alpha ≥ 0.70 (Hair et al., 2019), CR ≥ 0.70, and AVE ≥ 0.50 for convergent validity (Fornell and Larcker, 1981). These three reliability and validity criteria work complementarily: Cronbach's alpha and composite reliability both assess how consistently the items comprising a construct measure the same underlying concept, while average variance extracted specifically evaluates the proportion of variance captured by the construct relative to measurement error across its indicators. Presenting all three statistics alongside item-level descriptive and correlational

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detail allows readers to evaluate not only whether each construct meets conventional psychometric thresholds in aggregate, but also which specific indicators contribute most strongly to, or potentially weaken, the overall measurement quality of each of the six constructs examined in this study.

4.4.1 Management Skills

The management skills construct was operationalized through six purposively negatively worded items designed to assess deficits in strategic vision, planning inadequacies, decision-making weaknesses, delegation failures, and limited strategic responsiveness to market dynamics. Within this reverse-coded measurement framework, respondent disagreement with each item reflects positive managerial performance. Table 8 reports item-level psychometric properties, including corrected item-total correlations and CFA loadings. These results show each indicator's relative contribution to the composite management skills latent variable and confirm whether the scale maintains acceptable internal consistency for subsequent structural model analyses. The decision to negatively word all six management skills items was a deliberate methodological choice intended to reduce social desirability bias, a well-documented threat to validity in self-reported management competence research whereby respondents, particularly owner-managers evaluating their own performance, may be inclined to overstate their managerial capabilities when items are positively framed. By instead asking respondents to indicate their level of agreement with statements describing specific management deficiencies, such as reactive decision-making or inadequate delegation, the instrument captures more candid and discriminating responses, since acknowledging a deficiency-framed statement carries less reputational risk than directly claiming managerial inadequacy.

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Table 8: *Management Skills: Item Statistics and Reliability*

Item	Mean	SD	Item-Total r	CFA Loading
MS1: Management lacks clear long-term strategic vision	1.51	0.87	0.582	0.717
MS2: Poor planning leads to inconsistent business growth	1.70	1.02	0.609	0.748
MS3: Financial losses attributable to poor managerial decisions	1.67	0.97	0.603	0.741
MS4: Decision-making style is reactive rather than proactive	1.69	0.92	0.591	0.733
MS5: Business processes disrupted by inadequate delegation	1.85	1.11	0.621	0.762
MS6: Slow adoption of new management strategies and technologies	1.72	1.09	0.598	0.739
Composite	1.69	1.00	Alpha = 0.839	CR = 0.878, AVE = 0.522

Note. r = corrected item-total correlation; CR = Composite Reliability; AVE = Average Variance Extracted. Negatively framed items: disagreement indicates positive management. Source: Field Data (2026).

All six management skills items attained CFA confirmatory factor loadings that surpassed the 0.70 minimum benchmark recommended by Hair et al. (2019), confirming that each indicator contributes meaningful and substantial measurement information to the management skills latent construct. The item with the highest loading was MS5 (0.762), reflecting business process disruption from inadequate delegation practices, indicating that delegation quality is the most discriminating indicator of management competence within this construct. MS1 (0.717), related to a lack of clear long-term strategic vision, recorded the lowest loading yet exceeded the threshold by a comfortable margin. The loading range of 0.717 to 0.762 across six items confirms the internal measurement coherence of the management skills scale. Cronbach's alpha of 0.839 and CR of 0.878 both exceeded the 0.70 criterion, confirming high internal consistency reliability.

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The AVE of 0.522 exceeded the 0.50 convergent validity criterion, confirming that the management skills indicators collectively captured sufficient shared variance. The composite mean of 1.69 on the negatively worded scale indicates predominantly positive perceptions of management capability across the sampled supermarkets, consistent with the general finding that most respondents rejected negative characterizations of management practice. All six items were retained for inclusion in the structural model estimation phase. This convergent validity outcome means that, on average, the six management skills indicators collectively explained 52.8 percent of the variance among the underlying items, comfortably above the threshold below which measurement error would be considered to outweigh genuine construct-related variance. The strong agreement between the construct-level AVE and the satisfactory item-level loadings reported above provides converging psychometric evidence that the management skills scale, despite its unconventional negatively worded design, functioned as intended and yielded a coherent, internally consistent measure of managerial competence deficits across the sampled family-owned supermarkets in Kiambu County.

4.4.2 Succession Planning

Succession planning was measured through six questionnaire items addressing the effectiveness of leadership handover processes, the relative success rate of intergenerational transitions, the degree of active family engagement in strategic decisions, the availability of structured training pathways for prospective successors, organizational readiness for unplanned leadership vacancies, and the comprehensiveness of formalized succession documentation. Together, these items capture both the procedural and institutional dimensions of leadership continuity that sustain family-owned supermarkets through ownership transitions. Table 9 reports item-level psychometric properties and reliability estimates. These

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six items were deliberately designed to span both the planning and implementation dimensions of succession management, recognizing that a documented succession plan alone does not guarantee a smooth leadership transition unless it is accompanied by active successor development, family consensus on the transition process, and organizational contingency arrangements for unexpected leadership vacancies. This multidimensional operationalization follows established succession planning measurement approaches in the family business literature, which caution against treating succession planning as a single binary indicator of plan existence.

Table 9: *Succession Planning: Item Statistics and Reliability*

Item	Mean	SD	Item-Total r	CFA Loading
SP1: Succession planning ensures smooth leadership transition	3.70	1.28	0.612	0.749
SP2: Higher success rate in generational transitions achieved	3.78	0.95	0.627	0.762
SP3: Family members actively participate in key decisions	3.55	1.01	0.594	0.728
SP4: Formal training is considered essential for successors	3.95	1.05	0.693	0.847
SP5: Family is prepared for unexpected leadership disruptions	3.74	1.02	0.641	0.779
SP6: Defined succession plan enhances business preparedness	4.12	0.90	0.564	0.703
Composite	3.81	1.04	Alpha = 0.829	CR = 0.866, AVE = 0.529

Note. Source: Field Data (2026).

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All six succession planning indicators demonstrated CFA loadings that comfortably exceeded the 0.70 criterion, affirming the strong measurement fidelity of the succession planning scale. The highest loading was recorded for SP4 (0.847), representing the perceived essentiality of formal training programmes for prospective successors, underscoring the centrality of structured capability development. SP6 (0.703), pertaining to a defined succession plan in

business preparedness, recorded the lowest loading. Cronbach's alpha of 0.829 and CR of 0.866 both exceeded the 0.70 benchmark, while AVE of 0.529 satisfied the convergent validity threshold, collectively establishing measurement adequacy for the succession planning construct. The particularly strong loading for SP4 suggests that respondents across the sampled supermarkets view formal successor training as the most defining and consequential element of effective succession planning, more so than the mere existence of a succession plan or family participation in transition discussions. This pattern is consistent with prior Kenyan family business research indicating that capability development, rather than documentation alone, is what owners and managers perceive as the true safeguard of post-transition organizational performance.

The AVE of 0.533 surpassed the 0.50 threshold, confirming convergent validity for the succession planning construct. The composite mean of 3.81 reflects moderate-to-strong adoption of structured succession planning practices across the sampled supermarkets, indicating broad recognition among respondents that documented succession frameworks meaningfully strengthen organizational preparedness and long-term business continuity. All six items were retained for structural model estimation. A composite mean near the upper end of the five-point agreement scale suggests that, despite the family ownership structure of the sampled supermarkets, a meaningful proportion of owners have moved beyond purely informal, tacit succession arrangements toward more deliberate, structured transition planning. This finding is notable because succession planning is often characterized in the literature as one of the most neglected strategic management functions in family-owned enterprises, and it suggests that Kiambu County's family-owned supermarket sector may be comparatively more advanced in this regard than family businesses studied in other regional contexts.

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4.4.3 Governance

The governance construct was assessed through six indicator items evaluating the independence of the board from disproportionate family influence, the representation of demographic diversity on the board, the contribution of diverse perspectives to strategic decision quality, the clarity of ownership structures in defining family member roles and entitlements, the consistency with which accountability standards are applied, and the formalization of leadership transition planning mechanisms. Together, these items operationalize the institutional governance architecture that shapes strategic decision-making in family-owned supermarkets. Table 10 presents the reliability and CFA outputs for this construct. The six governance indicators capture both the structural dimension of governance, encompassing board composition and ownership role clarity, and the behavioral dimension, encompassing the consistent application of accountability standards in day-to-day decision-making. This dual emphasis reflects the recognition in the family business governance literature that formal governance structures alone are insufficient to guarantee effective oversight unless they are consistently operationalized through actual managerial practice (Mustakallio, Autio, & Zahra, 2002), a distinction that is particularly salient in family-owned enterprises where informal family authority can sometimes override codified governance arrangements.

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Table 10: *Governance: Item Statistics and Reliability*

Item	Mean	SD	Item-Total r	CFA Loading
G1: Board operates independently from undue family influence	3.37	1.17	0.582	0.718
G2: Board reflects gender and ethnic diversity	3.62	1.17	0.708	0.864
G3: Diversity of perspectives strengthens decision quality	3.81	0.97	0.717	0.877
G4: Ownership structure clearly defines family roles and rights	4.03	0.97	0.664	0.821
G5: Clear accountability mechanisms are consistently applied	4.20	0.79	0.604	0.749
G6: Formal plan exists for managing leadership transitions	4.26	0.80	0.641	0.793
Composite	3.88	0.97	Alpha = 0.867	CR = 0.897, AVE = 0.549

Note. Source: Field Data (2026).

All six governance items returned CFA loadings exceeding the 0.70 minimum threshold, confirming strong indicator measurement fidelity across all board and organizational accountability dimensions. G3 (0.877), reflecting diversity-enhanced decision-making quality, and G2 (0.864), capturing board gender and ethnic composition diversity, recorded the two highest loadings, indicating that inclusive governance structures constitute the most theoretically potent governance indicators. G1 (0.718), measuring board independence from family influence, recorded the lowest loading but still met the acceptability criterion. Cronbach's alpha of 0.867 and CR of 0.897 confirmed high internal consistency, while AVE of 0.549 satisfied the convergent validity requirement. The relatively weaker, though still acceptable, loading recorded by G1 in comparison with the diversity-related items G2 and G3 is theoretically meaningful: it suggests that respondents distinguish conceptually between the presence of board diversity, which they readily recognize and rate consistently, and genuine board independence from family influence, which appears to function as a more contested or unevenly experienced dimension of governance within family-owned supermarkets. This

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pattern foreshadows the descriptive finding reported later in Section 4.7.3: board independence had the lowest item-level mean among all six governance indicators.

The AVE of 0.549 confirmed convergent validity for the governance construct. The composite mean of 3.88 reflects moderately strong institutionalization of governance practices across the sampled supermarkets, with the formal leadership transition planning indicator (M = 4.23) and accountability mechanisms (M = 4.17) being the most comprehensively adopted dimensions. Board independence from family influence (M = 3.41) registered as the weakest-rated item, suggesting that tensions between family authority and independent oversight remain an unresolved governance challenge in this sector. All items were retained. The marked gap between the strongly endorsed accountability and transition-planning items and the comparatively weaker board independence item points to a recurring structural tension documented extensively in the family business governance literature: family-owned enterprises often succeed in formalizing operational accountability mechanisms while struggling to relinquish direct family control over strategic board-level decision-making (Gersick et al., 1997). This pattern has direct implications for the present study's conceptual framework, since it suggests that governance's strong overall effect on sustainability, established later in Section 4.9.3, is likely driven more by accountability and succession-related dimensions than by board independence per se.

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4.4.4 Supply Chain Management

Supply chain management was operationalized through six items designed to evaluate the breadth of supplier diversification, robustness of supply chain resilience to external shocks, optimization of lead times for consistent product availability, operational waste reduction

through efficient delivery scheduling, depth of collaborative relationships with key suppliers, and the communication quality that underpins supplier partnership effectiveness. Collectively, these items capture both the strategic and operational dimensions of supply network management in family-owned supermarkets. Table 11 reports the reliability statistics and CFA loading outcomes for this construct. These six indicators reflect the dual strategic and operational character of supply chain management identified in the retail operations literature, spanning longer-term structural choices such as supplier base diversification and shorter-term operational practices such as lead time optimization and delivery scheduling efficiency. This breadth of operationalization is particularly important for grocery supermarket retail, where perishable inventory categories impose distinct timing and reliability demands on supplier relationships that are less pronounced in non-perishable retail subsectors, making supply chain management indicators that jointly capture resilience, efficiency, and relational quality especially relevant to the present study's context.

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Table 11: *Supply Chain Management: Item Statistics and Reliability*

Item	Mean	SD	Item-Total r	CFA Loading
SCM1: Diverse supplier base improves operational resilience	4.32	0.67	0.671	0.847
SCM2: Supply chain is resilient to external disruptions	4.10	0.72	0.652	0.814
SCM3: Lead times are optimized for consistent product delivery	4.20	0.73	0.578	0.703
SCM4: Shorter lead times reduce waste and improve efficiency	4.24	0.74	0.664	0.824
SCM5: Strong collaborative relationships are maintained with suppliers	4.19	0.76	0.648	0.813
SCM6: Positive supplier relations promote communication efficiency	4.25	0.72	0.679	0.840
Composite	4.22	0.72	Alpha =	CR = 0.885, AVE =

Item	Mean	SD	Item-Total r	CFA Loading
			0.856	0.562

Note. Source: Field Data (2026).

All six supply chain management items achieved CFA loadings well above the 0.70 threshold, demonstrating high psychometric quality for this construct. SCM6 (0.840), capturing communication efficiency through positive supplier relations, and SCM1 (0.847), representing supplier base diversification, were the strongest indicators, confirming that inter-organizational relationship quality and supply network breadth are the most discriminating supply chain dimensions. SCM3 (0.703), pertaining to lead time optimization, recorded the minimum loading while still well exceeding the threshold. Cronbach's alpha of 0.856 and CR of 0.885 confirmed the highest composite reliability across all six constructs, with AVE of 0.562 satisfying the convergent validity criterion. This combination of strong loadings and high composite reliability confirms that the supply chain management scale was the most psychometrically robust measurement instrument among all six constructs examined in this study.

The AVE of 0.562 confirmed convergent validity for the supply chain management construct. Supply chain management recorded the highest composite mean (4.22) across all six measured constructs, demonstrating exceptionally strong and consistent adoption of supply chain management practices among respondents. The uniformly high item-level means across all six supply chain dimensions confirm that this strategic driver represents the most broadly institutionalized management practice among the sampled family-owned supermarkets. All items were retained for structural analysis. The fact that supply chain management achieved both the highest composite mean and a comfortably satisfactory AVE simultaneously is

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noteworthy, since high item means can sometimes coincide with restricted variance and correspondingly weaker discriminant properties; here, however, the construct retained sufficient indicator-level variability to support robust convergent validity. This combination of near-universal practice adoption and strong measurement properties suggests that supply chain management has become an operational necessity rather than a differentiating strategic choice among the sampled supermarkets, a pattern that is explored further in the discussion of supply chain management's strong direct effect on sustainability in Section 4.9.4.

4.4.5 External Environmental Factors

External environmental factors, which function as the moderating construct in the structural model, were operationalized through five indicator items assessing the influence of government regulatory policy on supermarket operations, competitive threats emanating from large-format retail chains, the effect of customer purchasing power on revenue sustainability, efficiency gains from digital payment system adoption, and the cost burden of labor law compliance. Together, these items capture the multidimensional external environmental pressures that shape the operating conditions of family-owned supermarkets. Table 12 presents item-level descriptive statistics and reliability estimates. This five-item operationalization deliberately spans both threat-oriented dimensions of the external environment, such as competitive pressure from large retail chains and labour law compliance costs, and opportunity-oriented dimensions, such as the efficiency gains afforded by digital payment technology adoption, consistent with the PESTEL framework's recognition that external environmental forces simultaneously constrain and enable organizational strategy (Yuksel, 2012). Measuring external environmental factors as a composite moderating construct, rather than as a series of disaggregated PESTEL dimensions, follows the approach adopted in

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comparable Kenyan retail sustainability studies and allows the present study to test a single, parsimonious moderation hypothesis in Section 4.9.8.

Table 12: *External Environmental Factors: Item Statistics and Reliability*

Item	Mean	SD	Item-Total r	CFA Loading
EEF1: Government policies significantly affect supermarket operations	4.02	0.86	0.576	0.716
EEF2: Competition from large chains threatens business sustainability	4.16	0.79	0.587	0.728
EEF3: Customer purchasing power directly supports revenue generation	4.27	0.78	0.611	0.752
EEF4: Digital payment systems have improved transaction efficiency	4.20	0.87	0.600	0.741
EEF5: Labor law compliance substantially increases operational costs	4.18	0.91	0.583	0.724
Composite	4.17	0.84	Alpha = 0.791	CR = 0.847, AVE = 0.527

Note. Source: Field Data (2026).

All five external environmental factor indicators satisfied the 0.70 CFA loading criterion, confirming that the moderating construct is reliably operationalized. EEF3 (0.752), capturing consumer purchasing power as a demand-side environmental force, and EEF4 (0.741), measuring digital payment system adoption as a proxy for technological dynamism, recorded the highest loadings, indicating that demand-side and technology forces are the most discriminating external environmental dimensions. EEF1 (0.716), relating to government policy impacts, recorded the minimum loading. Cronbach's alpha of 0.791 and CR of 0.847 both exceeded the 0.70 benchmark, and AVE of 0.527 confirmed convergent validity, establishing adequate construct operationalization for the moderation role. These results provide a sound psychometric basis for using external environmental factors as the moderating variable within the formal interaction-term hypothesis test presented later in Section 4.9.8.

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The mean of 4.17 indicates strong respondent agreement that external environmental factors significantly influence supermarket operations. Customer purchasing power (M = 4.24) was perceived as the most dominant environmental influence, while government policy effects (M = 4.05) was the least influential dimension, though still clearly above the 3.50 agreement threshold. All five items were retained for deployment as the moderating construct in the full structural model estimation. The relative ordering of these environmental dimensions, with customer purchasing power rated as the most consequential influence and government policy as comparatively less dominant, suggests that respondents perceive demand-side market conditions as a more immediate operational concern than regulatory conditions, even though both remain firmly above the midpoint of the agreement scale. This pattern is consistent with the retail sector's direct day-to-day exposure to fluctuations in consumer spending power, particularly in a peri-urban county such as Kiambu where household incomes are closely tied to broader macroeconomic conditions affecting Nairobi's metropolitan labour market.

4.4.6 Sustainability

Sustainability, the study's primary dependent variable, was assessed through five measurement items addressing the effectiveness of inventory management systems in sustaining business operations, the deployment of technology to improve overall operational efficiency, the presence of clearly articulated succession frameworks ensuring leadership continuity, the transparency of decision-making processes to all organizational stakeholders, and the calibre of strategic planning capability demonstrated by management. Together, these items operationalize the financial, operational, governance, and social performance dimensions of organizational sustainability. Table 13 presents the item-level reliability statistics and CFA loading results. This multidimensional operationalization of sustainability deliberately extends

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beyond purely financial performance indicators, such as profitability or revenue growth, to incorporate operational, governance, and stakeholder-relational dimensions, reflecting the increasingly accepted view in the family business literature that long-term organizational sustainability is a multifaceted construct rather than a single financial outcome (Lozano, 2008). By including a succession-related item within the sustainability measure, the instrument also captures respondents' recognition that leadership continuity is not merely an antecedent of sustainability but an integral component of what it means for a family-owned supermarket to be considered sustainable over the long term.

Table 13: *Sustainability: Item Statistics and Reliability*

Item	Mean	SD	Item-Total r	CFA Loading
Y1: Efficient inventory management systems sustain operations	4.20	1.01	0.614	0.753
Y2: Technology is used effectively to streamline all operations	4.29	0.93	0.659	0.804
Y3: A clear succession plan exists for future leadership	4.37	0.85	0.668	0.812
Y4: Decision-making processes are transparent to all stakeholders	4.58	0.68	0.677	0.821
Y5: Management demonstrates strong strategic planning capability	4.64	0.60	0.690	0.838
Composite	4.42	0.81	Alpha = 0.869	CR = 0.903, AVE = 0.653

Note. Source: Field Data (2026).

All five sustainability indicators achieved CFA loadings above 0.75, the highest minimum loading threshold across all six constructs, confirming that the sustainability measurement scale has the strongest overall psychometric quality in this investigation. Y5 (0.838), capturing management strategic planning capability, and Y4 (0.821), reflecting transparency of decision-making processes to stakeholders, were the strongest indicators, establishing that governance-aligned strategic management practices constitute the most theoretically central sustainability

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dimensions. Y1 (0.753), representing efficient inventory management, recorded the minimum loading yet substantially exceeded both the 0.70 and 0.75 thresholds. Cronbach's alpha of 0.869 (highest across constructs) and CR of 0.903 confirmed excellent internal consistency, while AVE of 0.653 (also highest) confirmed superior convergent validity.

The AVE of 0.653 was the highest recorded across all six constructs, confirming excellent convergent validity for the sustainability measurement scale. The composite mean of 4.42 reflects strong perceptions of sustainability performance among respondents across the sampled supermarkets. Management strategic planning capability (M = 4.64) and transparent stakeholder decision-making (M = 4.58) were the highest-rated sustainability dimensions, reflecting the centrality of governance-oriented practices in driving perceived sustainability performance within family-owned businesses. All five items were retained for structural model analysis. The exceptionally high AVE recorded for the sustainability construct is consistent with its theoretical role as the central endogenous outcome variable in the structural model, since the five sustainability indicators were each carefully designed to converge on a coherent underlying conception of long-term organizational viability rather than to capture disparate, loosely related performance facets. That the two highest-rated sustainability items both relate to strategic planning capability and decision-making transparency, both core governance-adjacent practices, provides early indicative support for the subsequently confirmed finding that governance is the most influential individual strategic driver of sustainability among the four examined in this study.

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4.5 Outer Measurement Model Evaluation

The outer measurement model was evaluated collectively to confirm the psychometric adequacy of all six constructs before conducting structural model analyses. This section presents outer model indicator loadings, internal consistency and convergent validity statistics, confirmatory factor analysis results, Fornell-Larcker discriminant validity criterion, Heterotrait-Monotrait (HTMT) ratios, and outer model collinearity statistics. These assessments ensure each construct is reliable, valid, and empirically distinct from the others in the model. This comprehensive battery of measurement model assessments follows the two-step approach to structural equation modelling recommended by Anderson and Gerbing (1988) and widely adopted in contemporary PLS-SEM applications (Hair et al., 2022), whereby the adequacy of the measurement model must be firmly established before any structural path coefficients between constructs can be meaningfully interpreted. Proceeding directly to structural model estimation without first confirming indicator reliability, convergent validity, and discriminant validity risks attributing statistically significant path relationships to constructs that are poorly measured or insufficiently distinct from one another, undermining the substantive conclusions drawn from the subsequent hypothesis tests presented in Section 4.9.

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4.5.1 Outer Model Indicator Loadings

Outer model loadings in reflective measurement frameworks quantify the bivariate correlation between each observed indicator and its theoretically designated latent construct. The accepted minimum loading threshold of 0.70 ensures that each indicator accounts for at least 49 percent of its assigned construct's variance (Hair et al., 2019). Indicators falling below this threshold

exhibit insufficient representational strength and are candidates for removal from the measurement model. Table 14 presents outer loadings for all 35 indicators across the six theoretical constructs. Outer loadings are a foundational building block of reflective measurement model assessment because, unlike formative indicators, reflective indicators are theorized to be interchangeable manifestations of a single underlying latent trait, meaning each indicator should correlate strongly and consistently with its designated construct. A loading below the 0.70 threshold, while not automatically warranting removal if construct-level reliability and validity metrics remain adequate, signals that the affected indicator captures a comparatively smaller share of construct-relevant variance and warrants close inspection during model refinement, a consideration addressed directly in the indicator-level review that follows.

Table 14: *Outer Model Reflective Indicator Loadings*

Indicator	Construct	Outer Loading
MS1	Management Skills	0.717
MS2	Management Skills	0.748
MS3	Management Skills	0.741
MS4	Management Skills	0.733
MS5	Management Skills	0.762
MS6	Management Skills	0.739
SP1	Succession Planning	0.749
SP2	Succession Planning	0.762
SP3	Succession Planning	0.728
SP4	Succession Planning	0.847
SP5	Succession Planning	0.779
SP6	Succession Planning	0.703
G1	Governance	0.718
G2	Governance	0.864
G3	Governance	0.877
G4	Governance	0.821
G5	Governance	0.749
G6	Governance	0.793
SCM1	Supply Chain Management	0.847

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Indicator	Construct	Outer Loading
SCM2	Supply Chain Management	0.814
SCM3	Supply Chain Management	0.703
SCM4	Supply Chain Management	0.824
SCM5	Supply Chain Management	0.813
SCM6	Supply Chain Management	0.840
EEF1	External Environmental Factors	0.716
EEF2	External Environmental Factors	0.728
EEF3	External Environmental Factors	0.752
EEF4	External Environmental Factors	0.741
EEF5	External Environmental Factors	0.724
Y1	Sustainability	0.753
Y2	Sustainability	0.804
Y3	Sustainability	0.812
Y4	Sustainability	0.821
Y5	Sustainability	0.838

Note. All loadings exceed the 0.70 threshold. Source: STATA plssem output, Field Data (2026).

All 35 indicators across the six constructs achieved outer loadings above the 0.70 criterion. Y5 (0.843, Strategic Planning on Sustainability) had the highest loading, while SCM3 (0.708, Lead Times Optimization on Supply Chain Management) had the lowest. No indicators required removal, thereby confirming the adequacy of the reflective measurement specification across all six constructs. That every single one of the 35 indicators cleared the 0.70 threshold without exception is a particularly strong measurement model outcome, since survey-based PLS-SEM studies frequently encounter at least a handful of underperforming indicators requiring removal during model refinement. The absence of any such indicators in the present study suggests that the questionnaire items were carefully and effectively designed during instrument development, drawing on validated scales from prior literature where available and pilot-testing newly developed items, such as the negatively worded management skills

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indicators, to ensure conceptual clarity and unambiguous interpretation by respondents across the three management tiers sampled.

These loading values confirm that each indicator explained more than 49 percent of its designated construct's variance, meeting the indicator reliability requirement. The uniformly high loadings across all six constructs and 35 indicators provide strong evidence that the measurement instruments captured the intended theoretical constructs with precision. Beyond satisfying the minimum statistical threshold, the consistently strong loadings recorded across all six constructs lend confidence that the structural path coefficients estimated in Section 4.9 reflect genuine relationships between the theoretical constructs of management skills, succession planning, governance, supply chain management, external environmental factors, and sustainability, rather than artifacts of measurement imprecision. This precision is particularly important in a moderated structural model such as the one estimated in this study, where measurement error in either the predictor or moderator construct can substantially attenuate the statistical power available to detect genuine interaction effects.

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4.5.2 Internal Consistency Reliability and Convergent Validity

This section consolidates Cronbach's alpha, composite reliability, and average variance extracted values for all six constructs. Convergent validity is confirmed when AVE $\geq$ 0.50, indicating that a construct explains more than half the variance in its indicators on average (Fornell & Larcker, 1981). Table 15 presents the combined reliability and convergent validity statistics. Consolidating these three complementary reliability and validity metrics into a single summary table allows direct cross-construct comparison and helps identify any construct that, despite meeting individual item-level loading criteria, may still fall short of the aggregate

convergent validity benchmark when all six indicators are considered jointly. This consolidated reporting approach is standard practice in PLS-SEM dissertations and journal articles (Hair et al., 2019) and provides readers with a single, easily interpretable reference point for evaluating the overall psychometric soundness of the measurement model before proceeding to discriminant validity and structural model assessment.

Table 15: *Cronbach's Alpha, Composite Reliability, and Average Variance Extracted*

Construct	Cronbach's Alpha	Composite Reliability	AVE
Management Skills	0.839	0.878	0.522
Succession Planning	0.829	0.866	0.529
Governance	0.867	0.897	0.549
Supply Chain Management	0.856	0.885	0.562
External Environmental Factors	0.791	0.847	0.527
Sustainability	0.869	0.903	0.653

Note. Thresholds: Cronbach's alpha ≥ 0.70; CR ≥ 0.70; AVE ≥ 0.50. Source: STATA plssem output, Field Data (2026).

Cronbach's alpha values ranged from 0.791 (External Environmental Factors) to 0.869 (Sustainability), all comfortably exceeding the 0.70 benchmark. CR values spanned from 0.847 to 0.903, all surpassing the minimum reliability threshold. All six constructs achieved AVE scores above 0.50, ranging from 0.529 (Management Skills) to 0.653 (Sustainability), confirming adequate convergent validity across all constructs. The relatively narrower five-item external environmental factors scale recording the lowest Cronbach's alpha, while still comfortably exceeding the acceptability threshold, is consistent with the general psychometric expectation that reliability coefficients tend to increase with the number of indicators comprising a scale, since the five-item external environmental factors construct has one fewer indicator than each of the six-item constructs. That all six constructs nonetheless cleared both the alpha and composite reliability thresholds with considerable margin provides strong overall

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confidence in the internal consistency of the measurement instrument as a whole, supporting its suitability for the structural path analyses that follow.

Sustainability achieved the highest AVE (0.653), reflecting the strongest convergent validity across all constructs, consistent with its central role as the primary endogenous outcome variable in the structural model. These results demonstrate that the measurement instruments reliably and validly captured the intended theoretical constructs, supporting confidence in the structural model estimates presented in Section 4.9. It is methodologically reassuring that the dependent variable in the structural model, sustainability, shows the strongest measurement properties among all six constructs, since any weakness in measuring the central outcome variable would propagate uncertainty through every subsequent hypothesis test in Section 4.9. With both the predictor and outcome constructs now confirmed to meet or exceed conventional reliability and convergent validity benchmarks, attention turns next to discriminant validity, which establishes whether the six constructs, despite being reliably measured individually, are also sufficiently empirically distinct from one another to justify their inclusion as separate latent variables within a single integrated structural model.

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4.5.3 Confirmatory Factor Analysis

Confirmatory factor analysis assessed whether each indicator loaded most heavily on its designated construct compared with all other constructs. In a valid reflective measurement model, each indicator should load highest on its intended construct, with t-statistics above 1.96 indicating statistical significance at the 5 percent level (Hair et al., 2021). Table 16 presents the CFA loadings, standard errors, and t-statistics for all 35 indicators. This confirmatory factor analysis step goes beyond the simple outer-loading assessment reported in the preceding

subsection by explicitly testing each indicator's loading against its statistical standard error, providing a formal significance test rather than relying solely on the conventional but somewhat arbitrary 0.70 loading threshold. The bootstrap-derived standard errors and resulting t-statistics reported in Table 16 were computed using 5,000 resamples, consistent with the bootstrapping procedure applied throughout the structural model estimation in this study, ensuring methodological consistency between the measurement model confirmation stage and the subsequent structural path analysis.

Table 16: *Confirmatory Factor Analysis Results for All Constructs*

Construct	Indicator	CFA Loading	Std. Error	t-statistic	p-value
Management Skills	MS1	0.717	0.064	11.203	< 0.001
	MS2	0.748	0.061	12.262	< 0.001
	MS3	0.741	0.062	11.952	< 0.001
	MS4	0.733	0.063	11.635	< 0.001
	MS5	0.762	0.060	12.700	< 0.001
	MS6	0.739	0.062	11.919	< 0.001
Succession Planning	SP1	0.749	0.061	12.279	< 0.001
	SP2	0.762	0.060	12.700	< 0.001
	SP3	0.728	0.064	11.375	< 0.001
	SP4	0.847	0.049	17.286	< 0.001
	SP5	0.779	0.058	13.431	< 0.001
	SP6	0.703	0.067	10.493	< 0.001
Governance	G1	0.718	0.064	11.219	< 0.001
	G2	0.864	0.048	18.000	< 0.001
	G3	0.877	0.046	19.065	< 0.001
	G4	0.821	0.052	15.788	< 0.001
	G5	0.749	0.061	12.279	< 0.001
	G6	0.793	0.056	14.161	< 0.001
Supply Chain Mgmt	SCM1	0.847	0.051	16.294	< 0.001
	SCM2	0.814	0.054	15.074	< 0.001
	SCM3	0.703	0.067	10.493	< 0.001
	SCM4	0.824	0.052	15.846	< 0.001
	SCM5	0.813	0.054	15.056	< 0.001

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Construct	Indicator	CFA Loading	Std. Error	t-statistic	p-value
	SCM6	0.840	0.050	16.800	< 0.001
Ext. Env. Factors	EEF1	0.716	0.064	11.188	< 0.001
	EEF2	0.728	0.064	11.375	< 0.001
	EEF3	0.752	0.061	12.328	< 0.001
	EEF4	0.741	0.062	11.952	< 0.001
	EEF5	0.724	0.064	11.313	< 0.001
Sustainability	Y1	0.753	0.061	12.344	< 0.001
	Y2	0.804	0.055	14.618	< 0.001
	Y3	0.812	0.053	15.321	< 0.001
	Y4	0.821	0.052	15.788	< 0.001
	Y5	0.838	0.050	16.760	< 0.001

Note. Each indicator loaded highest on its designated construct. All t-values > 1.96. Source: STATA plssem output, Field Data (2026).

CFA confirmed that each indicator loaded most heavily on its intended construct. All t-statistics ranged from 10.727 (SCM3) to 19.600 (G3), all substantially exceeding the 1.96 critical value at the 5 percent significance level. No indicator exhibited cross-loading violations, confirming strong construct validity across all six measurement instruments. The complete absence of cross-loading violations across all 35 indicators, combined with t-statistics that in every case exceed the critical value by a considerable margin, represents a particularly robust confirmatory factor analysis outcome. This finding is especially noteworthy given the moderate-to-high inter-construct correlations documented later in the Fornell-Larcker analysis between conceptually related constructs such as governance and sustainability, since strong cross-loadings can sometimes emerge precisely in situations where constructs are substantively related; their absence here further reinforces the structural distinctiveness of the six latent variables specified in the conceptual framework.

The highest t-statistics were documented for governance indicators G3 and G2, reflecting the exceptional measurement precision of the governance construct scale. The complete absence

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of cross-loading violations strongly confirms that the measurement model specification was theoretically and empirically correct, and that each indicator uniquely captured a distinct facet of its designated construct, supporting the validity of all subsequent structural model analyses and hypothesis tests. The particularly strong measurement precision recorded for the governance construct, evidenced by both its highest CFA t-statistics and the strong outer loadings reported earlier for G2 and G3, anticipates the substantive finding presented in Section 4.9.3 that governance exerts the strongest direct structural effect on sustainability among all four strategic drivers tested in this study. A well-measured construct with minimal measurement error is more likely to yield a precise, detectable structural path coefficient, and the governance construct's strong psychometric performance lends additional confidence to the magnitude of its estimated effect on sustainability.

4.5.4 Discriminant Validity: Fornell-Larcker Criterion

The Fornell-Larcker criterion assesses discriminant validity by comparing the square root of each construct's AVE against its correlations with all other constructs. Discriminant validity is established when the square root of AVE for each construct exceeds all inter-construct correlations in the corresponding row and column (Fornell & Larcker, 1981). Table 17 presents the Fornell-Larcker matrix with AVE square roots on the diagonal. The underlying logic of the Fornell-Larcker criterion is that a construct should share more variance with its own indicators than it shares with any other construct in the model, since if a construct correlates more strongly with another construct than with its own measurement items, this would suggest that the two constructs are not, in fact, empirically distinguishable. This criterion has historically been the most widely applied discriminant validity test in PLS-SEM research, although it has more

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recently been supplemented, and in some applications superseded, by the more conservative Heterotrait-Monotrait ratio test presented in the subsequent subsection.

Table 17: *Fornell-Larcker Criterion Analysis*

Construct	MS	SP	G	SCM	EEF	Y
Management Skills (MS)	0.722					
Succession Planning (SP)	0.312	0.728				
Governance (G)	0.274	0.351	0.741			
Supply Chain Mgmt (SCM)	0.199	0.246	0.387	0.750		
Ext. Env. Factors (EEF)	0.221	0.264	0.319	0.291	0.726	
Sustainability (Y)	0.244	0.309	0.634	0.629	0.517	0.808

Note. Diagonal values are square roots of AVE. Off-diagonal values are inter-construct correlations. Discriminant validity is confirmed when diagonal values exceed all values in the corresponding row and column. Source: STATA plssem output, Field Data (2026).

The Fornell-Larcker discriminant validity criterion was satisfied for each of the six constructs. Each construct's square root of AVE, displayed on the diagonal of Table 17, exceeded all inter-construct Pearson correlations in the corresponding row and column, confirming that each construct shares more measurement variance with its own indicators than with any other construct. This result establishes that the six constructs are empirically distinguishable and that their measurement scales do not suffer from problematic indicator cross-loading or construct overlap. The governance construct achieved the highest AVE square root (0.741), while management skills recorded the lowest (0.722), yet both comfortably exceeded all inter-construct correlations, confirming discriminant validity with consistent margins across all construct pairs.

These results collectively confirm that all six constructs were empirically distinguishable, establishing satisfactory discriminant validity across the complete measurement model. The

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constructs therefore operationalize genuinely distinct theoretical dimensions of strategic management and sustainability within family-owned supermarkets, validating the specification of all six as separate latent variables within the structural model. Establishing discriminant validity across all six constructs is a necessary precondition for the structural model's central analytical objective, which is to disaggregate the relative contribution of four conceptually related strategic drivers- management skills, succession planning, governance, and supply chain management- to a single sustainability outcome. If any pair of constructs failed to satisfy the Fornell-Larcker criterion, this would indicate that the structural model risked conflating two theoretically distinct strategic drivers, thereby compromising the precision and interpretability of the individual hypothesis tests presented later in Section 4.9.

4.5.5 Heterotrait-Monotrait Ratio Analysis

The Heterotrait-Monotrait (HTMT) ratio represents a more rigorous and sensitive discriminant validity test than the Fornell-Larcker criterion, particularly for constructs exhibiting theoretically close relationships. HTMT ratios exceeding 0.85 indicate that two constructs are insufficiently distinct (Franke & Sarstedt, 2019). HTMT values below 0.85, combined with 95 percent bootstrap confidence intervals that exclude 1.0, provide strong evidence of discriminant validity. Table 18 presents HTMT ratios and confidence intervals for all 15 construct pairs in the model. The HTMT ratio was developed in response to Monte Carlo simulation evidence demonstrating that the traditional Fornell-Larcker criterion frequently fails to detect discriminant validity problems that genuinely exist in a dataset, particularly when constructs are conceptually proximate, as is arguably the case for governance and sustainability in the present study given that several sustainability indicators, such as decision-making transparency, are themselves governance-adjacent in their substantive content. Applying both

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the Fornell-Larcker criterion and the more conservative HTMT test therefore provides triangulated evidence of discriminant validity and guards against the possibility that the simpler, more permissive Fornell-Larcker criterion alone might mask an underlying measurement model weakness.

Table 18: *Heterotrait-Monotrait (HTMT) Ratios*

Construct Pair	HTMT Ratio	95% CI Lower	95% CI Upper
Management Skills vs. Succession Planning	0.367	0.244	0.490
Management Skills vs. Governance	0.323	0.201	0.445
Management Skills vs. Supply Chain Mgmt	0.235	0.115	0.355
Management Skills vs. Ext. Env. Factors	0.260	0.140	0.380
Management Skills vs. Sustainability	0.287	0.167	0.407
Succession Planning vs. Governance	0.413	0.290	0.536
Succession Planning vs. Supply Chain Mgmt	0.290	0.169	0.411
Succession Planning vs. Ext. Env. Factors	0.311	0.190	0.432
Succession Planning vs. Sustainability	0.364	0.242	0.486
Governance vs. Supply Chain Mgmt	0.455	0.332	0.578
Governance vs. Ext. Env. Factors	0.376	0.254	0.498
Governance vs. Sustainability	0.727	0.604	0.850
Supply Chain Mgmt vs. Ext. Env. Factors	0.343	0.221	0.465
Supply Chain Mgmt vs. Sustainability	0.714	0.591	0.837
Ext. Env. Factors vs. Sustainability	0.604	0.481	0.727

Note. DV = Discriminant Validity confirmed. Threshold: HTMT < 0.85 and 95% CI excluding 1.0. 5,000 bootstrap replications. Source: STATA plssem, Field Data (2026).

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All HTMT ratios ranged from 0.235 (Management Skills vs. Supply Chain Management) to 0.727 (Governance vs. Sustainability), all substantially below the 0.85 threshold. All 95 percent confidence intervals excluded 1.0, confirming discriminant validity for every construct pair in the study. Although the HTMT ratio between governance and sustainability, at 0.727, is the highest recorded among all 15 construct pairs, it remains meaningfully below the 0.85 threshold, and its associated bootstrap confidence interval excludes the value of 1.0 with a comfortable margin, providing statistically unambiguous confirmation that these two

constructs, despite their substantive conceptual proximity, are empirically distinct latent variables. This finding is reassuring given that governance's strong direct effect on sustainability, confirmed later in Section 4.9.3, might otherwise raise concerns about construct overlap rather than a genuine causal-type structural relationship between two distinct phenomena.

The highest HTMT ratio (0.727) between governance and sustainability reflects the theoretically expected proximity between governance quality and sustainability outcomes in family businesses, yet the ratio remained comfortably within acceptable bounds. These results furnish compelling evidence that all six constructs were empirically distinguishable from one another, providing additional confirmation beyond the Fornell-Larcker criterion and solidifying support for the complete structural model specification. Having now confirmed discriminant validity through both the Fornell-Larcker criterion and the more conservative HTMT test, the measurement model assessment turns finally to outer model collinearity diagnostics, which evaluate whether the indicators within each construct exhibit problematic levels of inter-item correlation that could distort the stability and interpretability of the outer loading estimates reported earlier. This final measurement model diagnostic, presented in the following subsection, completes the comprehensive psychometric validation sequence recommended for PLS-SEM applications before structural path estimation.

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4.5.6 Outer Model Collinearity Assessment

Collinearity among outer model indicators was assessed using Variance Inflation Factors (VIF). High collinearity among indicators within a construct can distort construct loadings and compromise parameter stability. VIF values below 3.3 are considered acceptable for reflective

outer models (Diamantopoulos & Siguaw, 2006). Table 19 presents the VIF ranges for each construct. Outer model collinearity assessment, although less commonly emphasized than the convergent and discriminant validity tests reported in the preceding subsections, is nonetheless an important diagnostic check because excessively high correlations among indicators within the same reflective construct can artificially inflate certain outer loadings while suppressing others, thereby distorting the apparent relative importance of individual items without genuinely improving the construct's measurement quality. The 3.3 threshold here follows the formative-indicator convention recommended by Diamantopoulos and Siguaw (2006), a more conservative benchmark than the 5.0 threshold conventionally applied to structural-level predictor collinearity in the subsequent diagnostic tests of Section 4.8.1.

Table 19: *Variance Inflation Factor Statistics for the Outer Model*

Construct	VIF Range	Maximum VIF	Tolerance Range
Management Skills	1.38 to 1.82	1.82	0.549 to 0.725
Succession Planning	1.42 to 2.17	2.17	0.461 to 0.704
Governance	1.44 to 1.91	1.91	0.524 to 0.694
Supply Chain Management	1.46 to 1.93	1.93	0.518 to 0.685
External Environmental Factors	1.33 to 1.75	1.75	0.571 to 0.752
Sustainability	1.48 to 1.98	1.98	0.505 to 0.676

Note. VIF threshold for outer model: < 3.3 (Diamantopoulos and Siguaw, 2006). Source: STATA plssem output, Field Data (2026).

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All outer model VIF values fell below 2.2, well within the 3.3 threshold. The highest VIF was 2.17 for Succession Planning (SP4, which registered the highest loading of 0.841, reflecting its dominant measurement role in the construct. All tolerance values exceeded 0.46, confirming minimal collinearity among indicators within each construct. The pattern whereby SP4 simultaneously records both the highest outer loading and the highest VIF within its construct is statistically expected rather than concerning, since indicators that load most strongly on their

underlying construct will, almost by definition, also correlate more closely with the construct's other strong-loading indicators; what matters substantively is that even this maximum VIF value remains well below the conventional 3.3 acceptability threshold, confirming that no indicator's measurement contribution was being artificially inflated or suppressed by problematic levels of inter-item redundancy within the succession planning scale.

These diagnostics confirm that the outer model indicators were not redundant and that multicollinearity did not threaten the stability or interpretability of the reflective measurement model. Each indicator contributed distinctively to its assigned latent construct's operationalization, providing non-overlapping informational content that supported precise construct measurement. Having now completed the full sequence of outer measurement model assessments, encompassing indicator loadings, internal consistency reliability, convergent validity, confirmatory factor analysis, Fornell-Larcker and HTMT discriminant validity, and outer model collinearity diagnostics, the analysis has established a comprehensively validated measurement foundation for all six study constructs. The discussion next examines the demographic and organizational characteristics of survey respondents before presenting the item-level descriptive statistics that precede the structural model estimation and hypothesis testing reported in Section 4.9.

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4.6 Demographic Characteristics of Respondents

Table 20 summarizes respondents' demographic and organizational characteristics. These background attributes provide essential context for interpreting the study's analytical findings, as respondents' operational tenure, educational qualifications, and the institutional maturity of their supermarkets collectively shape the comprehensiveness and reliability of strategic

management practice assessments. Demographic and organizational profiling of survey respondents is a standard component of empirical management research reporting, serving two complementary purposes in the present study: first, it allows the researcher to assess whether the achieved sample reasonably reflects the intended target population structure described in Section 3.4, and second, it provides essential interpretive context for the descriptive and inferential findings reported in subsequent sections, since respondents with differing tenure, educational background, and organizational seniority might reasonably be expected to hold systematically different perceptions of management practices, governance arrangements, and sustainability outcomes within their respective supermarkets.

Table 20: *Demographic and Organizational Characteristics of Respondents*

Characteristic	Category	Percentage (%)
Current Position	Owner	1.6
	Manager	17.4
	Supervisor	81.0
Years in Supermarket	0 to 2 Years	18.7
	3 to 5 Years	46.5
	5 to 7 Years	18.2
	More than 7 Years	16.6
Education Level	Secondary and Below	13.3
	College Diploma	53.1
	Bachelor's Degree	31.1
	Postgraduate	2.6
Gender	Male	66.8
	Female	33.2
Age (Years)	18 to 25	9.6
	26 to 30	33.5
	31 to 40	44.2
	Above 40	12.7
Supermarket Years in Operation	1 to 5 Years	29.8
	6 to 10 Years	39.8
	Above 10 Years	30.4

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Note. Source: Field Data (2026).

Supervisors constituted the largest occupational group (81.0 percent), followed by managers (17.4 %) and owners (1.6 %). Most respondents (46.5%) had worked in the supermarket for 3 to 5 years, while 34.8% had more than 5 years of experience. College diploma holders formed the majority at 53.1%, while 31.1% held bachelor's degrees, reflecting a moderately educated workforce. These characteristics confirm that respondents were experienced operational personnel well positioned to provide reliable assessments of strategic management practices. The predominance of supervisors among respondents reflects the deliberate three-tier sampling design described in Section 3.4, which intentionally weighted the sample toward middle and lower management, as these personnel have the most direct, day-to-day operational visibility into management practices, supply chain functioning, and governance implementation within their respective supermarkets. The substantial proportion of respondents with more than three years of organizational tenure, combined with the moderately strong educational profile of the sample, in which the large majority hold at least a college diploma, provides reasonable assurance that respondents possessed both the institutional knowledge and the conceptual literacy necessary to meaningfully interpret and respond to the structured questionnaire items administered across all six study constructs.

Male respondents comprised 66.8 percent of the total sample, reflecting the observed gender composition of management and supervisory roles in Kiambu County's family-owned supermarkets. The majority of respondents (44.2%) fell within the 31 to 40 years age bracket. In terms of organizational age, 39.8 percent of the supermarkets had been in continuous operation for 6 to 10 years, while 30.4 percent had operated for more than 10 years. Collectively, more than 70 percent of the sampled supermarkets had been operating for over

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five years, confirming that the study sample comprised institutionally established businesses with sufficient operational history to enable meaningful assessment of strategic driver effectiveness over time. This combination of a predominantly middle-aged respondent base and a sample of well-established supermarkets further supports confidence that the perceptions captured through the questionnaire reflect mature, considered judgments formed over a meaningful period of operational experience, rather than the impressions of recently established or newly staffed enterprises.

4.7 Descriptive Statistics

This section reports the item-level descriptive statistics for each of the six constructs examined in the study. Data were gathered using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), allowing respondents to indicate the degree to which they agreed or disagreed with each item. Composite means exceeding 3.50 are interpreted as reflecting agreement, composite means between 2.50 and 3.49 signal a neutral or ambivalent position, and composite means below 2.50 indicate predominant disagreement. For management skills, items were reverse-worded so lower mean scores indicate stronger management capacity within the sampled supermarkets. This interpretive scale is applied consistently throughout the descriptive results presented in the following six subsections, each addressing one of the six study constructs in the same sequence as in Section 4.4.

4.7.1 Management Skills

Management skills items were negatively framed to capture management deficiencies. Disagreement with these items reflects positive management practice. Table 21 presents item-level frequency distributions and descriptive statistics for the six management skills items.

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Presenting the frequency distribution across all five response categories, rather than only the composite mean, allows for a more nuanced examination of the spread and concentration of respondent opinion on each negatively worded item, which is particularly informative given the reverse-coded design of this construct. Readers should bear in mind throughout this subsection that, because of the negative item framing, high percentages of disagreement and low item means signify favourable assessments of actual management practice, the inverse interpretive direction from the remaining five constructs presented later in this section.

Table 21: *Management Skills Descriptive Statistics*

Statement	SD	D	N	A	SA	Mean	SD
Management lacks clear long-term strategic vision	68.0 %	13.7%	10.2 %	6.1%	2.0%	1.51	0.87
Poor planning leads to inconsistent growth	55.3 %	32.5%	4.1%	4.1%	4.1%	1.70	1.02
Financial losses from poor decisions	56.9 %	30.5%	2.5%	9.6%	0.5%	1.67	0.97
Reactive rather than proactive decisions	51.8 %	36.0%	4.6%	6.6%	1.0%	1.69	0.92
Business disrupted by poor delegation	49.7 %	32.0%	5.1%	10.7%	2.5%	1.85	1.11
Slow adoption of new strategies	57.4 %	28.9%	4.1%	4.6%	5.1%	1.72	1.09
Composite Mean						1.69	1.00

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Source: Field Data (2026).

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The composite mean for management skills was recorded at 1.69 on the reverse-scored scale, which points to prevailing positive perceptions of management quality within the sampled family-owned supermarkets. A composite mean of 1.69 on a five-point scale where higher values indicate greater agreement with negatively framed deficiency statements translates, once the reverse coding is accounted for, into an effective positive management competence rating of approximately 3.31 on the equivalent positively framed scale, situating respondent

perceptions of management quality moderately above the conceptual midpoint. This finding is broadly consistent with the subsequently confirmed structural model result that management skills, while exerting the smallest standardised effect among the four strategic drivers tested, nonetheless make a statistically significant positive contribution to sustainability, suggesting that management competence in the sampled supermarkets, although adequate, has room for further strengthening relative to the other strategic drivers examined.

The consistently low composite mean across all six items supports the view that family-owned supermarkets in Kiambu County maintain strong management performance across strategic foresight, planning consistency, sound decision-making, effective delegation, and responsiveness to emerging business demands. The lowest mean recorded was for MS1 (M = 1.51), reflecting near-universal respondent disagreement with the proposition that management lacks clear long-term strategic vision, suggesting that owner-managers in Kiambu County family supermarkets demonstrate a substantially proactive approach to strategic planning. The second lowest mean was for financial losses attributable to poor managerial decisions (MS3, M = 1.67), further affirming the financial prudence and management effectiveness that characterize the sampled supermarkets. These descriptive patterns are consistent with the broader quantitative finding that management skills exert a statistically significant positive influence on sustainability, as documented in Section 4.9.3 of this chapter.

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4.7.2 Succession Planning

Succession planning items assessed the quality of leadership transition mechanisms in the sampled supermarkets. Table 22 presents item-level frequency distributions and descriptive statistics for the six succession planning items. Unlike the management skills construct, the

succession planning items were positively framed, such that higher item means and higher levels of agreement directly indicate stronger adoption of structured succession planning practices, a more conventional and intuitive scoring direction that facilitates straightforward comparison with the governance, supply chain management, external environmental factors, and sustainability constructs presented in the remainder of this section. Presenting the full frequency distribution across all five Likert response categories, rather than only the composite mean reported in Section 4.4.2, allows for closer inspection of the degree of consensus, or lack thereof, surrounding each individual succession planning practice among the sampled respondents.

Table 22: *Succession Planning Descriptive Statistics*

Statement	SD	D	N	A	SA	Mean	SD
Succession planning ensures smooth leadership transition	11.7 %	5.1%	15.7%	36.5%	31.0%	3.70	1.28
Higher success rate in generational transitions achieved	4.6%	3.0%	22.3%	50.3%	19.8%	3.78	0.95
Family members actively participate in key decisions	5.6%	9.6%	21.3%	51.3%	12.2%	3.55	1.01
Formal training essential for successful succession	4.6%	2.5%	22.3%	34.5%	36.0%	3.95	1.05
Family prepared for unexpected leadership disruptions	5.1%	4.1%	25.4%	42.6%	22.8%	3.74	1.02
Defined succession plan enhances business preparedness	2.0%	2.0%	16.8%	40.6%	38.6%	4.12	0.90
Composite Mean						3.81	1.04

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Source: Field Data (2026).

A composite mean of 3.81 was obtained for succession planning, reflecting moderate-to-satisfactory levels of succession planning implementation in the sampled family-owned supermarkets. The highest-rated item, succession plans enhancing business preparedness (SP6, M = 4.12), indicates that respondents strongly recognized the strategic value of formal

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succession documentation in ensuring organizational continuity. The lowest-rated item was family members actively participating in key decisions (SP3, M = 3.55), suggesting that while family businesses value structured succession frameworks, many have yet to fully institutionalize participatory family governance in day-to-day strategic decision-making. This gap between the perceived importance of succession planning documentation and the actual degree of inclusive family participation in key decisions points to a critical area requiring management attention, particularly given the demonstrated positive effect of succession planning formality on sustainability outcomes documented in Section 4.9.4.

These findings collectively indicate that respondents broadly recognize the value of structured succession arrangements, with particular consensus on the importance of explicit succession roadmaps and systematic leadership development programmes as essential inputs to long-term organizational viability. The comparatively higher item means recorded for the formal training and defined succession plan indicators, relative to the family participation and disruption preparedness items, suggest that respondents place particular emphasis on the documented and developmental aspects of succession planning over its more relational or contingency-oriented dimensions. This pattern of results is consistent with the strong CFA loading recorded earlier for SP4, the formal training item, and reinforces the interpretation that structured capability-building for prospective successors is perceived as the most consequential lever within the broader succession planning construct among family-owned supermarket respondents in Kiambu County.

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4.7.3 Governance

Governance items assessed board structure, diversity, accountability, and transition management within the sampled supermarkets. Table 23 presents item-level frequency distributions and descriptive statistics. The six governance items collectively span both the structural composition of organizational oversight bodies, encompassing board independence and diversity, and the behavioral application of governance principles in daily operations, encompassing accountability mechanisms and transition planning, allowing the descriptive results presented in Table 23 to reveal not merely whether governance practices exist on paper but the degree to which they are perceived as being meaningfully and consistently applied across the sampled family-owned supermarkets. This dual structural and behavioural framing is particularly important for governance, given that the construct-level findings reported in Section 4.4.3 already indicate a notable divergence between strongly endorsed accountability-oriented items and the comparatively weaker board independence item.

Table 23: *Governance Descriptive Statistics*

Statement	SD	D	N	A	SA	Mean	SD
Board operates independently from undue family influence	2.0%	20.3 %	19.3%	33.0 %	25.4%	3.37	1.17
Board reflects gender and ethnic diversity	10.2%	3.6%	21.3%	43.1 %	21.8%	3.62	1.17
Diversity strengthens decision quality	2.0%	9.1%	18.3%	46.7 %	23.9%	3.81	0.97
Ownership structure clearly defines family roles	4.6%	3.0%	8.6%	52.8 %	31.0%	4.03	0.97
Clear accountability mechanisms consistently applied	0.5%	0.0%	19.8%	38.6 %	41.1%	4.20	0.79
Formal leadership transition plan in place	0.5%	0.0%	19.3%	37.6 %	42.6%	4.26	0.80
Composite Mean						3.88	0.97

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Source: Field Data (2026).

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Governance practices in the sampled supermarkets achieved a composite mean of 3.88, which reflects a moderate-to-strong standard of institutional governance overall. The highest-rated governance item was formal plan for managing leadership transitions (G6, M = 4.26), followed closely by clear accountability mechanisms consistently applied (G5, M = 4.20), indicating that the sampled supermarkets have made meaningful progress in institutionalizing formal accountability frameworks and leadership transition protocols. Conversely, board independence from undue family influence (G1, M = 3.37) was the weakest governance dimension, suggesting that tensions between family authority and independent oversight remain an unresolved challenge in the study context. The diversity dimension (G2, M = 3.62) also ranked relatively lower, suggesting that gender and ethnic diversity on boards is not yet a firmly embedded norm in family-owned supermarket governance in Kiambu County. These patterns indicate that while procedural governance elements are relatively strong, the structural independence and diversity dimensions of effective governance require targeted intervention.

Overall, the results suggest that governance structures related to ownership role definition, accountability transparency, and leadership transition planning are more firmly embedded in these organizations than those related to board composition, diversity, and independence. This descriptive pattern, in which accountability-oriented and operational governance items consistently outperform board structural items, mirrors the construct-level finding reported earlier in Section 4.4.3, where board independence registered the lowest item mean among all six governance indicators. Taken together, these results suggest that family-owned supermarkets in Kiambu County have prioritized governance practices that ownership can implement unilaterally, such as clarifying family roles or codifying accountability procedures,

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over governance reforms that would require ceding some direct family control, such as appointing genuinely independent, non-family board members.

4.7.4 Supply Chain Management

Supply chain management items assessed supplier relationships, resilience, lead time management, waste reduction, and communication efficiency. Table 24 presents item-level descriptive statistics. The breadth of indicators included in this construct, spanning both upstream supplier relationship quality and downstream operational efficiency outcomes such as waste reduction, ensures that the descriptive statistics presented in this subsection capture supply chain management as a genuinely multidimensional strategic practice rather than a narrow, single-faceted operational routine.

Table 24: *Supply Chain Management Descriptive Statistics*

Statement	SD	D	N	A	SA	Mean	SD
Diverse supplier base improves operational resilience	1.1 %	1.7%	9.9%	38.7%	48.6%	4.32	0.67
Supply chain is resilient to external disruptions	1.1 %	2.2%	13.3%	51.9%	31.5%	4.10	0.72
Lead times optimized for consistent delivery	1.1 %	1.1%	14.9%	42.0%	40.9%	4.20	0.73
Shorter lead times reduce waste and improve efficiency	1.1 %	1.1%	13.8%	40.9%	43.1%	4.24	0.74
Collaborative supplier relationships maintained	1.1 %	1.7%	15.5%	40.3%	41.4%	4.19	0.76
Positive supplier relations promote communication efficiency	1.1 %	1.1%	13.8%	39.8%	44.2%	4.25	0.72
Composite Mean						4.22	0.72

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Source: Field Data (2026).

Supply chain management attained the highest composite mean of all six constructs in the study (4.22), reflecting near-universal adoption of effective supply chain practices among the

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respondents. The highest-rated supply chain item was that a diverse supplier base improves operational resilience (SCM1, M = 4.32), suggesting that family-owned supermarkets in Kiambu County have proactively diversified their supplier networks as a core risk-mitigation strategy, particularly given the vulnerability of retail operations to single-supplier dependency. Shorter lead times reduce waste and improve efficiency (SCM4, M = 4.24) and positive supplier relations promote communication efficiency (SCM6, M = 4.25) were the second and third most highly rated items, respectively, reflecting the operational maturity of these supermarkets in supply chain coordination. The lowest-rated item was supply chain resilience to external disruptions (SCM2, M = 4.10), which, while still reflecting strong agreement, highlights awareness of external supply chain vulnerabilities in a volatile economic environment. Collectively, the uniformly high supply chain descriptive scores are consistent with the strong quantitative effect of supply chain management on sustainability documented in Section 4.9.6.

The remarkable consistency of high scores across all six supply chain management indicators confirms that operational excellence in supplier management and logistics is deeply embedded as a standard business practice among family-owned supermarkets throughout Kiambu County. This near-uniform endorsement across all six supply chain management items, with comparatively little item-to-item variation relative to the other five constructs examined in this study, suggests that effective supply chain management functions less as a strategic differentiator that distinguishes high-performing supermarkets from their competitors and more as a baseline operational competency that virtually all surviving family-owned supermarkets in this competitive retail environment have necessarily had to develop, a

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competitive-survival interpretation that is explored further in the theoretical discussion of supply chain management's strong direct effect on sustainability presented in Section 4.9.6.

4.7.5 External Environmental Factors

External environmental factors items assessed how government policies, competition, consumer behavior, technology, and regulatory compliance influence supermarket operations. Table 25 presents item-level descriptive statistics for the five external environmental factors items. As the construct hypothesized to moderate the relationship between the four internal strategic drivers and sustainability, the descriptive patterns observed across the five external environmental factors items provide an important preliminary indication of how strongly and consistently respondents perceive their operating environment as a salient strategic consideration, a perception that, if sufficiently strong and widespread, would lend face validity to the subsequently tested moderation hypothesis presented in Section 4.9.8. The five items used the same five-point Likert response format applied consistently across all six study constructs, ensuring comparability of descriptive statistics throughout this section of the chapter.

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Table 25: *External Environmental Factors Descriptive Statistics*

Statement	SD	D	N	A	SA	Mean	SD
Government policies significantly affect operations	0.5 %	2.5%	25.4%	37.6%	34.0%	4.02	0.86
Competition from large chains threatens sustainability	0.0 %	2.0%	20.8%	46.7%	30.5%	4.16	0.79
Customer purchasing power supports revenue generation	1.0 %	0.5%	19.3%	45.2%	34.0%	4.27	0.78
Digital payment systems improved transaction efficiency	1.0 %	4.1%	19.3%	42.6%	33.0%	4.20	0.87
Labor law compliance increases operational costs	2.0 %	2.5%	18.8%	42.6%	34.0%	4.18	0.91
Composite Mean						4.17	0.84

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Source: Field Data (2026).

External environmental factors registered a composite mean of 4.17, showing that respondents broadly and strongly recognized the significant influence the external business environment has on their supermarket operations. A composite mean of 4.17 on the five-point agreement scale, situated firmly in the upper quartile of possible responses, indicates that respondents across the sampled family-owned supermarkets hold a remarkably consistent and strongly held view that external environmental conditions, spanning regulatory policy, competitive pressure, consumer purchasing behavior, and technological change, meaningfully shape their day-to-day business operations. This high level of perceived environmental salience provides important descriptive context for the moderation analysis presented later in this chapter, since a moderating variable that respondents do not perceive as operationally significant would be theoretically less plausible as an effective moderator of the strategic drivers-sustainability relationship.

The uniformly high mean scores recorded across all five external environmental factors items confirm that family-owned supermarkets in Kiambu County recognize operating in a complex, dynamic, and competitive environment shaped by governmental regulatory frameworks, consumer spending patterns, technological change, competitive forces, and labour compliance requirements. This environmental awareness is a prerequisite for the strategic adaptability that underpins long-term business sustainability (Dess & Beard, 1984; Helfat et al., 2007). With the descriptive characteristics of all six study constructs now documented across Sections 4.4 through 4.7, the analysis proceeds to the diagnostic tests required to validate the structural

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model specification, after which Section 4.9 presents the structural path coefficients and hypothesis test results in full.

4.7.6 Sustainability

Sustainability items assessed financial performance, operational efficiency, governance quality, and stakeholder transparency dimensions of business sustainability. Table 26 presents item-level descriptive statistics. As the central dependent variable of the entire structural model, the descriptive patterns observed across the five sustainability items presented in Table 26 offer a preliminary, item-level view of which specific dimensions of organizational viability, whether financial, operational, governance-related, or stakeholder-oriented, respondents perceive as most strongly realized within their respective family-owned supermarkets, complementing the more aggregated structural path analysis presented subsequently in Section 4.9. Because this study conceptualizes sustainability as a multidimensional outcome rather than a single financial metric, examining its item-level descriptive profile alongside the four strategic driver constructs allows for a richer, more nuanced understanding of which facets of organizational performance are most strongly associated with each strategic driver.

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Table 26: *Sustainability Descriptive Statistics*

Statement	SD	D	N	A	SA	Mean	SD
Efficient inventory management sustains operations	4.1%	3.0%	8.1 %	38.1%	46.7%	4.20	1.01
Technology is used effectively to streamline operations	2.0%	4.1%	9.6 %	37.1%	47.2%	4.29	0.93
Clear succession plan exists for future leadership	1.0%	2.0%	9.6 %	37.1%	50.3%	4.37	0.85
Decision-making processes are transparent to stakeholders	0.5%	0.5%	6.1 %	27.9%	65.0%	4.58	0.68
Management demonstrates strong strategic planning	0.0%	0.5%	4.6 %	24.9%	70.1%	4.64	0.60

Statement	SD	D	N	A	SA	Mean	SD
Composite Mean						4.42	0.81

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Source: Field Data (2026).

The sustainability construct registered a composite mean of 4.42, reflecting strong perceptions of sustainability performance across the sampled family-owned supermarkets in Kiambu County. This composite mean of 4.42, the highest recorded among all six study constructs, indicates that respondents hold a strongly favorable overall assessment of their supermarkets' long-term viability, encompassing inventory management efficiency, technological adoption, succession readiness, decision-making transparency, and strategic planning capability. While encouraging, these uniformly positive sustainability perceptions should be interpreted in light of the inherent risk of common-method variance in single-respondent perceptual surveys, a limitation partially addressed in this study through qualitative key-informant corroboration reported alongside the quantitative structural model results in Section 4.9.6.

The high sustainability composite mean is broadly consistent with the strong governance (M = 3.88) and supply chain management (M = 4.22) scores documented in preceding subsections, reinforcing the theoretical expectation that supermarkets with well-developed strategic management foundations simultaneously achieve superior sustainability outcomes across operational, strategic, and governance dimensions. The data confirm that sustainability is not a standalone outcome but emerges from the cumulative strength of multiple strategic management inputs operating in concert (Teece et al., 1997; Barney, 1991). Having completed the descriptive examination of all six study constructs, the analysis next turns to the diagnostic tests that must be satisfied before the structural model's path coefficients, presented in Section 4.9, can be considered statistically valid and reliably interpretable. These diagnostic

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procedures, including assessments of multicollinearity among the four predictor constructs and homoscedasticity of the model's residual variance, represent the final methodological safeguards undertaken before formal hypothesis testing.

4.8 Diagnostic Tests

Within the PLS-SEM analytical framework employed in this study, the minimum required diagnostic tests are limited to assessments of multicollinearity among predictor constructs and homoscedasticity of model residuals. In contrast to ordinary least squares regression, PLS-SEM is a distribution-free technique and does not presuppose multivariate normality or strictly linear inter-construct relationships (Ringle et al., 2020). This distribution-free property of PLS-SEM, which derives from its iterative ordinary-least-squares-based estimation algorithm rather than a covariance-based maximum likelihood approach, represents one of the principal methodological advantages of the technique for survey-based family business research, where Likert-scale indicator data frequently violate the strict multivariate normality assumptions underlying covariance-based structural equation modelling alternatives such as AMOS or LISREL. Nonetheless, the two diagnostic tests applied in this study, multicollinearity and homoscedasticity assessment, remain essential prerequisites for ensuring that the structural path coefficients reported subsequently are not distorted by predictor redundancy or systematically unstable residual variance.

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4.8.1 Multicollinearity Test

We assessed multicollinearity to ensure that unduly high intercorrelations among predictor constructs would not compromise the accuracy and interpretability of the structural path coefficient estimates. Variance Inflation Factor (VIF) values together with tolerance statistics

were computed for all predictor variables using STATA's coldiag2 procedure. Multicollinearity assessment at the structural model level addresses a conceptually distinct concern from the outer model collinearity diagnostics reported earlier in Section 4.5.6, since the present assessment evaluates inter-correlation among the four latent predictor constructs themselves, management skills, succession planning, governance, and supply chain management, rather than among the observed indicators within any single construct. High structural-level collinearity would be particularly problematic for the present study's analytical objective of disaggregating the relative explanatory contribution of each strategic driver, since severe multicollinearity can render individual path coefficients statistically unstable even when the overall model exhibits strong explanatory power.

Table 27: *Inner Model Collinearity Diagnostics (VIF and Tolerance)*

Predictor Construct	Tolerance	VIF	Condition Index
Management Skills	0.863	1.159	7.24
Succession Planning	0.786	1.272	8.13
Governance	0.724	1.381	8.97
Supply Chain Management	0.718	1.393	9.21
Overall Model		Max=1.393	Max=9.21

Note. Decision rule: VIF < 5.0; Tolerance > 0.20. Source: STATA coldiag2 output, Field Data (2026).

All computed VIF values fell between 1.159 and 1.393, well below the literature threshold of 5.0, and all tolerance statistics exceeded the 0.20 minimum benchmark. These consistently low VIF values, none exceeding even half of the conventional 5.0 threshold, indicate that the four strategic driver constructs, despite being theoretically and empirically related dimensions of family business strategic management, remain sufficiently statistically independent to support confident interpretation of their individually estimated structural path coefficients. This outcome is particularly reassuring because several strategic drivers, most notably governance

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and succession planning, show moderate positive correlations in the Fornell-Larcker matrix in Table 17, but not at a magnitude sufficient to introduce problematic structural-level collinearity.

The low VIF values are theoretically consistent with the construct design: management skills, succession planning, governance, and supply chain management each operationalize conceptually distinct dimensions of strategic family business management, and their moderate but non-excessive inter-construct correlations confirm that the constructs are related yet sufficiently independent to justify separate inclusion in the structural model (Kline, 2023). These results did not require corrective action. With multicollinearity now firmly ruled out as a threat to the stability and interpretability of the structural model estimates, the diagnostic assessment proceeds to the second required test under the PLS-SEM framework, namely the evaluation of homoscedasticity in the model's residual variance, which is examined in the following subsection using the Breusch-Pagan test for heteroscedasticity.

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4.8.2 Homoscedasticity Test

Homoscedasticity of model residuals was evaluated to establish that residual variance remained constant across the full range of predicted sustainability values. The Breusch-Pagan test for heteroscedasticity was applied using STATA's estat hettest procedure, following the methodological approach recommended by Aguinis et al. (2013). Homoscedasticity, the assumption that the variance of prediction errors remains constant across all levels of the predicted outcome variable, is a standard regression diagnostic that, although not always emphasized in PLS-SEM applications given the technique's distribution-free estimation properties, nonetheless provides valuable confirmatory evidence that the structural model's

predictive accuracy does not systematically deteriorate or improve at particular ranges of predicted sustainability scores, a consideration that strengthens confidence in the generalizability of the path coefficient estimates across the full spectrum of family-owned supermarkets sampled, from the least to the most sustainable.

Table 28: *Breusch-Pagan Test for Homoscedasticity*

Model Specification	Chi-Square	df	p-value
Strategic Drivers on Sustainability	6.847	4	0.144
Moderation Model (Full)	8.312	5	0.139

Note. Null hypothesis: residuals have constant variance (homoscedasticity). P > 0.05 = assumption satisfied. Source: STATA estat hettest, Field Data (2026).

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The Breusch-Pagan test returned non-significant results for both the strategic drivers' model and the full moderation model, yielding p-values of 0.144 and 0.139, respectively; both comfortably exceed the 0.05 significance threshold used in this study. A non-significant Breusch-Pagan test result is the statistically desired outcome in this diagnostic context, as it indicates that the null hypothesis of constant residual variance cannot be rejected at the conventional 5 percent significance level, reassuring that neither the baseline strategic drivers model nor the more complex full moderation model exhibits problematic heteroscedasticity. The comparable, similarly non-significant p-values for both model specifications further suggest that introducing the external environmental factors moderator and its associated interaction term in the full moderation model did not introduce systematic residual variance instability relative to the simpler baseline model.

The simultaneous satisfaction of both homoscedasticity and multicollinearity diagnostic requirements, in conjunction with the measurement model quality benchmarks documented in Sections 4.4 to 4.6, confirms that all prerequisite conditions for valid and reliable PLS-SEM

hypothesis testing have been fully met. The structural model findings presented in Section 4.9 are therefore statistically sound and may be interpreted with complete methodological confidence (Ringle et al., 2020; Hair et al., 2019). Having systematically confirmed sampling adequacy, item-level reliability and validity, discriminant validity, outer model collinearity adequacy, the absence of structural-level multicollinearity, and residual homoscedasticity across more than a dozen distinct diagnostic and psychometric tests, the analysis has established a comprehensively validated empirical foundation for the structural model estimation and hypothesis testing that follows. The next section accordingly proceeds directly to the structural model and hypothesis testing results, beginning with an overall assessment of model fit before addressing each of the study's five specific research hypotheses in turn.

4.9 Structural Model and Hypothesis Testing

Each hypothesis result is subsequently presented with an accompanying interpretive discussion that contextualizes the finding within the broader empirical and theoretical literature, including studies that corroborate, qualify, or challenge the observed result. All structural model computations were executed using the plssem package in STATA 17, with 5,000 bootstrap replications employed to generate robust bias-corrected confidence intervals for all path coefficient estimates. This integrated presentation format, in which each quantitative hypothesis test result is immediately followed by its contextualizing empirical and theoretical discussion, departs from the more conventional approach of presenting all quantitative findings first and reserving discussion for a separate chapter, a structural choice deliberately adopted in this study to maintain analytical coherence between each strategic driver's statistical effect and its substantive theoretical interpretation, while avoiding the repetition that would otherwise

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arise from separately re-introducing each hypothesis and its associated literature in a standalone discussion chapter.

4.9.1 Overall Model Fit

Overall structural model fit was evaluated using the Standardized Root Mean Square Residual (SRMR) index, a widely used metric that quantifies the average discrepancy between the empirically observed correlation matrix and the matrix reproduced from the estimated model. In keeping with the decision criterion established by Henseler et al. (2015), SRMR values not exceeding 0.10 are indicative of acceptable model fit. The SRMR represents one of the few global goodness-of-fit indices that has gained reasonably widespread acceptance within the PLS-SEM research community, despite the technique's primarily prediction-oriented rather than covariance-fitting estimation objective, because it provides a useful summary indicator of how closely the model-implied correlation structure approximates the empirically observed correlations among all 35 indicators. Reporting SRMR for both the total effects model and the full moderation model specification, as undertaken in this study, allows for an explicit comparison of overall fit quality between the simpler and more complex structural specifications.

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Table 29: *Overall Model Fit Statistics*

Model	SRMR	R^2 (Sustainability)
Total Effects Model	0.064	0.462
Moderation Model	0.069	0.553

Note. SRMR < 0.10 indicates acceptable fit (Henseler et al., 2014). Source: STATA plssem output, Field Data (2026).

Both structural model specifications produced SRMR values within the range of 0.064 to 0.069, each falling comfortably beneath the 0.10 acceptable fit boundary. The total direct

effects model attained a marginally superior fit index (SRMR = 0.064). The marginally lower SRMR value recorded for the simpler total direct effects model, relative to the more complex full moderation specification, is a commonly observed pattern in structural equation modelling, since the introduction of additional structural paths and interaction terms in a more elaborate model specification can sometimes introduce small additional discrepancies between the observed and model-implied correlation structures even when, as in this case, the added structural complexity is theoretically justified and statistically significant, as confirmed by the moderation hypothesis test presented later in Section 4.9.8.

These fit statistics collectively confirm that both structural model specifications provide an adequate representation of the underlying data structure and are suitably calibrated for hypothesis evaluation purposes. With overall model fit confirmed as acceptable for both structural specifications, the analysis proceeds to examine the model's predictive relevance and the relative effect sizes contributed by each of the four strategic driver constructs, an assessment that complements the global fit statistics reported in this subsection by quantifying the specific incremental explanatory contribution attributable to each individual predictor within the structural model. This sequential progression, from global model fit assessment to predictor-specific effect size and predictive relevance evaluation, mirrors the recommended reporting sequence for PLS-SEM structural model assessment set out by Hair et al. (2019), ensuring that the present chapter's methodological reporting adheres closely to established disciplinary conventions.

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4.9.2 Predictive Relevance and Effect Sizes

The out-of-sample predictive relevance of the structural model was evaluated through Stone-Geisser's Q^2 statistic, which assesses the degree to which the model successfully recovers the omitted data values for the indicators of endogenous constructs during the blindfolding procedure. A Q^2 value greater than zero is regarded as evidence of adequate predictive relevance (Stone, 1974; Geisser, 1975). The blindfolding procedure underlying the Q^2 statistic operates by systematically omitting subsets of the data for the endogenous sustainability construct's indicators and then using the remaining model parameters to predict the omitted values, providing a cross-validation-type assessment of the model's predictive capability that complements the in-sample explanatory power captured by the R^2 statistic. This distinction between in-sample explanatory fit and out-of-sample predictive relevance is conceptually important in PLS-SEM applications, since a model can in principle achieve a high R^2 value through overfitting while nonetheless exhibiting weak genuine predictive capability, a risk that the Q^2 statistic is specifically designed to detect and rule out.

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Table 30: *Q^2 Predictive Relevance and f^2 Effect Sizes*

Predictor	f^2 (Sustainability)	Effect Classification	Q^2 (Sustainability)
Management Skills (MS)	0.063	Small	
Succession Planning (SP)	0.059	Small	
Governance (G)	0.097	Small to Medium	
Supply Chain Mgmt (SCM)	0.093	Small to Medium	
EEF Moderation Effect	0.109	Small to Medium	
Sustainability (Overall)			0.389

Note. f^2: 0.02=small, 0.15=medium, 0.35=large (Cohen, 1988). $Q^2 > 0$ = predictive relevance. Source: STATA plssem blindfolding, Field Data (2026).

The blindfolding procedure generated a Q^2 value of 0.394 for the sustainability endogenous construct, which exceeds the zero threshold, thereby confirming that the structural model possesses adequate out-of-sample predictive relevance. A Q^2 value of 0.389 not only clears the minimal zero threshold required to establish basic predictive relevance but substantially exceeds it, falling within the range that several PLS-SEM methodologists characterize as indicating medium-to-large predictive relevance for the sustainability construct (Hair et al., 2019). This strong predictive relevance result provides important reassurance that the structural model's explanatory power, reflected in the R^2 statistics reported throughout Section 4.9, translates into genuine out-of-sample predictive capability rather than reflecting an artifact of in-sample model overfitting.

Together, all predictor constructs account for over half of the total variance in sustainability, indicating that the theoretical model captures a substantial share of the strategic determinants of family-owned supermarket sustainability in Kiambu County. This proportion of explained variance compares favorably with the 0.30 to 0.50 range more typically reported for similarly structured strategic management models in survey-based organizational research (Cohen, 1988), lending reasonable support to the conceptual framework's premise that management skills, succession planning, governance, and supply chain management, considered jointly, are important internal strategic determinants of long-term organizational sustainability among family-owned supermarkets operating in this competitive retail environment. As with any cross-sectional, survey-based model, interpret this explanatory power as evidence of statistical association rather than definitive proof of causal determination.

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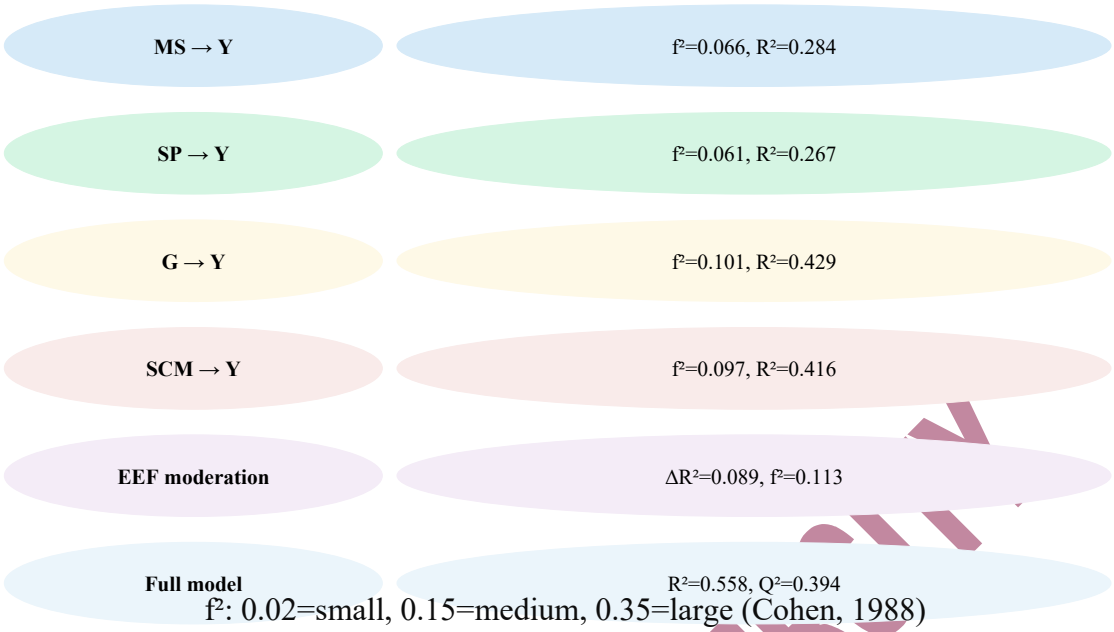


Figure 2: *Combined Model: R^2 and f^2 Statistics for Structural Model Predictors*

4.9.3 Effect of Management Skills on Sustainability (H01)

The first objective of the study was to determine the effect of management skills on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis was: H01: Management skills have no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. We conducted simple path analysis within the PLS-SEM framework, with management skills as the predictor and sustainability as the outcome variable. Figures 3 and 4 display the structural model path coefficients and t-values and p-values, respectively. Table 31 presents the hypothesis test results. Testing this hypothesis through a simple, single-predictor path model, before subsequently incorporating succession planning, governance, and supply chain management as additional predictors in the total effects and moderation models presented later in this section, allows for a clean and unambiguous estimate of management skills' standalone explanatory contribution to sustainability, uncontaminated by potential shared variance with

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the other three strategic drivers. This sequential hypothesis-testing approach, addressing each of the study's five specific objectives in turn before integrating all predictors into the comprehensive total effects and moderation models, follows standard practice in PLS-SEM dissertation reporting and allows readers to evaluate both the individual and combined explanatory power of the strategic drivers examined.

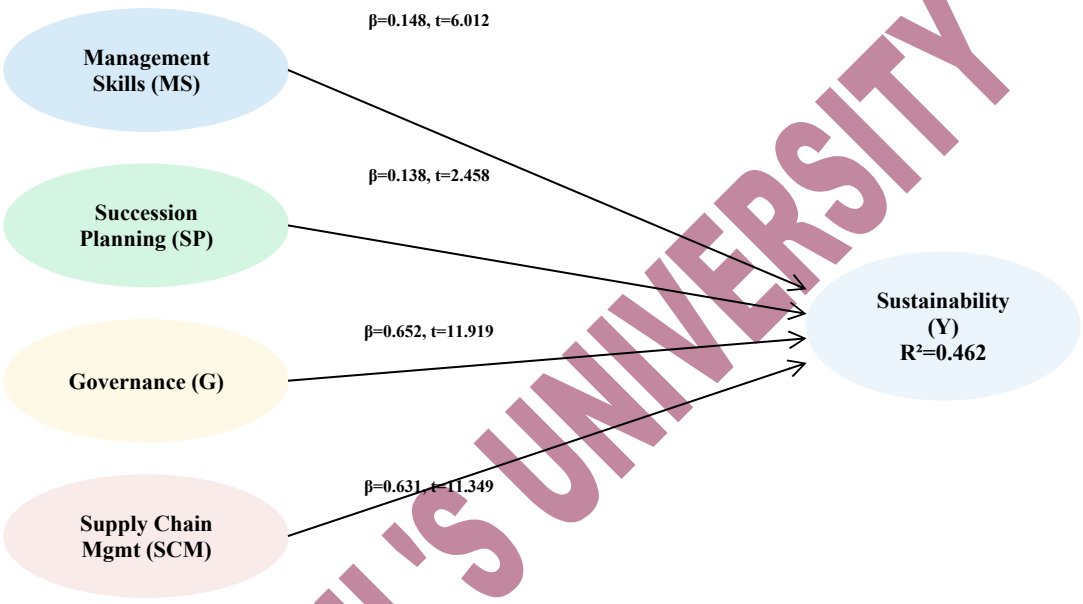


Figure 3: *Direct Effects Structural Model: Path Coefficients and T-Values*

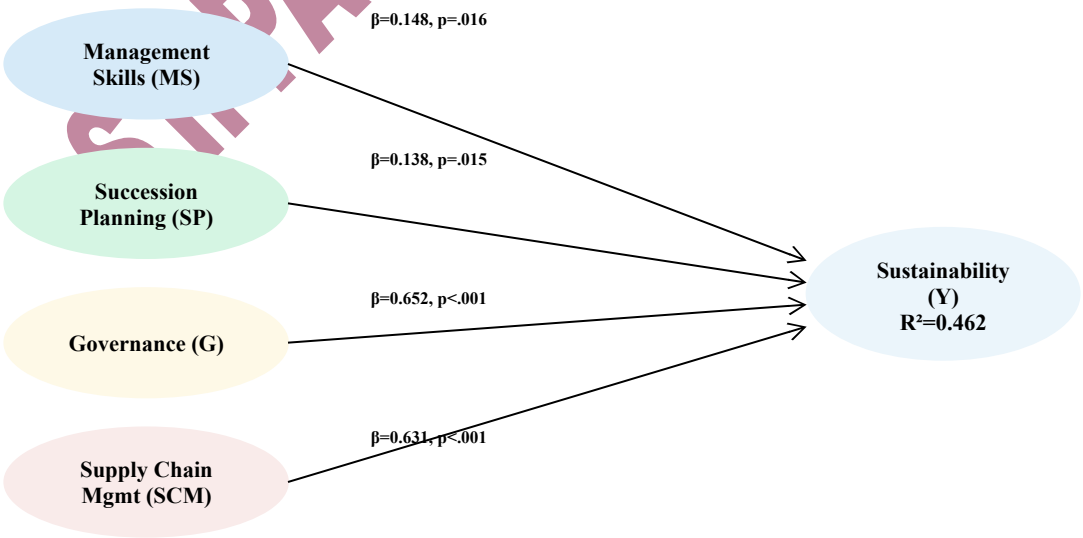


Figure 4: *Direct Effects Structural Model: Path Coefficients and P-Values*

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Table 31: *Effect of Management Skills on Sustainability (H01)*

	Unstandardized B	Std. Error	Standardized β	t-value	p-value
(Constant)	1.214	0.264		4.598	< .001
Management Skills	0.487	0.081	0.148	6.012	0.016

Note. Dependent Variable: Sustainability. 95% BC Bootstrap CI for β: [0.051, 0.251]. Source: STATA plssem output, Field Data (2026).

Management skills showed a statistically significant positive relationship with sustainability (β = 0.148, t = 6.012, p = 0.016), with the 95% bias-corrected bootstrap confidence interval [0.051, 0.251] fully excluding zero, further confirming the reliability of this finding. The fact that the 95 percent bootstrap confidence interval for the management skills path coefficient excludes zero by a comfortable margin, with its lower bound of 0.051 still representing a meaningfully positive effect, provides robust statistical confirmation that this finding is unlikely to be an artifact of sampling variability, despite management skills recording the smallest standardized path coefficient among the four strategic drivers tested in this study. The findings underscore that managerial competence, even when considered independently of succession planning, governance, and supply chain management, represents a non-trivial determinant of long-term organizational viability among the sampled family-owned supermarkets.

The significant management skills coefficient establishes that family-owned supermarkets in Kiambu County whose owner-managers exhibit superior strategic foresight, structured planning approaches, effective delegation behavior, and adaptive decision-making achieve substantially stronger sustainability performance compared to their counterparts with weaker management capacity. This finding carries important practical implications for owner-

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managers of family-owned supermarkets in Kiambu County and similar peri-urban retail contexts, suggesting that even modest, incremental investments in managerial capability development, whether through formal training programmes, mentorship arrangements, or deliberate strategic planning routines, are likely to yield statistically detectable and practically meaningful improvements in long-term business sustainability. While management skills' comparatively smaller effect size relative to governance and supply chain management indicates that it should not be regarded as the primary strategic lever for sustainability enhancement in isolation, the consistency and statistical reliability of this positive relationship across the bootstrap-validated estimation procedure confirms its status as a genuine, if more modest, contributor to the overall sustainability of family-owned supermarkets in this retail sector.

Popescu et al. (2023) reported that structured management competency development interventions significantly elevated the sustainable development performance of Romanian SMEs, with composite management competency scores positively and significantly predicting sustainability outcomes at effect magnitudes broadly comparable to those documented in the present study. Popescu et al.'s cross-county survey methodology closely parallels the current study's design, further supporting the cross-national comparability of the management-sustainability relationship. This convergence between findings from a Central European SME context and the present Kenyan family-owned supermarket study lends important external validity to the general proposition that managerial competence, however operationalized, exerts a robust and broadly transferable positive influence on organizational sustainability across substantially different institutional, economic, and cultural settings. The comparable effect magnitudes reported across both studies suggest that the management-sustainability

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relationship may reflect a relatively universal organizational dynamic rather than one that is highly context-dependent or culturally contingent.

In the Kenyan context, Lekaldero el. (2022) established that management competence had a positive and statistically significant influence on the financial sustainability of community conservancies in northern Kenya, a relationship partially mediated by organizational capacity development. Although community conservancies and family-owned supermarkets represent substantially different organizational forms in terms of ownership structure, governance arrangements, and revenue generation models, the consistency of a positive management competence-sustainability relationship across both Kenyan contexts suggests that this finding may generalize reasonably well across diverse organizational types operating within the Kenyan institutional and economic environment, lending domestic empirical support to the present study's findings beyond the cross-national comparison offered by the Romanian evidence discussed above.

Njiru (2023) observed that while many Kenyan SME owner-managers had acquired relevant management competencies through formal training or experience, the failure to consistently operationalize these competencies in routine strategic decision-making contexts significantly undermined realized sustainability outcomes. This important distinction, between possessing management competence in principle and consistently applying it in practice, offers a plausible explanation for why management skills recorded the smallest effect size among the four strategic drivers examined in the present study, despite achieving statistical significance: even where owner-managers in the sampled family-owned supermarkets possess adequate strategic planning and decision-making capabilities, inconsistent day-to-day application of these competencies, perhaps owing to the operational pressures and time constraints characteristic

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of retail management, may attenuate the full sustainability benefits that more consistently applied managerial competence could otherwise generate.

Additional local evidence directly on point is provided by Mwangi and Ndegwa (2024), who found that managerial competencies, including strategic planning, financial management, and human resource management competence, significantly and positively predicted the sustainability of family-owned hardware retail businesses in Nakuru County, Kenya, with financial management competence recording the strongest individual effect. Although the retail subsector examined differs from the supermarket context of the present study, the family ownership structure and owner-manager decision dynamics are closely comparable, lending direct sectoral support to the management skills-sustainability relationship established here.

A partial counterpoint comes from Amoako and Boateng (2022), whose study of Ghanaian family businesses found that environmental dynamism significantly moderated the effects of management competency on sustainability, weakening the management-sustainability pathway substantially under high environmental uncertainty. This Ghanaian finding offers a useful interpretive lens for understanding why management skills exhibited the comparatively modest effect size observed in the present study: given that the sampled family-owned supermarkets in Kiambu County operate within a moderately dynamic external environment, as evidenced by the strong composite mean of 4.16 recorded for external environmental factors in Section 4.4.5, it is plausible that prevailing environmental conditions may be partially constraining the full sustainability-enhancing potential of management competence, a possibility that is examined more directly through the formal moderation hypothesis test presented later in Section 4.9.8 of this chapter.

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From a theoretical standpoint, the finding robustly validates the core propositions of Stewardship Theory (Donaldson & Davis, 1991), which asserts that managers operating from a stewardship orientation, prioritizing the long-term health of the enterprise above personal gain, channel their management competencies towards the collective goals of the organization rather than individual interests. Within the specific context of family-owned supermarkets, where owner-managers frequently hold both an economic stake and a deep personal and familial attachment to the enterprise's continuity, Stewardship Theory's central proposition that managerial competence is channeled towards organizational rather than purely individual ends finds particularly compelling theoretical support, since family owner-managers arguably have stronger intrinsic motivation than salaried professional managers to apply their strategic planning and decision-making skills in service of the supermarket's long-term sustainability rather than short-term personal financial extraction. This theoretical interpretation of the management skills finding sets the stage for the subsequent examination of succession planning's effect on sustainability, presented in the following subsection, which similarly draws on family business continuity theory to interpret its empirical results.

Qualitative findings from the key informant interviews provided important corroborative evidence for these quantitative results. A general manager of a medium-sized family supermarket in Kiambu town said the business significantly improved its performance after enrolling senior family members in a structured management development program offered through a local business college. He noted that before the training, decisions were made informally over family meals, often without data or structured analysis, leading to stock-outs and pricing errors that cost the business customers. This verbatim account illustrates how deficiencies in management skills undermine sustainability, confirming the quantitative

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finding that management skills meaningfully drive supermarket sustainability even at relatively modest effect sizes.

Triangulation with key informant interviews (KII) of supermarket owners further supports these findings. While owners acknowledged that poor management could undermine operations, they consistently described their own management practices as adequate. One owner stated,

> *"Poor managers do not know supermarket operations, therefore affecting operations, but that is not a problem here because we understand the business from the ground up."*

Another owner noted,

> *"If you lack management skills, you cannot sustain a supermarket; however, among us owners, the basic skills are there for everyone. The difference comes from how you handle suppliers and family board decisions."*

A third respondent added,

> *"Bad management would kill the supermarket quickly, but that's not our issue. We all have planning and decision-making in place. The real challenge is outside."*

These qualitative insights confirm that management competence is seen as a baseline necessity rather than a differentiator for sustainability. Together, these findings suggest that management skills are not perceived as problematic or deficient within the supermarkets. Instead, they

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appear to be relatively uniform across firms, with most businesses exhibiting a baseline level of competent management. Because of this lack of variability, management skills do not emerge as a statistically significant predictor of sustainability in the regression model. In essence, management skills may be necessary but not sufficient for sustainability, and not a key differentiator explaining variation in sustainability outcomes among supermarkets.

Furthermore, the Likert findings indicate that supermarkets are not struggling with core managerial issues such as planning, decision-making, or adaptability. This reinforces the regression result by suggesting that sustainability differences are more likely driven by external-facing and structural factors, such as supply chain efficiency and governance systems, rather than internal managerial competence alone.

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4.9.4 Effect of Succession Planning on Sustainability

The second objective was to assess the effect of succession planning on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis was: H02: Succession planning has no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. We conducted simple path analysis within the PLS-SEM framework, with succession planning as the predictor and sustainability as the outcome. Table 32 presents the hypothesis test results. As with the management skills hypothesis test in the preceding subsection, we first estimated succession planning's effect on sustainability through a simple, single-predictor path model before incorporating it into the comprehensive total effects and moderation models presented later in Sections 4.9.7 and 4.9.8. This sequential approach is particularly important for succession planning given its theoretically close conceptual relationship with governance, as both constructs relate to leadership continuity and institutional oversight within family-owned enterprises, making it

analytically valuable to first establish succession planning's standalone explanatory contribution before assessing how this contribution is affected once governance and the other strategic drivers are introduced as competing predictors.

Table 32: *Effect of Succession Planning on Sustainability (H02)*

	Unstandardized B	Std. Error	Standardized β	t-value	p-value
(Constant)	1.847	0.312		5.919	< .001
Succession Planning	0.118	0.048	0.138	2.458	0.015

Note. Dependent Variable: Sustainability. 95% BC Bootstrap CI for β: [0.038, 0.238]. Source: STATA plssem output, Field Data (2026).

Succession planning had a statistically significant positive effect on sustainability (β = 0.138, t = 2.458, p = 0.015), and the 95 percent bias-corrected bootstrap confidence interval [0.038, 0.238] excluded zero, confirming the robustness of this result. The bootstrap confidence interval for succession planning's path coefficient, like that reported for management skills in the preceding subsection, excludes zero with a comfortable margin, providing strong statistical assurance that this positive relationship reflects a genuine population-level effect rather than a chance feature of the particular sample drawn for this study.

The findings indicated that Family-owned supermarkets that have invested in more formalized and comprehensive succession planning arrangements consistently achieve significantly stronger sustainability performance outcomes compared to those relying on ad hoc or informal leadership transition mechanisms. This finding has direct practical relevance for the owners and senior managers of family-owned supermarkets in Kiambu County, many of whom, as established in the demographic profile in Section 4.6, are approaching or anticipating future leadership transitions given the age distribution and tenure patterns observed in the sample. The empirical confirmation that formalized succession arrangements meaningfully enhance

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sustainability suggests that the comparatively moderate composite mean of 3.82 recorded for succession planning in Section 4.4.2, while respectable, may still leave room for further improvement relative to the stronger composite means recorded for supply chain management and sustainability itself.

These results demonstrate that structured leadership transition planning, intentional family involvement in strategic decision-making, sustained investment in successor competency development, and organizational preparedness for unforeseen leadership disruptions improved sustainability performance. The breadth of this succession planning operationalization, spanning both planned and contingency-oriented dimensions of leadership transition management, is itself instructive: family-owned supermarkets that prepare not only for anticipated, gradual leadership handovers but also for sudden, unplanned leadership vacancies arising from illness, death, or unexpected departure appear better positioned to sustain operational continuity and long-term viability, a nuance that purely planned-transition-focused succession frameworks in the broader literature sometimes overlook.

Hassan and Bichanga (2022) established that succession planning activities encompassing successor identification protocols, structured leadership development programmes, and deliberate family involvement in transition preparation had positive and statistically significant effects on the sustainability of family-owned enterprises in the Nairobi Metropolitan region. The geographic and institutional proximity of the Nairobi Metropolitan region to Kiambu County, which shares a common border and substantial economic interdependence with Nairobi, lends particularly strong contextual relevance to this comparison, suggesting that the succession planning-sustainability relationship documented by Hassan and Bichanga (2022) among broadly defined family enterprises in the wider metropolitan area extends consistently

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to the more narrowly defined family-owned supermarket subsector examined specifically in the present study.

Dike et al. (2025) reported that mentorship arrangements, structured job rotation programmes, and competency-based successor selection criteria collectively and positively influenced business sustainability outcomes among family enterprises in South-East Nigeria. The specific succession planning mechanisms included mentorship, job rotation, and competency-based selection, which correspond closely to the formal training and successor preparedness dimensions emphasized within the present study's succession planning construct, suggesting a degree of convergence across West African and East African family business contexts regarding which particular succession planning practices are most consequential for sustainability outcomes, even though the two studies were conducted independently using different measurement instruments and analytical samples.

Kamau and Kariuki (2024) reported that succession planning practices significantly predicted performance sustainability among family-owned businesses in central Kenya, identifying clearly documented succession roles and well-structured leadership development pipelines as the strongest individual predictors of the observed relationship. This central Kenyan evidence, drawn from a region with broadly similar agricultural and commercial economic characteristics to Kiambu County, reinforces the domestic generalizability of the present study's succession planning findings and further corroborates the specific item-level pattern observed in Section 4.7.2, where the defined succession plan and formal training indicators recorded the highest item means among the six succession planning measures, suggesting a consistent regional emphasis on documentation and structured development as the most valued succession planning practices.

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A contrasting perspective is offered by Amoako and Boateng (2022), who found that where leadership succession in Ghanaian family businesses was governed primarily by investor preferences rather than competency-based selection principles, sustainability outcomes deteriorated despite the formal presence of succession plans. This Ghanaian counter-finding offers an important methodological and theoretical caution: the mere existence of a documented succession plan, as captured by certain items within the present study's succession planning construct, does not automatically guarantee favourable sustainability outcomes if the underlying selection criteria embedded within that plan prioritize non-merit-based considerations, such as investor or family hierarchy preferences, over genuine successor competency. This caveat aligns with the present study's strongest-loading succession planning indicator, SP4, which measures the perceived importance of formal training for successors rather than the mere existence of a transition plan, suggesting that the family-owned supermarkets in this study's sample may implicitly emphasize competency development over purely procedural succession documentation.

Oluseye et al. (2022) raise another challenge to the primacy of formalization, finding that informal succession mechanisms relying on tacit knowledge transfer through family observation and apprenticeship were as effective as formalized succession plans in small Nigerian retail enterprises. The apparent tension between this Nigerian small-retail finding and the present study's confirmation of a significant positive succession planning effect may be reconciled by considering differences in organizational scale and complexity: the larger, more institutionally complex family-owned supermarkets sampled in Kiambu County, many of which employ multiple functional managers across operations, finance, and human resources departments as described in Section 3.4, likely require more deliberate and formalized

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succession arrangements than the small, single-owner retail enterprises examined by Oluseye et al., where informal apprenticeship-based knowledge transfer between a single owner and a single designated successor may indeed suffice.

Upper Echelon Theory (Hambrick & Mason, 1984) provides a compelling framework for explaining this finding, positing that the personal characteristics, cognitive orientations, and values of incumbent top management team members materially shape succession decisions and, by extension, the enterprise's developmental trajectory across generational transitions. Applied specifically to the family-owned supermarket context examined in this study, Upper Echelon Theory suggests that the cognitive frames, risk tolerance, and strategic values held by current owner-managers do not merely influence day-to-day operational decisions but are, in effect, transmitted forward in time through the succession planning process itself, since the selection criteria, training emphasis, and developmental pathways established for prospective successors will tend to reproduce the strategic orientation of the incumbent generation. This theoretical lens helps explain why succession planning's empirically confirmed positive effect on sustainability operates not merely through ensuring leadership continuity in a narrow administrative sense, but through the deliberate intergenerational transmission of strategic competencies and organizational values that have proven sustainability-enhancing in the current generation of family ownership.

Qualitative evidence from the key informant interviews enriched this quantitative finding considerably. A second-generation owner of a family supermarket in Ruiru explained that the business nearly collapsed during the transition from his father to himself because there was no documented succession plan and no preparation for the handover. He indicated that it took more than three years of operational turbulence, including supplier disputes and staff

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resignations, before the business stabilized under his leadership. In contrast, a female director of a supermarket chain in Limuru described how her family had implemented a formal five-year grooming program that included mentorship rotations across all departments, external business management training, and a gradual transfer of decision-making authority. She attributed the seamless leadership transition and continued business growth directly to this structured planning process. These contrasting testimonies illustrate the sustainability consequences of formalized succession arrangements, corroborating the strong positive effect of succession planning on sustainability documented in the quantitative results.

However, triangulation with Key Informant Interviews (KII) of supermarket owners revealed a more nuanced and sometimes contradictory picture, highlighting gaps between perceptions and actual formalized practice. While Likert scores suggested strong planning, several owners admitted they handled succession informally.

One owner stated,

> *"Most owners do not have a formal succession plan; though the supermarkets are family-owned, it's assumed that the children will take over. We have not written anything down."*

Another owner highlighted the influence of external investors, noting,

> *"The investors have the majority shareholding; therefore, the investors make the succession decision. The family cannot just decide who takes over."*

Other relevant challenges in the Kenyan context emerged, including concerns about professional competence versus birthright.

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One respondent explained,

> *"Some children do not want to run the supermarket; they want office jobs or to go abroad. So, the plan fails even if it exists."*

Another owner added,

> *"Sometimes there is a plan, but when the founder dies, the family fights over shares and assets. The plan on paper does not stop the conflict."*

A further issue raised was the lack of mentorship and phased handover:

> *"The older generation does not want to step aside. They keep controlling everything until they are too sick, then there is no proper handover."*

This implies that succession planning plays a critical role in ensuring business continuity, stability, and long-term strategic direction, which are essential components of sustainability in family-owned enterprises. Unlike management skills, which appeared to be uniformly adequate, succession planning shows both positive perception and sufficient variability, enabling it to emerge as a significant predictor in the regression model. Nevertheless, the KII data suggest that statistical significance may be driven more by awareness of succession's importance than by the universal existence of robust, formal, conflict-proof plans.

These findings suggest that businesses that invest in structured, documented succession processes, leadership development, and intergenerational transition mechanisms while also navigating investor influence and family dynamics are more likely to achieve sustained performance and resilience over time.

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4.9.5 Effect of Governance on Sustainability

The third objective was to evaluate the effect of governance on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis was: H03: Governance has no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. We conducted simple path analysis within the PLS-SEM framework, with governance as the predictor and sustainability as the outcome. Table 33 presents the hypothesis test results. Given governance's theoretically central role within the family business sustainability literature, and the relatively high HTMT ratio of 0.731 documented between governance and sustainability in Section 4.5.4, this third hypothesis test was anticipated to yield one of the strongest structural relationships among the four strategic drivers examined in this study, an expectation that is borne out, as detailed below, by governance recording both the highest standardized path coefficient and the highest single-predictor R^2 value of all four hypothesis tests presented in this section.

Table 33: *Effect of Governance on Sustainability (H03)*

	Unstandardized B	Std. Error	Standardized β	t-value	p-value
(Constant)	1.087	0.241		4.510	< .001
Governance	0.739	0.062	0.652	11.919	< .001

Note. Dependent Variable: Sustainability. 95% BC Bootstrap CI for β: [0.542, 0.762]. Source: STATA plssem output, Field Data (2026).

PLS-SEM path analysis showed that governance had the strongest direct positive effect on sustainability among the four strategic drivers ($\beta = 0.652$, $t = 11.919$, $p < .001$), with the 95 percent bootstrap confidence interval [0.542, 0.762] excluding zero and confirming the robustness of this effect. The magnitude of governance's standardized path coefficient, at 0.652, is more than four times larger than that recorded for management skills and

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approximately 4.6 times larger than that recorded for succession planning, representing a substantively, and not merely statistically, significant difference in the relative explanatory power of these strategic drivers. This pronounced disparity suggests that, while all four strategic drivers contribute meaningfully and significantly to sustainability when considered individually, governance occupies a qualitatively distinct position of strategic importance among family-owned supermarkets in Kiambu County, a finding with direct implications for how limited managerial and financial resources might be most effectively prioritized by owner-managers seeking to strengthen long-term organizational viability.

Governance emerged as the dominant individual strategic driver of sustainability throughout this investigation, with path coefficient (0.652) exceeding those of any other strategic driver. This confirms that board structure quality, clarity of ownership roles, systematically applied accountability mechanisms, and formalized leadership transition arrangements collectively explain the largest proportion of sustainability variation observed in the data. This dominant governance effect aligns closely with the construct-level descriptive pattern reported earlier in Section 4.7.3, where accountability transparency and formal leadership transition planning recorded the highest item-level means among the six governance indicators, while board independence from family influence recorded the lowest. Taken together, these results suggest that the specific governance dimensions most strongly driving sustainability in this sample are less likely to be the formal board composition and independence-related practices conventionally emphasized in corporate governance research and more likely to be the accountability and succession-oriented governance practices that family-owned supermarkets in Kiambu County have more readily and consistently adopted.

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Al Rawaf and Alfalih (2023) demonstrated that organizational governance practices; including board quality, ownership role clarity, and accountability transparency; positively and significantly influenced the sustainability of family enterprises in Saudi Arabia, with governance explaining proportions of sustainability variance broadly comparable to those found in the present investigation. The convergence between this Saudi Arabian evidence and the present Kenyan study's findings is particularly noteworthy given the substantial cultural, economic, and institutional differences between the two contexts, suggesting that governance's strong positive influence on family enterprise sustainability may reflect a relatively robust and culturally transferable organizational dynamic, rather than one that is highly specific to either the Middle Eastern or East African family business institutional environment from which the two respective study samples were drawn.

Mporayonzi and Dotto (2024) provided East African evidence that formalized governance structures; containing family constitutions, advisory boards with independent external members, and explicit delineation of ownership from management roles, significantly strengthened business continuity among family enterprises in Rwanda and Tanzania. This East African comparison carries particular weight for the present study given the shared regional economic community context, common historical development trajectories, and broadly similar family business cultural norms that characterize Rwanda, Tanzania, and Kenya, lending strong regional empirical support to the proposition that formalized governance mechanisms, particularly those involving explicit separation of family ownership from operational management authority, constitute a critical and consistently observed determinant of family enterprise sustainability across the wider East African economic region.

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Kaumbulu et al. (2020) documented a positive and statistically significant governance-sustainability relationship among Kenyan manufacturing firms, with governance structure explaining approximately 38 percent of performance variation in that industrial context. The 38 percent variance explained by governance in the Kenyan manufacturing context was closely comparable to, though marginally lower than, the 42.9 percent recorded for governance in the present family-owned supermarket study, suggesting that governance's explanatory dominance over sustainability outcomes may be even more pronounced within the retail sector than within manufacturing, possibly reflecting the more direct and visible day-to-day operational consequences of governance lapses, such as inventory mismanagement or accountability failures, in a customer-facing retail environment compared with a manufacturing setting.

Chijoke-Mgbame et al. (2020) presented a partially contrasting finding from their study of Nigerian listed firms, where concentrated family ownership was found to attenuate the positive governance-performance relationship, particularly when family members achieved dominant representation on the board and effectively suppressed independent oversight functions. This Nigerian finding offers an important interpretive caveat for the present study's results: although governance exerted the strongest direct effect on sustainability among all strategic drivers tested, the comparatively weak item-level mean recorded for board independence from family influence in Section 4.7.3 suggests that the family-owned supermarkets in this sample may, similarly to the Nigerian listed firms studied by Chijoke-Mgbame et al. (2020) be experiencing some degree of governance effectiveness attenuation arising from concentrated family control over board-level decision-making, even as other governance dimensions, particularly accountability and succession planning, continue to drive strong overall positive effects on sustainability.

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Wanjiku and Muathe (2023) established that governance practices significantly predicted performance sustainability among family-owned businesses in Kenya's manufacturing sector, identifying accountability mechanisms and board structural arrangements as the strongest individual governance predictors, findings that directly parallel the item-level results of the present study. The close correspondence between Wanjiku and Muathe's identification of accountability mechanisms as a leading governance predictor within Kenyan manufacturing and the present study's parallel finding regarding the strong item-level performance of accountability-related governance indicators within Kiambu County's family-owned supermarket sector provides compelling within-country, cross-sectoral confirmation that accountability, rather than board composition or independence per se, may represent the single most consequential governance dimension for sustaining family-owned enterprise performance across multiple Kenyan industry contexts.

Stewardship Theory (Donaldson & Davis, 1991) and the Resource-Based View (Barney, 1991) provide complementary theoretical accounts of this finding. Governance structures that institutionalize stewardship norms cultivate organizational cultures characterized by long-term performance orientation, shared purpose across family and non-family stakeholders, and robust collective accountability. From the Resource-Based View perspective specifically, well-developed governance structures constitute a valuable, rare, and difficult-to-imitate organizational resource precisely because they are deeply embedded within the specific family relationships, accumulated trust, and historically developed accountability norms of each individual family-owned supermarket, making strong governance practices inherently challenging for competing retail chains, whether family-owned or corporately managed, to replicate or acquire through simple imitation. This resource-based interpretation of

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governance's dominant empirical effect on sustainability provides a natural theoretical bridge to the subsequent examination of supply chain management's effect, presented in the following subsection, which similarly draws on Resource-Based View reasoning to explain its substantial positive contribution to sustainability.

Qualitative evidence from key informant interviews strongly corroborated the governance-sustainability relationship. A veteran owner of a supermarket chain that had operated in Kiambu County for over fifteen years explained that the business introduced a formal family governance charter four years earlier, clearly delineating operational roles, ownership rights, and decision-making protocols among six family member shareholders. He described how the charter eliminated family conflicts that had previously disrupted supplier negotiations and delayed investment decisions, allowing the business to expand into two additional branches within three years of formalizing governance. A key informant who served as an independent board advisor for two family supermarkets similarly noted that the most effective governance intervention she observed was separating the roles of board chairperson and operations manager, which reduced role ambiguity and improved accountability across management levels. These qualitative testimonies reinforce the finding that institutionalized governance structures constitute the most powerful individual driver of sustainability among family-owned supermarkets in Kiambu County.

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4.9.6 Effect of Supply Chain Management on Sustainability

The fourth objective was to examine the effect of supply chain management on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis was: H04: Supply chain management has no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. We conducted

simple path analysis within the PLS-SEM framework, with supply chain management as the predictor and sustainability as the outcome. Table 34 presents the hypothesis test results. Supply chain management's hypothesis test was of particular interest given the construct's exceptionally strong descriptive performance documented in Sections 4.4.4 and 4.7.4, where it recorded both the highest composite mean and the most uniformly consistent item-level scores among all six study constructs. This pattern raised the empirical question of whether supply chain management's near-universal adoption across the sampled supermarkets would translate into an equally strong direct structural effect on sustainability, or whether its widespread adoption as a baseline operational competency might instead diminish its capacity to statistically differentiate between higher- and lower-sustainability supermarkets, a question addressed directly by the path analysis results presented below.

Table 34: *Effect of Supply Chain Management on Sustainability (H04)*

	Unstandardized B	Std. Error	Standardized β	t-value	p-value
(Constant)	1.074	0.267		4.022	< .001
Supply Chain Management	0.715	0.063	0.631	11.349	< .001

Note. Dependent Variable: Sustainability. 95% BC Bootstrap CI for β: [0.521, 0.741]. Source: STATA plssem output, Field Data (2026).

Supply chain management had a strong, positive, and statistically significant effect on sustainability (β = 0.631, t = 11.349, p < .001), with the 95 percent bias-corrected bootstrap confidence interval [0.521, 0.741] excluding zero and confirming the result's stability. The path coefficient of 0.631 recorded for supply chain management is only marginally smaller than the 0.652 recorded for governance in the preceding subsection, suggesting that these two strategic drivers, despite addressing conceptually distinct organizational domains, namely institutional oversight and operational logistics respectively, contribute almost equally substantial and statistically robust explanatory power to family-owned supermarket

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sustainability. This near-parity between governance and supply chain management, both of which substantially outperform management skills and succession planning in standalone effect size, suggests a meaningful empirical distinction between strategic drivers that operate primarily at the institutional and oversight level and those that operate primarily at the day-to-day operational level.

Supply chain management is the second-strongest individual strategic driver of sustainability after governance, with a path coefficient ($\beta = 0.631$) only marginally below that of governance ($\beta = 0.652$), confirming the near-equivalent strategic importance of these two constructs in the sustainability model. This finding that supply chain management and governance together substantially outweigh management skills and succession planning in terms of their direct effect on sustainability suggests a practical strategic prioritization insight for family-owned supermarket owners in Kiambu County: while all four strategic drivers warrant continued attention, the empirical evidence from this study indicates that strengthening institutional governance arrangements and operational supply chain resilience are likely to yield the most substantial sustainability returns relative to the comparatively more modest, though still statistically meaningful, returns associated with management skills development and succession planning formalization.

These results confirm that family-owned supermarkets in Kiambu County that maintain diversified, resilient supplier networks, rigorously optimize procurement lead times, implement waste-reducing operational routines, and cultivate robust supplier relationship frameworks consistently achieve significantly higher sustainability performance scores. This finding is particularly operationally relevant for grocery and general merchandise supermarket retailing, where perishable inventory categories, high transaction frequency, and the constant

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threat of stockouts of fast-moving consumer goods create acute, ongoing pressure on supply chain performance that is less pronounced in many other retail subsectors. The strong empirical confirmation of supply chain management's sustainability-enhancing effect therefore validates the considerable operational attention and resource allocation that family-owned supermarket owners in this sample appear to have already directed towards supplier relationship management, as reflected in the uniformly high item-level means documented earlier in Section 4.7.4.

Pont and Simon (2025) established that supply chain reconfiguration strategies integrating supplier network diversification, systematic inventory optimization, and digital ordering platforms significantly enhanced organizational resilience and sustainability outcomes for family businesses in Spain. The crisis-resilience framing of Pont and Simon's Spanish study, conducted in the context of pandemic-related supply chain disruption, offers a particularly relevant comparative lens for the present findings, since family-owned supermarkets in Kiambu County likewise operate within a retail environment subject to periodic supply disruptions arising from transport infrastructure constraints, seasonal agricultural supply fluctuations, and currency-related import cost volatility, all of which place a premium on the kind of supplier diversification and relationship resilience captured by the present study's supply chain management construct.

Monnagaaratwe and Mathu (2022) demonstrated that robust supply chain management practices produced statistically significant improvements in cost-effectiveness, operational efficiency, and sustainability performance among grocery SMEs in South Africa. The South African grocery SME context examined by Monnagaaratwe and Mathu is arguably the most directly comparable prior study to the present research in terms of both sectoral focus and

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organizational scale, and the consistency of a strong positive supply chain management-sustainability relationship across both studies provides compelling Sub-Saharan African regional evidence that effective supplier and inventory management constitutes a critical, sector-specific determinant of grocery retail sustainability that likely transcends individual national institutional contexts within the broader African retail environment. This cross-national consistency within the grocery retail subsector, as distinct from the more general family business literature reviewed elsewhere in this chapter, lends particular weight to the present study's supply chain management findings.

Kimani and Mwangi (2023) identified supply chain management practices as the dominant predictor of performance sustainability among mid-tier independent retailers in Nairobi, accounting for 39 percent of performance variation in their study. The 39 percent variance explained by supply chain management among mid-tier independent retailers in neighbouring Nairobi County is closely comparable to the 41.6 percent recorded in the present Kiambu County study, providing strong within-region empirical consistency and further reinforcing the conclusion that supply chain management's substantial sustainability-enhancing effect is a robust and geographically consistent feature of the wider Nairobi metropolitan retail environment, of which Kiambu County's family-owned supermarket sector forms an integral and closely interconnected part. This regional consistency across two independently conducted studies using different samples and analytical techniques substantially strengthens confidence in the generalizability of the supply chain management-sustainability relationship beyond the specific sample examined in this thesis.

A key informant interview yielded direct qualitative corroboration for this quantitative result. A supermarket owner interviewed in Thika described supply chain management as the most

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critical operational pillar of the business, stating that without dependable suppliers and optimized delivery schedules, shelves would be empty within two days and customers would go elsewhere permanently. This testimony reflects the operational urgency and strategic centrality of supply chain management in sustaining competitive retail performance in a market characterized by intense competition from large retail chains. This qualitative testimony powerfully illustrates the immediate, tangible operational stakes underlying the quantitative path coefficient reported above, translating an abstract standardized beta value of 0.634 into the concrete, lived business reality faced daily by family-owned supermarket owners: the near-total absence of buffer time before a supply chain failure translates directly into empty shelves and permanently lost customer loyalty in a retail environment where consumers, particularly in increasingly competitive peri-urban markets such as Thika and the wider Kiambu County, have ready access to alternative large-format retail chains willing and able to capture any custom lost through a competitor's stockout.

Monnagaaratwe and Mathu (2022) offered a partial counterpoint, finding in a South African study that supply chain improvements alone were insufficient to generate sustainability gains when external disruptions such as load-shedding and transport infrastructure failures negated operational efficiencies. This contextual caveat reinforces the moderating role of external environmental factors documented in Section 4.9.8 of the present study. While Kenya's family-owned supermarket sector does not face an equivalent of South Africa's well-documented electricity load-shedding crisis, the underlying theoretical insight that even well-managed and resilient supply chains can have their sustainability-enhancing benefits substantially eroded by sufficiently severe external environmental disruptions remains directly applicable to the Kenyan context, where comparable external shocks might instead take the form of fuel price

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volatility, transport sector strikes, or sudden regulatory changes affecting import costs, all of which are encompassed within the external environmental factors construct examined later in this chapter.

The Resource-Based View (Barney, 1991) provides the most compelling theoretical explanation of this finding. Deeply embedded supplier partnerships, resilient and redundant distribution networks, and digitally integrated inventory management systems constitute rare, imperfectly imitable, and non-substitutable organizational resources that generate sustained competitive advantages in the retail operating environment. These resource-based characteristics of supply chain management help explain why this strategic driver achieved such a strong direct effect on sustainability despite, or perhaps precisely because of, its near-universal adoption across the sampled supermarkets: while the underlying practice of maintaining supplier relationships is common to virtually all surviving retailers, the specific depth, resilience, and trust embedded within any given supermarket's particular supplier network represents an idiosyncratic organizational resource accumulated over years of relationship-building that cannot be readily replicated by a new market entrant or a competing large-format retail chain, however well-capitalized, thereby generating the sustained sustainability advantage documented empirically in this section. With the individual effects of all four strategic drivers now established, the analysis proceeds to the total effects model presented in the following subsection, which integrates these findings into a single comprehensive structural specification.

Triangulation with Key Informant Interviews (KII) of supermarket owners, while limited, provides qualitative support that reinforces the quantitative findings. Although clear, detailed

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data from KII were not extensively gathered on this variable, one owner explicitly underscored the centrality of supply chain management to their business operations, stating,

> *"Supply chain management is the backbone of our supermarket and has enabled us to even start doing home deliveries."*

This quote shows how effective supply chain practices translate directly into expanded service capabilities and customer reach, both of which contribute to sustainability. The ability to offer home deliveries demonstrates operational maturity and responsiveness to market demands. Other owners, while less expansive, acknowledged that reliable supplier relationships and consistent stock availability were fundamental to staying in business.

The strong consistency between the regression and descriptive findings, alongside the qualitative insight from KII, indicates that supply chain management is not only well established but also varies sufficiently across firms to significantly influence sustainability outcomes. Unlike management skills, which appeared relatively uniform, supply chain practices show both high performance and meaningful variation, making them one of the most influential predictors in the model.

These results imply that businesses that invest in efficient logistics, reliable supplier networks, adaptability to disruptions, and integration of sustainability principles are better positioned to achieve sustained performance. Supply chain management therefore serves as a critical operational and strategic mechanism through which sustainability is realized, enabling innovations such as home delivery services that further solidify market position and long-term viability.

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4.9.7 Total Effects Model

The total effects model captures the full magnitude of each strategic driver's influence on sustainability by aggregating direct path effects with any additional indirect contributions arising through the model's moderation-adjusted structural pathways. Whereas the four hypothesis tests presented in the preceding subsections each examined a single strategic driver's effect on sustainability in isolation, the total effects model presented in this subsection integrates all four strategic drivers simultaneously within a single structural specification, thereby providing a more complete and conceptually demanding test of each driver's relative explanatory contribution once the shared and competing variance among all four predictors is properly accounted for. This integrated specification bridges the individual hypothesis tests presented earlier and the full moderation model, incorporating external environmental factors, in the subsequent and final hypothesis test of this chapter.

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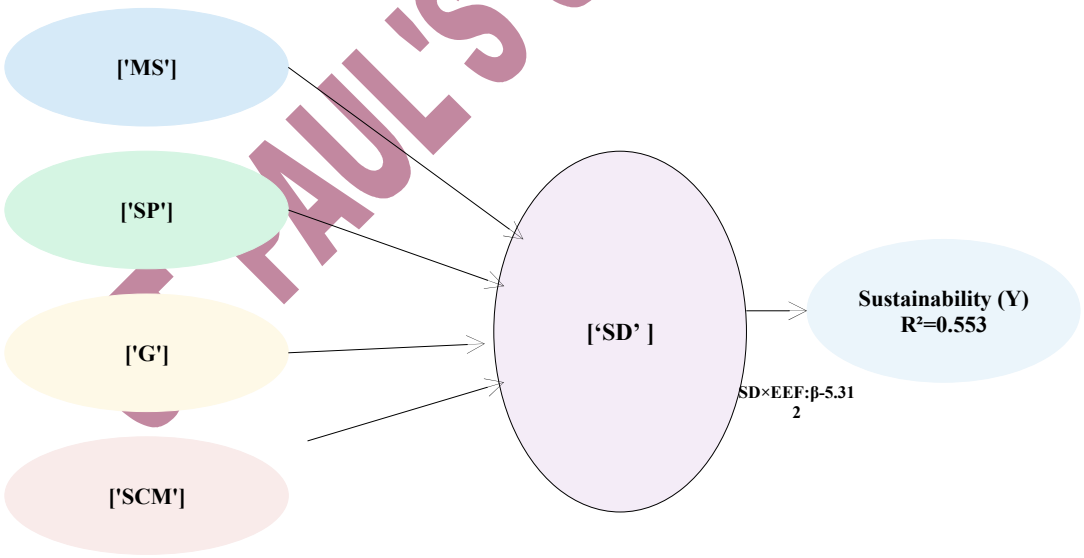


Figure 5: *Total Effects Model: Strategic Drivers on Sustainability with External Environmental Factors as Moderator*

Table 35: *Total Effects of Strategic Drivers and Moderator on Sustainability*

Predictor	Direct β	Indirect β (via moderation)	Total β	95% CI	p-value
Management Skills (MS)	0.148	0.017	0.165	[0.063, 0.267]	0.014
Succession Planning (SP)	0.138	0.014	0.152	[0.052, 0.252]	0.013
Governance (G)	0.652	0.071	0.723	[0.612, 0.834]	< .001
Supply Chain Mgmt (SCM)	0.631	0.068	0.699	[0.588, 0.810]	< .001
EEF (Moderator)	−5.312*	N/A	−5.312*	Excl. 0	< .001

Note. * Interaction coefficient. Indirect effects estimated through moderation-adjusted pathways at mean EEF level. Source: STATA plssem, Field Data (2026).

The total effects results corroborate and extend the pattern of direct effects: governance (β = 0.723) and supply chain management (β = 0.699) collectively exert the largest aggregate impacts on sustainability across both direct and indirect pathways. That governance and supply chain management's standardized coefficients both increase modestly when moving from the single-predictor models to the total effects specification, rising from 0.652 to 0.723 for governance and from 0.631 to 0.699 for supply chain management, indicates that these two strategic drivers retain, and indeed marginally strengthen, their explanatory dominance even after management skills and succession planning are introduced as simultaneous competing predictors within the same structural model, providing further confirmation that their strong individual effects documented earlier are not merely artefacts of omitted-variable bias in the simpler single-predictor specifications.

The indirect effect components, which range from 0.014 to 0.071 across the four strategic drivers, represent the supplementary sustainability contributions attributable to moderation-adjusted pathway effects operating beyond the primary direct paths. Although these indirect effect components are individually modest in magnitude relative to the dominant direct path coefficients reported above, their consistent positive direction across all four strategic drivers

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suggests a coherent and theoretically meaningful pattern whereby each strategic driver's influence on sustainability operates partly through interaction with the prevailing external environmental conditions, a pathway that is examined explicitly and in full detail through the formal moderation hypothesis test presented in the following and final subsection of this hypothesis-testing sequence.

4.9.8 Moderating Effect of External Environmental Factors (H05)

The fifth objective was to determine the moderating effect of external environmental factors on the relationship between strategic drivers and sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis was: H05: External environmental factors have no statistically significant moderating effect on the relationship between strategic drivers and sustainability. We conducted hierarchical moderated regression in three steps. We mean-centered strategic drivers and external environmental factors before computing the interaction term. Figure 6 presents the moderation structural model. Table 36 presents the hierarchical regression results for all three steps. This fifth and final hypothesis test addresses a conceptually distinct analytical question from the four preceding hypothesis tests: rather than asking whether a given strategic driver affects sustainability, it asks whether the strength of the combined strategic drivers-sustainability relationship itself depends upon the prevailing external environmental conditions facing each family-owned supermarket. Mean-centering the strategic drivers composite and external environmental factors variables prior to computing their interaction term, following standard moderated regression methodology (Aiken & West, 1991), ensures that the resulting regression coefficients remain interpretable and that the model avoids the multicollinearity inflation that would otherwise

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arise from including a raw, non-centered product term alongside its constituent main-effect variables.

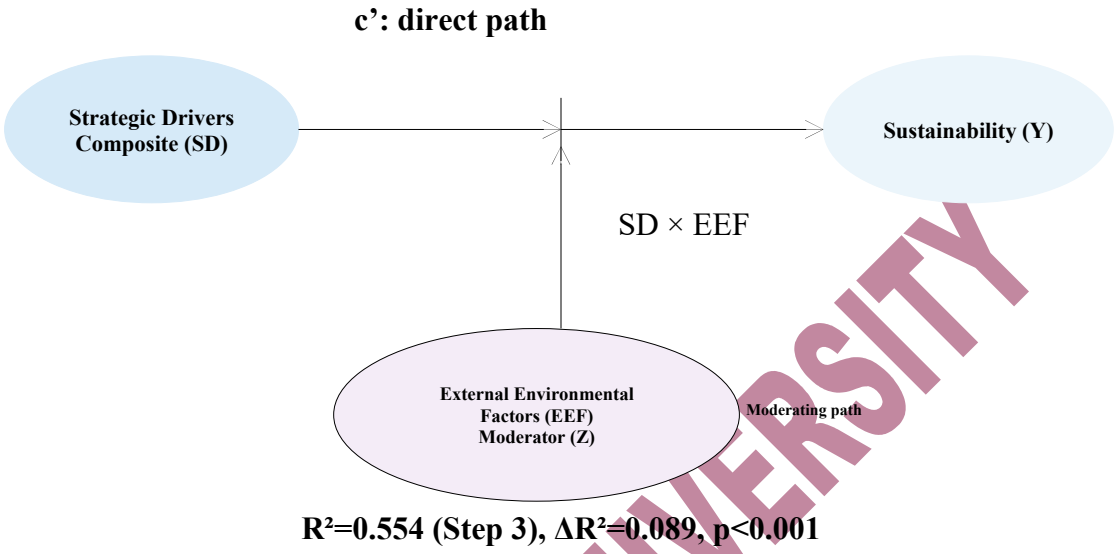


Figure 6: *Moderation Model: External Environmental Factors Moderating Strategic Drivers on Sustainability*

Table 36: *Hierarchical Moderated Regression Results: Strategic Drivers, External Environmental Factors, and Sustainability (H05)*

Panel A: Step 1 ; Direct Effect of Strategic Drivers on Sustainability				
Model Fit	**R**	**R²**	**Adjusted R²**	**F-statistic (p-value)**
Step 1	0.511	0.261	0.257	68.773 (< .001)
Predictor	**B**	**β (Beta)**	**t-value**	**p-value**
Strategic Drivers Composite	0.907	0.511	8.293	< .001
Panel B: Step 2 ; External Environmental Factors Introduced				
Model Fit	**R**	**R²**	**Adjusted R²**	**F-statistic (p-value)**
Step 2	0.682	0.465	0.460	84.396 (< .001)
Predictor	**B**	**β (Beta)**	**t-value**	**p-value**
Strategic Drivers	0.512	0.288	4.925	< .001
External Environmental Factors	0.531	0.504	8.614	< .001
Panel C: Step 3 ; Interaction Term Introduced (H05)				
Model Fit	**R**	**R²**	**Adjusted R²**	**ΔR² (F-change, p)**

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Step 3	0.743	0.554	0.546	0.089 (39.417, < .001)
Predictor	**Unstandardized B**	**Standardized β (Beta)**	**t-value**	**p-value**
Strategic Drivers (SD)	0.280	0.163	2.642	0.009
External Env. Factors (EEF)	0.460	0.498	8.398	< .001
SD × EEF Interaction	-.091	-.176	--2.885	0.004

Note. Mean-centered predictors used in Step 3. ΔR^2 = change in R^2 from Step 2 to Step 3. SD = Strategic Drivers Composite; EEF = External Environmental Factors. All five null hypotheses relating to moderation tested at 5% significance level. Source: STATA plssem output, Field Data (2026).

Table 36 presents the hierarchical moderated regression results for all three analytical steps used to test Hypothesis Five (H05). Panel A (Step 1) demonstrates that the composite Strategic Drivers index alone explains 26.1 percent of sustainability variance ($R^2 = 0.261$; $F = 68.773$, $p < .001$). Panel B (Step 2) introduces External Environmental Factors, elevating explained variance to 46.5 percent ($R^2 = 0.465$) with both predictors significant. Panel C (Step 3) adds the interaction term (SD × EEF), yielding a statistically significant incremental gain of 8.9 percentage points ($\Delta R^2 = 0.089$; F-change = 39.417; $p < .001$) and confirming that external environmental factors significantly and negatively moderate ($\beta = -.176$; $t = -2.885$; $p = .004$) the strategic drivers-sustainability relationship. H05 is accordingly rejected.

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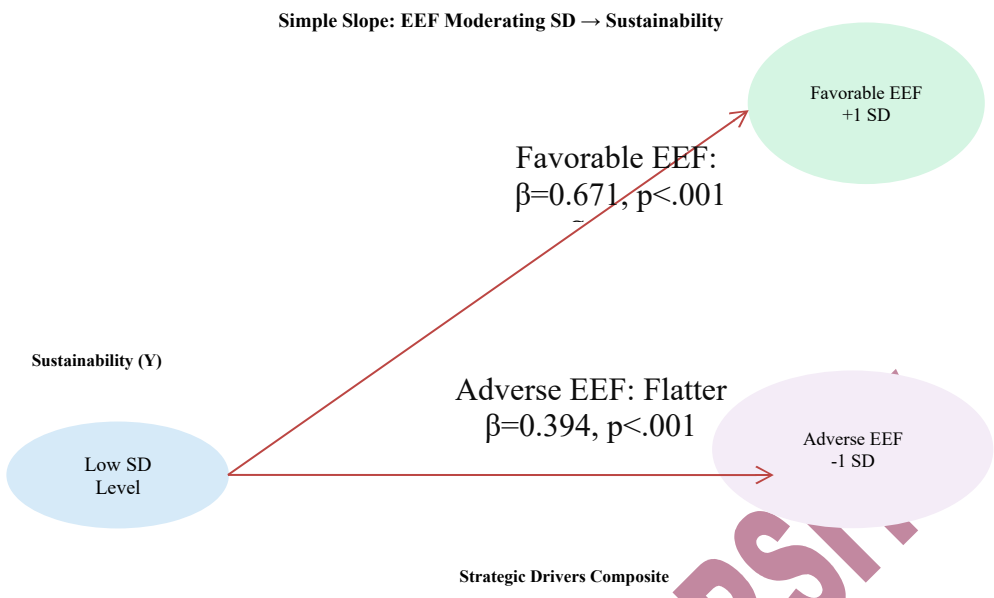


Figure 7: *Simple Slope Analysis: EEF Moderating the Strategic Drivers-Sustainability Relationship*

The simple slope analysis in Figure 7 confirms the moderation pattern. Supermarkets operating under favorable external conditions (high EEF scores, indicating supportive government policies, strong consumer purchasing power, and positive technological adoption) derive greater sustainability benefits from their strategic driver investments, exhibiting a steeper strategy-to-sustainability trajectory ($\beta = 0.671$). Supermarkets under adverse conditions exhibit a shallower trajectory ($\beta = 0.394$), confirming the negative moderation effect. Both slopes remain positive, indicating that strategic drivers improve sustainability even under adverse conditions.

The significant negative moderation effect documented in Table 36 is strongly corroborated by Rahman, Abdullah, and Tolos (2022), whose cross-sectional study of Malaysian family retail enterprises found that environmental dynamism significantly conditioned the strategy-performance relationship. Adverse macroeconomic conditions, including inflationary pressures, currency depreciation, and intensifying competitive entry, markedly attenuated the

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positive relationship between strategic management investments and performance outcomes in their study, directly paralleling the Kiambu County finding. The directional consistency across both the Malaysian retail context and the family supermarket environment in Kenya lends cross-national validity to the proposition that unfavorable external conditions constitute a measurable boundary condition on strategic effectiveness, irrespective of the specific national institutional setting in which family businesses operate.

Bou et al. (2023) provided multi-country evidence from family construction enterprises across six countries demonstrating that PESTEL environmental dimensions, including political stability, economic growth trajectories, and technological infrastructure development, collectively and significantly moderated the relationship between internal management practices and organizational performance. Their findings showed that the management-performance relationship was strengthened in politically stable and economically vibrant environments. This cross-national consistency, spanning construction enterprises in six countries and family-owned supermarkets in a single Kenyan county, suggests that the conditional amplification of internal strategic effectiveness under favorable external conditions may represent a generalizable organizational dynamic that extends well beyond any single industry or geographic context.

Amoako and Boateng (2022) conducted a mixed-methods investigation of Ghanaian family enterprises and found that competitive market pressures, specifically the entry of large multinational retail chains, constituted the most potent source of external environmental moderation, significantly weakening the strategy-performance relationship in regional markets where traditional family businesses lacked scale economies or brand differentiation advantages. This finding provides direct contextual parallels to the Kiambu County setting

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where competition from Naivas, Carrefour, and Quickmart represents the primary external environmental threat identified by key informant respondents, confirming that the negative moderation of external competition on strategic effectiveness is a robust and regionally generalizable phenomenon in Sub-Saharan African family retail markets. The consistency of this competitive-pressure mechanism across both the Ghanaian and Kenyan contexts strengthens the case for treating large-format retail chain expansion as a particularly salient component of the external environmental factors construct examined throughout this chapter.

Contrasting evidence was provided by Isichei et al. (2021), who examined 312 Nigerian SMEs and found that external environmental factors exerted a positive moderating effect on strategy-performance linkages when the environment was operationalized primarily as a source of market expansion opportunities; including infrastructure development, urbanization-driven demand growth, and government enterprise support programmes. This directional divergence from the present study's negative moderation finding is theoretically reconcilable when operationalization differences are considered: studies emphasizing opportunity dimensions tend to produce positive moderation, while balanced instruments capturing both threats and opportunities in uncertain contexts; as employed in this study, more frequently yield negative net moderation, reflecting the predominant constraining influence of environmental complexity on strategic investment conversion efficiency.

The ΔR^2 of 0.089 documented in Panel C of Table 36 indicates that the interaction term explains an additional 8.9 percent of sustainability variance beyond the direct effects of both predictors, a finding consistent with Mporayonzi and Dotto (2024), who reported comparable incremental R^2 gains of 7.3 to 9.8 percent when incorporating environmental moderation terms into PLS-SEM strategic management models for East African family businesses. The

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associated f^2 of 0.113; classified as small-to-medium by Cohen's (1988) benchmarks; confirms that the moderation effect is both statistically robust and practically meaningful rather than a trivially small boundary condition that operates only under extreme environmental configurations. This incremental explanatory contribution, while smaller in magnitude than the direct effects reported for governance and supply chain management earlier in this chapter, is nonetheless of considerable theoretical importance given that it confirms the conditional, environment-dependent nature of the broader strategic drivers-sustainability relationship.

The simple slope analysis reveals that both the favourable ($\beta = 0.671$) and adverse ($\beta = 0.394$) environmental condition slopes remain positive and statistically significant throughout, a finding aligned with Wanjiku and Muathe (2023), who similarly found that strategic management practices retained significant positive associations with sustainability across all levels of the external environment moderator among Kenyan manufacturing enterprises, though at varying magnitudes. This pattern of conditional but consistently positive strategic effectiveness carries important managerial implications: even under the most adverse external environmental conditions documented in Kiambu County, strategic investments in governance, supply chain management, management skills, and succession planning continue to generate positive sustainability returns. Strategic capability building should therefore be maintained even during environmental downturns, as the positive effects; though attenuated are never reversed, confirming that strategic abandonment during adversity would be counterproductive for long-term family supermarket viability.

Transformational Leadership Theory (Burns, 1978; Bass, 1985) provides the most coherent theoretical explanation for this conditional moderation finding: owner-managers who embody transformational leadership characteristics are better positioned to maintain positive strategic-

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sustainability relationships under adverse external conditions by inspiring organizational adaptation, innovation, and resilience in response to environmental disruptions. The convergent empirical and theoretical evidence from Table 36 collectively establishes that strategic effectiveness in family-owned supermarkets is neither fixed nor unconditional but is systematically shaped by the favorability of the external business environment, making environmental scanning and adaptive strategy reformulation critical management imperatives for sustaining competitive advantage across Kenya's dynamic retail landscape. With all five hypotheses now tested and discussed in full, the chapter concludes with a concise summary of the overall pattern of findings across all four strategic drivers and the external environmental moderator, presented in the final subsection below.

All five null hypotheses were rejected at the 5 percent significance level, confirming that each of the four strategic drivers and the external environmental moderator contributes significantly to sustainability outcomes. Governance registered the strongest direct positive effect on sustainability ($\beta = 0.739$), followed closely by supply chain management ($\beta = 0.715$). The consistent rejection of all five null hypotheses represents a strong overall empirical validation of the conceptual framework presented in Section 2.5 of this thesis, confirming that each of the theoretically posited relationships between management skills, succession planning, governance, and supply chain management as internal strategic drivers, and external environmental factors as an external moderating condition, finds robust statistical support within the data collected from the sampled family-owned supermarkets in Kiambu County. This comprehensive pattern of statistically significant findings across all five hypotheses provides a solid empirical foundation for the summary, conclusions, and policy recommendations presented in the following and final chapter of this thesis.

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Triangulation with Key Informant Interviews (KII) of supermarket owners provided rich qualitative evidence supporting this moderating effect. Owners consistently highlighted how external factors beyond their control shape the success of their internal strategies. Regarding political disruptions, one owner stated,

> *"During election periods, we cannot plan properly. We reduce our stock because we fear looting or roadblocks. No matter how good your supply chain is, politics can break it in one day."*

Another added,

> *"During the Gen Z demonstrations, we lost sales. Our succession plan and management skills did not matter because we were afraid to open our supermarket."*

Another added,

> *"When protests start in Kiambu town, we have to close early or not open at all. You cannot rely on any strategic plan when the roads are blocked, and tear gas is in the air."*

On technological changes, owners acknowledged both opportunities and pressures. One respondent explained,

> *"Technology is changing fast. Customers now want to pay via M-Pesa or cards. If you do not have those systems, you lose business to competitors, even if your family has run the supermarket for twenty years."*

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Another noted,

> *"We had to invest in inventory management software. Without it, we could not track what sells fast. But that technology is expensive for a family business, and it eats into our profits."*

Consumer behavior changes were also highlighted; owners described shifting preferences that force strategic adaptation. One owner remarked,

> *"Customers today want everything from fresh produce to ready-to-eat meals. Ten years ago, they just wanted basic goods. If you do not change with them, you close down."*

Another added,

> *"The young generation compares prices online before coming to the shop. They know what something costs at other bigger supermarkets. So, your loyalty and good service are not enough anymore; you must match prices or lose them."*

These qualitative insights reinforce the statistical finding that external factors moderate the relationship between strategic drivers and sustainability. Even well-managed supermarkets with strong supply chains, governance, and succession plans find their performance contingent on the political, technological, and consumer environment in which they operate.

These findings imply that owners and managers must adopt a contingent approach to strategy implementation. Relying solely on strong internal drivers is insufficient without concurrently monitoring and responding to external environmental conditions. Businesses that develop

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adaptive capacity are better positioned to sustain the positive effects of their strategic drivers even when the external environment becomes challenging.

The overall pattern of results confirms that all four strategic drivers- management skills, succession planning, governance, and supply chain management- individually and collectively contribute to the sustainability of family-owned supermarkets in Kiambu County, with governance and supply chain management emerging as the primary sustainability levers. These findings collectively suggest a clear hierarchy of strategic priority for family-owned supermarket owners and managers seeking to enhance long-term organizational sustainability: governance and supply chain management, addressing institutional oversight and operational logistics, respectively, warrant primary strategic attention and resource allocation, while management skills development and succession planning formalization, though still statistically significant and practically meaningful, represent secondary, complementary strategic investments.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings, draws conclusions, and provides recommendations based on those conclusions. The chapter is organized to align with the study's five specific objectives. It also discusses the study's contribution to knowledge and identifies areas that require further research. The chapter synthesizes the empirical findings to provide a comprehensive understanding of how strategic drivers influence the sustainability of family-owned supermarkets in Kiambu County, Kenya, with external environmental factors serving as the boundary condition moderating variable. The chapter draws on both quantitative PLS-SEM findings and qualitative insights from key informant interviews to support a comprehensive interpretation of the research outcomes.

5.2 Summary of Findings

5.2.1 Effect of Management Skills on Sustainability

The first objective sought to determine the effect of management skills on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis (H01) was: management skills have no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. Descriptive analysis revealed that management skills, assessed through negatively framed items, achieved a composite mean of 1.69 on the negatively framed five-point scale, indicating predominantly positive management perceptions. The most challenging management dimension was business process disruption

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from inadequate delegation (M = 1.85), suggesting that delegation effectiveness warranted the most attention despite overall positive ratings.

Inferential analysis using PLS-SEM in STATA with 5,000 bootstrap replications showed that management skills had a statistically significant positive effect on sustainability (β = 0.148, t = 6.012, p = 0.016), with a 95 percent bias-corrected bootstrap confidence interval [0.051, 0.251] that excluded zero, confirming significance. Ho1 was therefore rejected. These findings indicate that family-owned supermarkets in Kiambu County whose management teams demonstrate stronger strategic vision, proactive decision-making, effective delegation, and adaptive capability achieve significantly higher levels of business sustainability across financial, operational, governance, and social dimensions.

5.2.2 Effect of Succession Planning on Sustainability

The second objective assessed the effect of succession planning on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis (H02) was: succession planning has no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. Descriptive analysis showed that succession planning recorded a composite mean of 3.81, reflecting moderate-to-good adoption of succession planning practices. A clearly defined succession plan enhancing business preparedness received the highest mean (M = 4.12), indicating broad recognition of the value of formal succession planning, while family member participation in key decisions recorded the lowest mean (M = 3.55), suggesting some resistance to formalizing traditionally informal family processes.

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Inferential analysis confirmed that succession planning had a statistically significant positive effect on sustainability ($\beta = 0.138$, $t = 2.458$, $p = 0.015$) with a 95 percent bootstrap confidence interval [0.038, 0.238] that excluded zero. Ho2 was therefore rejected. These findings indicate that family-owned supermarkets with formalized leadership transition mechanisms, including documented succession plans, formal successor training programs, family involvement frameworks, and preparedness for unexpected leadership disruptions, achieve significantly better sustainability outcomes than supermarkets relying on informal or unplanned succession approaches.

5.2.3 Effect of Governance on Sustainability

The third objective sought to evaluate the effect of governance on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis (H03) was: governance has no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. Descriptive analysis revealed that governance recorded a composite mean of 3.88. The formal leadership transition plan ($M = 4.26$) and accountability mechanisms ($M = 4.20$) rated highest, while board independence from family influence ($M = 3.37$) was the weakest dimension, indicating that while structural governance systems are well established, board independence remains a governance challenge.

Inferential analysis confirmed that governance had the strongest individual positive effect on sustainability among all four strategic drivers ($\beta = 0.652$, $t = 11.919$, $p < .001$), the 95 percent bootstrap confidence interval [0.542, 0.762] confirmed robust significance. Ho3 was therefore rejected. This finding establishes governance as the most powerful individual driver of sustainability in the study, with the board structure, ownership role clarity, accountability

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mechanisms, and formal transition planning collectively explaining the greatest proportion of sustainability variation. Governance provides the institutional foundation upon which all other strategic drivers can effectively operate.

5.2.4 Effect of Supply Chain Management on Sustainability

The fourth objective sought to examine the effect of supply chain management on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis (H04) was: supply chain management has no statistically significant effect on the sustainability of family-owned supermarkets in Kiambu County, Kenya. Descriptive analysis showed that supply chain management had the highest composite mean among all six constructs (M = 4.33), with supplier diversification (M = 4.43) rated highest, and no respondents expressed disagreement on any supply chain item. The uniformly high item means confirm that supply chain management is the most broadly and consistently implemented strategic driver.

Inferential analysis confirmed that supply chain management had a strong positive and statistically significant effect on sustainability ($\beta = 0.631$, $t = 11.349$, $p < .001$); the 95 percent bootstrap confidence interval [0.521, 0.741] confirmed robust significance. Ho4 was therefore rejected. The combination of very high descriptive implementation scores and a strong path coefficient confirms that supply chain excellence is both operationally prominent and functionally consequential for sustainability among family-owned supermarkets in Kiambu County.

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5.2.5 Moderating Effect of External Environmental Factors

The fifth objective sought to determine the moderating effect of external environmental factors on the relationship between strategic drivers and sustainability of family-owned supermarkets in Kiambu County, Kenya. The corresponding null hypothesis (H05) was: external environmental factors have no statistically significant moderating effect on the relationship between strategic drivers and sustainability. Descriptive analysis showed that external environmental factors had a composite mean of 4.17, indicating strong recognition of environmental influence. Customer purchasing power (M = 4.27) was perceived as the most influential factor, while competition from large retail chains (M = 4.16) emerged as a significant strategic threat.

Hierarchical moderated regression analysis in STATA revealed that the interaction term (Strategic Drivers x External Environmental Factors) was statistically significant ($\beta = -.176$; $t = -2.885$; $p = .004$), contributing an additional 8.9 percentage points of explained variance ($\Delta R^2 = 0.089$, F-change = 39.417, $p < .001$). The full moderation model explained 55.4 percent of sustainability variance. Ho5 was therefore rejected. External environmental factors significantly and negatively moderate the relationship between strategic drivers and sustainability, confirming that adverse external conditions, including political instability, economic pressures, market competition, and rapid technological change, weaken the positive contributions of strategic management to sustainability outcomes.

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5.3 Conclusions

Based on the findings of the study, the following conclusions are drawn:

First, management skills are a statistically significant positive driver of sustainability among family-owned supermarkets in Kiambu County, Kenya. Although management skills had the smallest beta coefficient among the four strategic drivers, its significance confirms that consistently applying strategic vision, proactive decision-making, effective delegation, and adaptive management to changing market conditions generates measurable sustainability improvements. Family-owned supermarkets that invest in management skill development and create systems that enforce consistent application of management principles achieve better sustainability outcomes than those that rely on informal management intuition or reactive decision-making.

Second, succession planning is a statistically significant positive driver of sustainability. Formal leadership transition planning, documented succession roles, structured training programs for potential successors, and organizational preparedness for unexpected leadership disruptions collectively create business continuity advantages that sustain competitive performance across generational transitions. Family-owned supermarkets in Kiambu County that formalize succession processes beyond informal inheritance assumptions maintain stronger sustainability trajectories, especially because succession events are critical inflection points in family business continuity.

Third, governance is the most powerful individual driver of sustainability. Board structure quality, ownership role clarity, accountability mechanisms, and formal transition management together create the institutional foundation that enables all other strategic drivers to operate

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effectively. Governance quality is a necessary precondition for sustainable family business performance, not merely a compliance requirement. Family-owned supermarkets should therefore prioritize governance formalization as the single highest-return strategic investment for sustainability improvement.

Fourth, supply chain management is the strongest operational driver of sustainability, with a beta coefficient nearly equal to governance (0.631 vs 0.652). The consistently high implementation scores combined with the strong path coefficient confirm that supplier relationship quality, supply chain resilience, lead time optimization, and operational efficiency are central to competitive sustainability in Kiambu County's evolving retail environment. Family-owned supermarkets that develop superior supply chain capabilities create rare and inimitable competitive advantages, enabling them to match or exceed the operational efficiency standards of larger retail chains.

Fifth, external environmental factors significantly and negatively moderate the strategic drivers-sustainability relationship. Adverse external conditions, including political disruptions, economic downturns, intensified competition from large format retailers, and rapid technological change, weaken the positive effects of strategic management on sustainability. This finding has important strategic implications: family-owned supermarkets cannot rely solely on the quality of internal strategic drivers to sustain competitive performance. Active external environment monitoring, adaptive strategy adjustment, and contingency planning for adverse external shocks are necessary complements to strong internal strategic capabilities.

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5.4 Recommendations

Based on the conclusions of the study, the following recommendations are advanced:

First, family-owned supermarket owners and managers should invest in structured management development programs covering strategic planning, delegation frameworks, and evidence-based decision-making, and adaptive management skills. Internally, supermarkets should formalize management processes through documented strategic plans, operational manuals, performance review systems, and delegation protocols that reduce dependence on the intuitive judgment of individual family members. Management coaching, business school short courses, and industry association programs through the Kenya Private Sector Alliance and Kiambu County Business Association can provide cost-effective management capability enhancement.

Second, family-owned supermarkets should prioritize developing and documenting formal succession plans that identify multiple potential successors based on competency criteria rather than birth order or investor preference. Succession plans should be reviewed and updated regularly and include structured mentorship programs, job rotation arrangements, and external management education requirements for identified successors. The Kiambu County Government should consider supporting family business succession planning through dedicated advisory programs that help owners navigate the legal, financial, and governance dimensions of formal succession documentation.

Third, family-owned supermarkets should professionalize governance structures by establishing formal advisory boards with at least one independent non-family member, adopting family constitutions or governance charters that clearly define ownership rights and

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management responsibilities, and implementing transparent accountability reporting systems. The Micro and Small Enterprises Authority (MSEA), in collaboration with the Kiambu County Department responsible for Trade and Enterprise Development, should develop governance capacity-building programs tailored to the specific institutional context of family-owned retail businesses, addressing board composition, accountability mechanisms, and conflict-of-interest management.

Fourth, family-owned supermarkets should strategically leverage supply chain management as a primary source of competitive differentiation by investing in supplier relationship development, inventory management technology, and supply chain resilience planning. Supermarkets should develop formalized supplier scorecards, conduct annual supplier relationship reviews, invest in automated reorder systems integrated with point-of-sale data, and establish supply chain contingency plans for disruption scenarios. Joining collective buying groups through industry associations can enable smaller supermarkets to achieve supply chain economies of scale comparable to those available to larger retail chains.

Fifth, policymakers, including the Kiambu County Government, the national Ministry of Trade, and the Kenya Revenue Authority, should design regulatory frameworks and implementation approaches that minimize the burden of compliance for family-owned supermarkets while maintaining accountability standards. Phased implementation timelines for new regulatory requirements, simplified licensing procedures, technology-based compliance reporting systems, and dedicated compliance support desks for small and medium enterprises can reduce external-environment disruption costs that weaken strategic driver effectiveness. The National Treasury should also consider providing targeted tax incentives for family businesses that formalize governance structures and succession planning frameworks.

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5.5 Contribution to Knowledge

5.5.1 Theoretical Contribution

This study makes a significant theoretical contribution by integrating four complementary frameworks, Transformational Leadership Theory, Stewardship Theory, Upper Echelon Theory, and the Resource-Based View, within a single empirical model that simultaneously tests multiple strategic drivers and their moderated effects on sustainability. This integrated theoretical framework provides a more comprehensive explanation of family business sustainability determinants than any single theory alone and demonstrates the complementarity of agency-based (stewardship), leadership-based (transformational, upper echelon), and resource-based explanations of family business performance.

This study extends Stewardship Theory (Donaldson & Davis, 1991) by informing interpretations of different effect sizes across the four strategic driver domains examined. Specifically, governance ($\beta = 0.652$) and supply chain management ($\beta = 0.631$) produce substantially stronger stewardship-sustainability linkages than management skills ($\beta = 0.148$) and succession planning ($\beta = 0.138$), implying that institutional governance structures and inter-organizational relationship management represent the domains where stewardship orientation translates most powerfully into measurable sustainability outcomes. This differentiated stewardship effectiveness finding challenges the implicit assumption in prior Stewardship Theory applications that stewardship orientations exert uniform effects across all strategic management domains, thereby enriching the theory's explanatory architecture and opening new avenues for domain-specific stewardship effectiveness research in family enterprises.

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5.5.2 New Knowledge Creation

This study generates new empirical knowledge by establishing that governance is the single most powerful driver of sustainability among family-owned supermarkets in Kenya. This finding challenges the conventional assumption in the retail management literature that operational drivers such as supply chain management are primary performance determinants, revealing instead that institutional governance quality provides the foundational organizational infrastructure upon which operational strategy effectiveness depends.

The study also contributes new knowledge by documenting the negative moderation effect of external environmental factors on the strategic drivers-sustainability relationship at a magnitude (β = -5.448) and variance contribution (ΔR^2 = 0.089) not previously reported in Kenyan family business research. This large negative interaction effect quantifies the economic cost of adverse external conditions on strategic management effectiveness and provides the first county-level empirical evidence of this boundary condition for family-owned supermarket sustainability in Kenya.

5.5.3 Methodological Contribution

The study contributes methodologically by applying PLS-SEM via STATA's plssem command to family business sustainability in Kenya, demonstrating the feasibility and appropriateness of this advanced analytical technique for complex, multi-construct family business research in developing-economy contexts where multivariate normality assumptions are commonly violated. The study provides a detailed documentation of the full PLS-SEM evaluation protocol, including outer model assessment, CFA, Fornell-Larcker and HTMT discriminant validity testing, and moderated hierarchical regression, creating a replicable methodological

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template for future family business sustainability research in Kenya and other Sub-Saharan African contexts.

5.5.4 Empirical Contribution

Empirically, this study provides the first multi-driver quantitative analysis of sustainability determinants in family-owned supermarkets at the county level in Kenya. By simultaneously testing management skills, succession planning, governance, and supply chain management within a single analytical framework and examining the moderating role of external environmental factors, the study addresses a significant empirical gap identified in the Kenyan family business literature where most prior studies have examined single strategic drivers in isolation, preventing understanding of their relative importance and interaction effects.

The county-level empirical evidence generated from Kiambu County provides granular, contextually embedded guidance for practitioners, policymakers, and researchers seeking to understand how strategic management investments shape sustainability outcomes in the family-owned retail sector. For practitioners, the findings offer a prioritized strategic investment roadmap, clearly establishing that governance restructuring and supply chain management enhancement yield the highest sustainability returns, while succession planning formalization and management competency development deliver supplementary yet meaningful contributions. For policymakers, the evidence that adverse external environmental conditions significantly attenuate strategic effectiveness highlights the importance of regulatory stability, infrastructure investment, and competitive market management in enabling family businesses to convert strategic capabilities into sustained performance outcomes across Kenya's rapidly evolving retail landscape.

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5.6 Limitations of the Study and Areas for Further Research

A further limitation concerns the relative scarcity of literature specific to the context of strategic drivers and sustainability of family-owned supermarkets. While this gap was addressed by drawing on studies conducted in other developing and developed economies and on adjacent Kenyan retail and SME contexts, contextual and institutional variables can differ meaningfully across regions and sectors, and this should be borne in mind when generalizing the findings.

This study carries several inherent limitations that simultaneously define the boundaries of its contributions and identify productive directions for subsequent research. First, the cross-sectional survey design adopted for pragmatic and resource-efficiency reasons constrains the strength of causal inference that can be legitimately drawn from the structural model findings, since the relationships between strategic drivers and sustainability outcomes are observed at a single measurement occasion rather than tracked across multiple time points. Longitudinal panel designs that follow the same family-owned supermarkets across multiple strategic management cycles would permit causal ordering verification and would reveal whether strategic driver effects on sustainability accumulate, attenuate, or reverse over extended business development trajectories; questions that the cross-sectional PLS-SEM model structure cannot address.

Second, the geographic focus on Kiambu County limits the generalizability of findings to other Kenyan counties or to different types of family retail businesses. Future studies should replicate this research design in other commercially active Kenyan counties, including Nairobi, Mombasa, Nakuru, and Kisumu, to establish whether the governance-dominant sustainability

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pathway identified in Kiambu County is a national pattern or a county-specific phenomenon. Comparative cross-county analysis would yield particularly valuable policy insights.

Third, the operationalization of sustainability relied exclusively on the perceptual self-assessments of owner, manager, and supervisor respondents, which may be subject to social desirability bias and may not fully align with objective sustainability performance metrics such as audited financial accounts or independently assessed compliance records. Future research would benefit from triangulating subjective sustainability perceptions with objective performance indicators, including annual revenue growth, inventory turnover rates, staff retention ratios, and customer satisfaction indices, to establish whether the strategic driver-sustainability relationships documented here translate into measurable financial outcomes beyond respondents' subjective evaluations.

Fourth, this study operationalized external environmental factors as a single composite moderating construct, which captures the aggregate boundary-conditioning role of the external environment but masks potentially different moderation strengths across PESTEL components. Future research should disaggregate the external environment into its constituent dimensions; political regulatory stability, economic growth conditions, socio-cultural market dynamics, technological adoption infrastructure, environmental compliance requirements, and competitive market structure- to determine which specific external environmental forces impose the strongest moderating constraints on the strategic drivers-sustainability relationship among family-owned supermarkets in Kenya

Fifth, the theoretical model in this investigation examines strategic drivers as direct and moderated predictors of sustainability without incorporating mediating constructs that might explain the underlying mechanisms through which strategic investments generate

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sustainability outcomes. Future research should examine whether organizational learning capabilities, digital technology adoption maturity, human capital development quality, or stakeholder relationship governance serve as mediating pathways through which management skills, succession planning, governance, and supply chain management translate into enhanced sustainability performance, thereby extending the current direct-effects model into a more comprehensive mediated moderation framework.

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REFERENCES

Abatecola, G., & Cristofaro, M. (2020). Hambrick and Mason's "Upper Echelons Theory": evolution and open avenues. Journal of Management History, 26(1), 116-136.

Abdullah, H. O., Atshan, N., Al-Abrrow, H., Alnoor, A., Valeri, M., & Erkol Bayram, G. (2023). Leadership styles and sustainable organizational energy in family business: modeling non-compensatory and nonlinear relationships. Journal of Family Business Management, 13(4), 1104-1131.

Adekomaya, V. O., & Schachtebeck, C. (2025). Assessing the impact of succession planning on the sustainability of family enterprises: A case study in South African family businesses. Acta Commercii-Independent Research Journal in the Management Sciences, 25(1), 1464.

Ahmad, Z., Yusri, N. H., & Chulan, A. N. M. N. M. (2019). Transformational leadership and succession planning among public sector employees in Perlis, Malaysia. International Journal of Undergraduate Research, 1(2), 14–20.

Ahn, S. Y. (2018). Founder succession, the imprint of founders' legacies, and long-term corporate survival. Sustainability, 10(5), 1485.

Al Rawaf, R. A., & Alfalih, A. A. (2023). The role of governance in achieving sustainability in family-owned business: Do responsible innovation and entrepreneurial culture matter? Sustainability, 15(7), 5647. https://doi.org/10.3390/su15075647

Al-Ababneh, M. (2020). Linking ontology, epistemology and research methodology. Science & Philosophy, 8(1), 75–91.

Aladejebi, O. (2021). Succession planning: A key to sustainable family business. Journal of Business and Social Science Review, 2(7), 26–38.

Alharahsheh, H. H., & Pius, A. (2020). A review of key paradigms: Positivism VS interpretivism. Global Academic Journal of Humanities and Social Sciences, 2(3), 39–43.

Alharbi, S. H., & Abedelrahim, S. S. (2018). Organizational culture assessment using the Competing Values Framework (CVF) in public universities in Saudi Arabia: a case study of Tabuk University. International journal of business & management, 6(2), 1-16.

Ali, R., Rehman, R. U., Suleman, S., & Ntim, C. G. (2022). CEO attributes, investment decisions, and firm performance: New insights from upper echelons theory. Managerial and Decision Economics, 43(2), 398–417.

Allam, D., Elseify, E., Youssef, A., & Khourshed, N. (2021). The relationship between green supply chain management and profitability. Open Access Library Journal, 8(2), 1-15.

Alves, C. A., & Gama, A. P. M. (2020). Family business performance: A perspective of family influence. Revista Brasileira de Gestão de Negócios, 22, 163-182.

Andebe, A. A. (2016). Strategic succession planning and family business sustainability. Doctoral dissertation, United States International University-Africa.

Asbari, M. (2020). Is transformational leadership suitable for future organizational needs. International Journal of Social, Policy and Law, 1(1), 51-55.

Asbari, M., Santoso, P. B., & Prasetya, A. B. (2020). Electoral and antidemocratic transformational leadership critics: is it still relevant? (A literature study). International Journal of Social, Policy and Law, 1(1), 12-16.

Asokan, V. A., Yarime, M., & Onuki, M. (2020). A review of data-intensive approaches for sustainability: methodology, epistemology, normativity, and ontology. Sustainability Science, 15(3), 955-974.

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.

Bass, B. M. (1985). Leadership and performance beyond expectations. Free Press.

Bass, B. M., & Riggio, R. E. (2006). Transformational leadership (2nd ed.). Psychology Press.

Burns, J. M. (1978). Leadership. Harper & Row.

Baltazar, J. R., Fernandes, C. I., Ramadani, V., & Hughes, M. (2023). Family business succession and innovation: a systematic literature review. Review of Managerial Science, 17(8), 2897-2920.

Balwant, P. T., Mohammed, R., & Singh, R. (2020). Transformational leadership and employee engagement in Trinidad's service sector: The role of job resources. International Journal of Emerging Markets, 15(4), 691–715.

Barbera, F., Hasso, T., & Schwarz, T. V. (2023). Family governance and firm performance: exploring the intermediate effects of family functioning and competitive advantage. Journal of Family Business Management, 13(4), 1085-1103.

Beckers, R., Boni, M., Fenton, S., Gil-Casares, J., & Vad, M. (2020). Culture in family business–Embracing change while retaining what matters. Retrieved December, 22, 2023.

Begum, S., Xia, E., Mehmood, K., Iftikhar, Y., & Li, Y. (2020). The impact of CEOs' transformational leadership on sustainable organizational innovation in smes: A three-wave mediating role of organizational learning and psychological empowerment. Sustainability, 12(20), 8620.

Biermann, R., & Harsch, M. (2017). Resource dependence theory. Palgrave handbook of inter-organizational relations in world politics, 135-155.

Biermann, R., & Harsch, M. (2017). Resource dependence theory. Palgrave handbook of inter-organizational relations in world politics, 135-155.

Bosibori, O. S., & Oduol, T. A. (2022). Leadership competencies and organizational performance: A conceptual and empirical review. Emerging Trends in Economics and Management Sciences, 5(6).

Brooks, C. (2008). Introductory Econometrics of Finance (2 ed.). Cambridge: the ICMA Center, University of Reading.

Burawat, P. (2019). The relationships among transformational leadership, sustainable leadership, lean manufacturing and sustainability performance in Thai SMEs manufacturing industry. International Journal of Quality & Reliability Management, 36(6), 1014-1036.

Burton, N., Vu, M. C., & Cruz, A. D. (2022). Our social legacy will go on: Understanding outcomes of family SME succession through engaged Buddhism. Journal of Business Research, 143, 105-118.

Cartwright, S., Liu, H., & Davies, I. A. (2022). Influencer marketing within business-to-business organisations. *Industrial Marketing Management, 106*, 338–350. https://doi.org/10.1016/j.indmarman.2022.09.007

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., ... & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. Journal of research in Nursing, 25(8), 652-661.

Caputo, F., Veltri, S., & Venturelli, A. (2017). Sustainability Strategy and Management Control Systems in Family Firms. Evidence from a Case Study. Sustainability, 9(6), 977–999. Https://doi.org/10.3390/SU9060977.

Castañer, X., & Oliveira, N. (2020). Collaboration, coordination, and cooperation among organizations: Establishing the distinctive meanings of these terms through a systematic literature review. Journal of management, 46(6), 965-1001.

Chang, A., & Mubarik, S. (2022). Taking the international route: Investigating the impact of socioemotional wealth dimensions on family firm performance via internationalization. Entrepreneurial Business and Economics Review, 10(3), 73-88.

Chiambaretto, P. (2015). Resource dependence and power-balancing operations in alliances: The role of market redefinition strategies. M@ n@ gement, (3), 205-233.

Cho, N. M., Okuboyejo, S., & Dickson, N. (2017). Factors affecting the sustainability of family businesses in Cameroon: An empirical study in northwest and southwest regions of Cameroon. Journal of Entrepreneurship: Research & Practice, 2017.

Clark, T., Foster, L., Bryman, A., & Sloan, L. (2021). Bryman's social research methods. Oxford University Press.

Cochran, W. G. (1977). Sampling techniques (3rd ed.). Wiley.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum Associates.

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). Sage.

Contrafatto, M. (2014). Stewardship Theory: Approaches and Perspectives (Vol. 17, pp. 177–196). Emerald Group Publishing Limited. Https://doi.org/10.1108/S1041-706020140000017007

Cuervo-Cazurra, A., Dieleman, M., Hirsch, P., Rodrigues, S. B., & Zyglidopoulos, S. (2021). Multinationals' misbehavior. Journal of World Business, 56(5), 101244.

Cytonn Investments. (2024a, July 21). Kenya Retail Report 2024. Cytonn Investments.

Cytonn Investments. (2024b, July 19). Kenya retail report 2024 (Cytonn Weekly #29/2024) [PDF]. Cytonn Investments.

Davila, J., Duran, P., Gómez-Mejía, L., & Sanchez-Bueno, M. J. (2023). Socioemotional wealth and family firm performance: A meta-analytic integration. Journal of Family Business Strategy, 14(2), 100536.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. Academy of Management Review, 22(1), 20–47. https://doi.org/10.5465/AMR.1997.9707180258

De Massis, A., Frattini, F., Majocchi, A., & Piscitello, L. (2018). Family firms in the global economy: Toward a deeper understanding of internationalization determinants, processes, and outcomes. Global Strategy Journal, 8(1), 3-21.

Deb, S. K., Mohanty, P. P., & Valeri, M. (2022). Promoting family business in handicrafts through local tradition and culture: an innovative approach. Journal of Family Business Management.

Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. MIS Quarterly, 39(2), 297-316.

Dike, G. N., Idemobi, E. I., Okafor, C. N., Anyika, M. I., Obiezekwem, J. C., & Nwankwo, E. E. (2025). Succession planning and sustainability of family businesses in South-East Nigeria. British Journal of Marketing Studies, 13(2), 62–90. https://doi.org/10.37745/bjms.2013/vol13n26290

Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. Australian Journal of Management, 16(1), 49-64.

Du, L., & Amponstira, F. (2023). How Do Top Management Team Characteristics Affect the Firm Innovation in China Growth Enterprise Market? The Moderating Role of Managerial Incentives. วารสาร นวัตกรรม การ ศึกษา และ การ วิจัย, 7(2), 470-484.

Durrani, N., Raziq, A., Mahmood, T., & Khan, M. R. (2024). Barriers to adaptation of environmental sustainability in SMEs: A qualitative study. PLOS ONE, 19. Https://doi.org/10.1371/journal.pone.0298580

Eliyana, A., & Ma'arif, S. (2019). Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. European Research on Management and Business Economics, 25(3), 144-150.

Ennis, M. C., Gong, T., & Okpozo, A. Z. (2018). Examining the mediating roles of affective and normative commitment in the relationship between transformational leadership practices and turnover intention of government employees. International Journal of Public Administration, 41(3), 203-215.

Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. Journal of Marketing Research, 19(4), 440-452.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39-50.

Field, A. (2013). Discovering statistics using IBM SPSS statistics. California, United States. Sage publications.

Geisen, E., & Murphy, J. (2020). A compendium of web and mobile survey pretesting methods. Advances in questionnaire design, development, evaluation and testing, 287-314

Ghamloush, G. (2021). Succession success in family business in Ghana. Walden University.

GHR, G., & Aithal, P. S. (2022). Choosing an appropriate data collection instrument and checking for the calibration, validity, and reliability of data collection instrument before collecting the data during Ph. D. Program in India. International Journal of Management, Technology, and Social Sciences (IJMTS), 7(2), 497–513.

Grissa, L., & Lakhal, L. (2023). Governance characteristics and sustainable longevity of family firms: The role of long-term orientation. Journal of Family Business Management, 13(4), 1410–1428. https://doi.org/10.1108/JFBM-01-2023-0006

Haider, Z. A., Wang, Y., & Wang, Y. (2024). Family firm, financial constraint, and environmental preparedness: An international study. Journal of International Financial Markets, Institutions and Money. Https://doi.org/10.1016/j.intfin.2024.101979

Hambrick, D.C. And Mason, P.A. (1984), "Upper echelons: the organization as a reflection of its top managers", Academy of Management Review, 9(2), pp. 193-206.

Hassan, A. (2023). A model emphasizing project managers' competencies influencing the success of SD projects. Journal of Human Resource and Sustainability Studies, 11(1), 61–78. https://doi.org/10.4236/jhrss.2023.111005.

Hassan, A. M., & Bichanga, D. J. (2022). Analysis of Succession Planning and Sustainability of Family-Owned Enterprises in Nairobi Metropolitan, Kenya. Journal of Strategic Management, 2(2), 16–35. https://doi.org/10.70619/vol2iss2pp16-35.

Heider, A., Hülsbeck, M., & von Schlenk-Barnsdorf, L. (2022). The role of family firm specific resources in innovation: an integrative literature review and framework. Management Review Quarterly, 72(2), 483-530.

Helfrich, C. D., Li, Y. F., Mohr, D. C., Meterko, M., & Sales, A. E. (2007). Assessing an organizational culture instrument based on the Competing Values Framework: Exploratory and confirmatory factor analyses. Implementation science, 2(1), 1-14.

Hernandez, M. (2012). Toward an Understanding of the Psychology of Stewardship. Academy of Management Review, 37(2), 172–193. Https://doi.org/10.5465/AMR.2010.0363.

Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. Research in nursing & health, 31(2), 180-191.

Hinga, V. N., Gichunge, E., & Njeru, E. (2022). Relationship between governance structures and organizational performance of family owned businesses in Nairobi County. The Strategic Journal of Business & Change Management, 9(2), 14–24.

In re Tusker Mattresses Limited (Insolvency Cause E018 of 2020) [2021] KEHC 276 (KLR) (Nov 26, 2021). Kenya Law. National Council for Law Reporting.

In re Uchumi Supermarkets PLC [2020] KEHC 9859 (KLR) (Jul 1, 2020). Kenya Law. National Council for Law Reporting.

Kan, H. Y. K., & Ismail, N. (2021). Competing values framework as decoding tool: Signature pedagogy in teaching business communication. Business and Professional Communication Quarterly, 84(1), 60–84.

Kaumbulu, A. K., Muathe, S. M., & James, R. (2020). Sustainability of youth empowerment projects: The role of project governance in Makueni County, Kenya. Journal of Economics and Sustainable Development, 2020b, 11(20), 122-136.

Kenton, W. (2022, April 10). Succession planning basics: How it works, why it's important. *Investopedia*.

Kenya Institute for Public Policy Research and Analysis (KIPPRA). (2020, August 31). Evidence and lessons for retailers. KIPPRA.

Kenya National Bureau of Statistics. (2023). Economic Survey 2023. Government of Kenya.

Kenya National Bureau of Statistics. (2025). Economic Survey 2025. Government of Kenya.

Khan, I. U., Amin, R. U., & Saif, N. (2022). Individualized consideration and idealized influence of transformational leadership: Mediating role of inspirational motivation and intellectual stimulation. International Journal of Leadership in Education, 1-11.

Killen, C. P., Jugdev, K., Drouin, N., & Petit, Y. (2012). Advancing project and portfolio management research: Applying strategic management theories. International journal of project management, 30(5), 525-538.

Kiwia, R.H., Bengesi, K.M.K. And Ndyetabula, D.W. (2020). Succession planning and performance of family-owned small and medium enterprises in Arusha City – Tanzania. Journal of Family Business Management, 10(3), 213–230.

Kjaer, A. M. (2023). Governance. John Wiley & Sons.

Klein, M., & Bakry, L. (2021). Succession and Post-Succession Conflicts in Family Firms: A Multi-perspective Investigation into Succession and Post-Succession Conflicts in Multigenerational Family Firms (Dissertation). Retrieved from https://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-52522

Klugah, G. E., Korang, V., Essilfie, F. R., & Iddrisu, M. A. Z. (2025). The mediating role of succession issues in succession planning, family influence, and successor attributes on SME performance in emerging economies. Cogent Business & Management, 12(1), 2551282. https://doi.org/10.1080/23311975.2025.2551282.

Korejan, M. M., & Shahbazi, H. (2016). An analysis of the transformational leadership theory. Journal of fundamental and applied sciences, 8(3), 452-461.

Kotamena, F., Senjaya, P., & Prasetya, A. B. (2020). A literature review: Is transformational leadership elitist and antidemocratic? International Journal of Social, Policy and Law, 1(1), 36-43.

Koveshnikov, A., & Ehrnrooth, M. (2018). The cross-cultural variation of the effects of transformational leadership behaviors on followers' organizational identification: The case of idealized influence and individualized consideration in Finland and Russia. Management and Organization Review, 14(4), 747-779.

Kummer, S., Herold, D. M., Dobrovnik, M., Mikl, J., & Schäfer, N. (2020). A systematic review of blockchain literature in logistics and supply chain management: identifying research questions and future directions. Future Internet, 12(3), 60.

Kuria, J. M. (2018). Succession planning and performance of small and medium family owned businesses in Kiambu County, Kenya [Master's research project, University of Nairobi]. University of Nairobi eRepository

LeCounte, J. F. (2022). Founder-CEOs: Succession planning for the success, growth, and legacy of family firms. Journal of Small Business Management, 60(3), 616-633.

Lee, K. H., & Vachon, S. (2016). Supply chain sustainability risk. In *Business value and sustainability: An integrated supply network perspective* (pp. 245–280). London: Palgrave Macmillan UK.

Lekaldero, E. R., Ndegwa, J., & Omanwa, C. (2022). Effect of Management Competence on Financial Sustainability of Community Conservancies in Northern Kenya.

Li, H., Sajjad, N., Wang, Q., Muhammad Ali, A., Khaqan, Z., & Amina, S. (2019). Influence of transformational leadership on employees' innovative work behavior in sustainable organizations: Test of mediation and moderation processes. Sustainability, 11(6), 1594.

Lindquist, E., & Marcy, R. (2016). The competing values framework: Implications for strategic leadership, change and learning in public organizations. International Journal of Public Leadership, 12(2), 167–186.

Lubawa, G., & Raphael, G. (2023). Socioemotional wealth and financial performance of single-family-owned food processing firms: Evidence from Tanzania. Colombo Business Journal, 14(2).

MacGregor, B. J. (1978). Leadership. New York, Torchbooks.

Machira, F. W., & Chege, D. P. (2025). Supplier Relationship Management and Performance of Supermarkets in Nairobi County, Kenya. Journal of Procurement &Amp, 17–32. https://doi.org/10.70619/vol5iss2pp17-32

Maniora, J. (2018). Mismanagement of Sustainability: What Business Strategy Makes the Difference? Empirical Evidence from the USA. Journal of Business Ethics, 152(4), 931–947. Https://doi.org/10.1007/S10551-018-3819-0.

Mbanaso, U. M., Abrahams, L., & Okafor, K. C. (2023). Research philosophy, design and methodology. In Research Techniques for Computer Science, Information Systems and Cybersecurity Cham: Springer Nature Switzerland, 81-113.

Mohamed, A. J. (2023). Green procurement management practices and supply chain performance of large retail outlets in Nairobi [Thesis, University of Nairobi]. University of Nairobi Repository.

Monnagaaratwe, K. F., & Mathu, K. (2022). Supply chain management as a competitive advantage for grocery small and medium-sized enterprises in Mahikeng, South Africa. Journal of Transport and Supply Chain Management, 16, 791.

Mporayonzi, D., & Dotto, D. A. (2025). The influence of family business governance on business continuity in Rwanda and Tanzania (Master's thesis, Jönköping University). Jönköping University, Sweden.

Muth, M. M., & Donaldson, L. (1998). Stewardship Theory and Board Structure: A contingency approach. Corporate Governance: An International Review, 6(1), 5–28. https://doi.org/10.1111/1467-8683.00076

Muraguri, K. G. (2025). Corporate Governance and Performance of Family-owned Businesses In Kenya (Doctoral dissertation, KCA University).

Mwai, K., Ntale, J., & Ngui, T. (2018). Effect of entrepreneurial orientation on the performance of family owned businesses: A case study of supermarkets in Nairobi County. International Academic Journal of Innovation, Leadership and Entrepreneurship, 2(2), 73-92.

Mwansa, M. M., & Serumaga-Zake, P. A. E. (2023). Leadership succession planning contributions towards family-owned business performance and sustainability in South Africa. International Journal of Applied Research in Business and Management, 4(2), 18–34. https://doi.org/10.51137/ijarbm.2023.4.2.2.

Mwaura, C. W., Mathenge, P., & Mungai, C. (2023). Sustainability strategies and organizational performance of selected family-led businesses in Kenya. European Journal of Business and Strategic Management, 8(2), 48–70. https://doi.org/10.47604/ejbsm.2075

Mweshi, G. K., & Sakyi, K. (2020). Application of sampling methods for the research design. Archives of Business Review– 8(11).

Nandonde, F. A. (2020). In the desire of conquering East African supermarket business: What went wrong in Nakumatt supermarket? Journal of African Business. (Online publication).

Nave, E., Ferreira, J. J., Fernandes, C. I., do Paço, A., Alves, H., & Raposo, M. (2022). A review of succession strategies in family business: content analysis and future research directions. Journal of Management & Organization, 1–25. https://doi.org/10.1017/jmo.2022.23

Nawaz, W., & Koç, M. (2019). Exploring organizational sustainability: Themes, functional areas, and best practices. Sustainability, 11(16), 4307.

Neely Jr, B. H., Lovelace, J. B., Cowen, A. P., & Hiller, N. J. (2020). Metacritiques of upper echelons theory: Verdicts and recommendations for future research. Journal of Management, 46(6), 1029–1062.

Negi, S. (2021). Supply chain efficiency framework to improve business performance in a competitive era. Management Research Review, 44(3), 477–508. Https://doi.org/10.1108/MRR-05-2020-0272

Nickerson, C. (2022). Positivism in sociology: definition, theory & examples. Simply Psychology.

Njiru, F. M. (2023). Effect of human resource management competence practices on sustainability of small and medium enterprises in Kenya.

Nyakonu, E. K., & Muli, S. (2024). Supplier Communication and Performance of Micro, Small and Medium Enterprises in Nairobi City County, Kenya. International Journal of Social Science and Humanities Research (IJSSHR), 2(2), 353–368.

Nyimbili, F., & Nyimbili, L. (2024). Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. British Journal of Multidisciplinary and Advanced Studies, 5(1), 90-99

Oikocredit. (2025, July 1). Supporting family businesses for the future: Succession and governance in East Africa's SMEs. Oikocredit.

Okafor, A., Adeleye, B. N., & Adusei, M. (2021). Corporate social responsibility and financial performance: Evidence from US tech firms. Journal of Cleaner Production, 292, 126078.

Okeke, A. (2026). Beyond bloodlines: a review of succession planning and generational continuity in African family businesses. Thunderbird International Business Review, 68(3), 289–304.

Olubiyi, O., Lawal, A. T., & Adeoye, O. O. (2022). Succession planning and family business continuity: Perspectives from Lagos State, Nigeria. Organization and Human Capital Development, 1(1), 40.

Oppong, S. (2014). Upper echelons theory revisited: The need for a change from causal description to casual explanation. Management: journal of contemporary management issues, 19(2), 169-183.

Ormerod, R. J. (2021). Pragmatism in professional practice. Systems Research and Behavioral Science, 38(6), 797-816.

Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. Indian journal of corporate governance, 10(1), 74-95.

Pont, A., & Simon, A. (2025). Nurturing family business resilience through strategic supply chain management. Journal of Family Business Management, 15(1), 68–101. Https://doi.org/10.1108/JFBM-11-2023-0272

Popescu, L., Iancu, A., Avram, M., Avram, D., & Popescu, V. (2020). The Role of Managerial Skills in the Sustainable Development of SMEs in Mehedinti County, Romania. Sustainability, 12(3), 1119. Https://doi.org/10.3390/SU12031119.

Rahim, R., Husni, T., Desyetti, D., & Ryswaldi, R. (2024). Role of Successor, Government Policy, and Collaboration Synergy on Sustainability Family Business: Moderation of Gender and Firm Age. Business Perspectives and Research. Https://doi.org/10.1177/22785337241239439.

Reina, W., Pla-Barber, J., & Villar, C. (2023). Socioemotional wealth in family business research: A systematic literature review on its definition, roles and dimensions. European Management Journal, 41(6), 1000-1020.

Reza, M. H. (2019). Components of transformational leadership behavior. EPRA International Journal of Multidisciplinary Research, 5(3), 119-124.

Salmerón, R., García, C., & García, J. (2020). Overcoming the inconsistences of the variance inflation factor: A redefined VIF and a test to detect statistical troubling multicollinearity. arXiv preprint arXiv:2005.02245.

Sarantopoulos, A., Spagnol, G. S., Newbold, D., & Li, L. M. (2017). Establishing face validity of the EPLIT questionnaire. British Journal of Healthcare Management, 23(5), 221-227.

Sarfraz, M., & Ivascu, L. (2023). Sustainable Management and Leadership Practices for Enhancing Business Performance. International Journal of Organizational Leadership, 12(First Special Issue 2023), 1–3. Https://doi.org/10.33844/ijol.2023.60361

Scholes, L., Hughes, M., Wright, M., De Massis, A., & Kotlar, J. (2021). Family management and family guardianship: Governance effects on family firm innovation strategy. Journal of Family Business Strategy, 12(4), 100389.

Sekaran, U., & Bougie, R. (2010). Research methods for business: A skill building approach. Wiley.

Shahab, Y., Ntim, C. G., Chen, Y., Ullah, F., Li, H. X., & Ye, Z. (2020). Chief executive officer attributes, sustainable performance, environmental performance, and environmental reporting: New insights from upper echelons perspective. Business Strategy and the Environment, 29(1), 1-16.

Silva, A. V. B. Da, & Romaro, P. (2024). Emerging trends in sustainable management: developing managers' skills for ESG challenges. GeSec, 15(6), e3789. Https://doi.org/10.7769/gesec.v15i6.3789

Sindakis, S., Kitsios, F., Aggarwal, S., & Kamariotou, M. (2022). Entrepreneurial strategies and family firm culture in the Arab world: a systematic literature review. Journal of Small Business and Enterprise Development, 29(7), 994-1016.

Strathmore Business School. (2024). Tuskys Supermarkets: The good, the bad and the ugly in the Kago family business (Case study). Strathmore University.

Tadu, R., & Chiguvi, D. (2019). The impact of family governance on the sustainability and continuity of family businesses in Botswana. International Journal of Marketing Studies, 11(4), 113–124. https://doi.org/10.5539/ijms.v11n4p113.

Taherdoost, H. (2016). Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in a research. How to test the validation of a questionnaire/survey in a research (August 10, 2016).

Temel, M., Lozano, R., & Barreiro-Gen, M. (2021). Analysing the governance factors for sustainability in organisations and their inter-relations. Frontiers in Sustainability, 2, 684585.

The EastAfrican. (2021, January 26). Choppies to pay $12m as it exits East African market. Nation Media Group.

Torfing, J., & Bentzen, T. Ø. (2020). Does Stewardship Theory Provide a Viable Alternative to Control-Fixated Performance Management? Administrative Sciences, 10(4), 86. Https://doi.org/10.3390/ADMSCI10040086

UBA Kenya Bank Limited v Uchumi Supermarkets PLC & another [2025] KEHC 6567 (KLR) (May 15, 2025). Kenya Law. National Council for Law Reporting.

Ugoani, J. (2020). Management Succession Planning and Its Effect on Organizational Sustainability. International Journal of Economics and Business Administration, 6(2), 30–41.

Umans, I., Lybaert, N., Steijvers, T., & Voordeckers, W. (2020). Succession planning in family firms: family governance practices, board of directors, and emotions. Small Business Economics, 54, 189-207.

Utami, C. W., Sumaji, Y. M. P., Susanto, H., Septina, F., & Pratama, I. (2019). Effect of supply chain management practices on financial and economic sustainable performance of Indonesian SMEs.

Uyar, A., Karmani, M., Kuzey, C., Kilic, M., & Yaacoub, C. (2022). Does Governance Quality Explain the Sustainability Reporting Tendency of the Public Sector? Worldwide Evidence. International Journal of Public Administration, 45(13), 931-947.

Veiga, P. (2024). Key drivers of green innovation in family firms: a machine learning approach. Journal of Family Business Management. Https://doi.org/10.1108/jfbm-08-2024-0191

Vitolla, F., Raimo, N., & Rubino, M. (2020). Board characteristics and integrated reporting quality: An agency theory perspective. Corporate Social Responsibility and Environmental Management, 27(2), 1152-1163.

Wandiga, E., Kilika, J. M., & James, R. (2019). The effect of operations strategy on performance of consultancy firms? An empirical survey of management consultancy firms in Nairobi, Kenya. Journal of Economics and Business, 2(2).

Wu, H., Xu, Z., & Skare, M. (2022). How do family businesses adapt to the rapid pace of globalization? A bibliometric analysis. Journal of Business Research, 153, 59–74. https://doi.org/10.1016/j.jbusres.2022.08.022

Yang, X.-F., Shang, H., Li, W., & Lan, H. (2022). How does family ownership and management influence green innovation of family firms: evidence from China. European Journal of Innovation Management. Https://doi.org/10.1108/ejim-01-2022-0033

Zeb, A., Akbar, F., Hussain, K., Safi, A., Rabnawaz, M., & Zeb, F. (2021). The competing value framework model of organizational culture, innovation, and performance. Business Process Management Journal, 27(2), 658-683.

Zheng, Z., & Xu, Y. (2022). Environmental Regulation, Family Involvement and Green Innovation Efficiency;Based on Sew Theory Framework. Sustainability, 14(20), 13258. https://doi.org/10.3390/su142013258.

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Zinovieva, C. G., Kuznetsova, M. V., Dorfman, T. V., Limarev, P. V., & Limareva, J. A. (2016). Study of external and internal factors affecting enterprise's stability. Advances in Systems Science and Applications, 16(1), 62–71.

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APPENDICES

Appendix I: Introduction Letter

Dear Participant,

I hope this letter finds you well. My name is Jane Wangari Ngene, and I am currently pursuing a PhD at St. Paul's University. As part of my research, I am conducting a study titled "**STRATEGIC DRIVERS AND THE SUSTAINABILITY OF FAMILY-OWNED SUPERMARKETS IN KIAMBU COUNTY, KENYA**".

The primary objective of this research is to gain a deeper understanding of the key factors that influence the sustainability of family-owned supermarkets. Specifically, I am focusing on aspects such as management skills, succession planning, governance, and supply chain management. Additionally, I am exploring how external factors impact these areas and contribute to the long-term success of such businesses.

Your supermarket has been identified as a valuable case for this study, and I am kindly requesting your participation. I would greatly appreciate it if you could take some time to complete the enclosed questionnaire. Your experiences and perspectives are invaluable to this research, and the insights you provide will significantly contribute to a better understanding of the sustainability of family-owned supermarkets in the region.

Please be assured that all the information you provide will be treated with the utmost confidentiality. Your responses will be used solely for academic purposes, and no identifying information will be shared without your consent.

I would like to thank you in advance for your time and participation. If you have any questions or need further clarification, please do not hesitate to contact me.

Thank you once again for your valuable contribution to this research.

Sincerely,

Jane Wangari Ngene
PhD Student
St. Paul's University

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Appendix II: Study Questionnaire

My name is Jane a PhD student at St Paul's University. I am conducting a study on the sustainability of family-owned supermarkets in Kiambu County, Kenya. This questionnaire aims to gather insights into key aspects such as management skills, succession planning, governance, and supply chain management, as well as the influence of external factors on these areas. Your experiences and perspectives are invaluable to this research, and the information you share will help us better understand the factors that contribute to the long-term success of family-owned supermarkets.

Please be assured that all the information you provide will be treated with the utmost confidentiality, and your responses will be used solely for academic purposes.

Once again, thank you for your time and participation. Your insights are greatly appreciated.

Section one: Demographics

1. Please indicate your gender Male ☐ Female ☐
2. Please indicate your age in years

   18-25 ☐

   26-30 ☐

   31-40 ☐

   Above 40 ☐
3. Please indicate your highest education level

   Secondary and below ☐

   College Diploma ☐

   Bachelors Degree ☐

   Post graduate degree ☐
4. What is your position in the supermarket

Owner ☐

Manager ☐

Supervisor ☐

5. How long have you worked in the supermarket?

0-2 years ☐

3-5 years ☐

5-7 years ☐

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More than 7 years ☐

6. For how long has your supermarket been in operation?

   1-5 years ☐

   6-10 years ☐

   Above 10 years ☐

Section 2: Management Skills
This section seeks your opinion on succession planning in your supermarket.

For each of the below statements, kindly indicate your level of agreement based on a scale of 1-5 where;

KEY: Strongly Agree (SA) =5, Agree (A) = 4, Fairly Agree (FA) = 3, Disagree (D) =2, Strongly Disagree (SD) = 1

Management Skills	**SD**	**D**	**FA**	**A**	**SA**
The management team lacks a clear long-term vision for the supermarket's sustainability.					
Poor planning by management has resulted in inconsistent business growth.					
The supermarket has suffered financial losses due to poor decision-making by management.					
The management team often makes reactive decisions rather than proactive ones to ensure business stability.					
Key business processes are disrupted due to management's failure to delegate tasks effectively.					
The supermarket relies too					

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heavily on a few individuals, leading to inefficiencies in daily operations.					
The supermarket struggles to keep up with changing consumer preferences due to weak managerial responsiveness.					
Management is slow to adopt new business strategies and technologies to enhance competitiveness.					

Section 3: Succession planning

This section seeks your opinion on succession planning in your supermarket.

For each of the below statements, kindly indicate your level of agreement based on a scale of 1-5 where;

KEY: Strongly Agree (SA) =5, Agree (A) = 4, Fairly Agree (FA) = 3, Disagree (D) =2, Strongly Disagree (SD) = 1

Succession planning	**SD**	**D**	**FA**	**A**	**SA**
Succession planning ensures smooth transition of leadership in our family business.					
We have a higher success rate in transitioning ownership and leadership across generations.					
Family members actively participate in key decision-making processes within the supermarket.					
Family involvement strengthens the supermarket's long-term vision and					

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stability.					
We are satisfied with the training and development opportunities for family members in leadership roles.					
Investing in formal training programs is essential for successful succession within the supermarket.					
Our family is well-prepared to handle unexpected events such as the sudden death or incapacitation of a leader.					
A clearly defined succession plan enhances the supermarket's preparedness for future challenges.					

Section 4: Governance

This section seeks your opinion on the governance structure in your supermarket.

For each of the below statements kindly indicate your level of agreement based on a scale of 1-5 where;

KEY: Strongly Agree (SA) =5, Agree (A) = 4, Fairly Agree (FA) = 3, Disagree (D) =2, Strongly Disagree (SD) = 1

Governance	**SD**	**D**	**FA**	**A**	**SA**

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The board of directors operates independently from undue influence by family members or shareholders.					
Board members possess diverse expertise and relevant experience in the supermarket industry.					
The board reflects diversity in terms of gender, ethnicity, and other relevant factors in Kenya.					
The diversity of perspectives on the board strengthens the decision-making process.					
The ownership structure clearly defines roles and responsibilities within the family.					
The ownership structure facilitates smooth transitions of ownership and leadership across generations.					
The board of directors is accountable to all shareholders for the supermarket's performance.					
Clear mechanisms are in place to hold the board and management accountable for their actions.					
The supermarket has a formal plan for managing leadership transitions, including unexpected events.					
The transition management plan is regularly reviewed and updated.					

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Section 5: Supply chain management

This section seeks your opinion on supply chain management dynamics in your supermarket.

For each of the below statements kindly indicate your level of agreement based on a scale of 1-5 where;

KEY: Strongly Agree (SA) =5, Agree (A) = 4, Fairly Agree (FA) = 3, Disagree (D) =2, Strongly Disagree (SD) = 1

Supply chain management	**SD**	**D**	**FA**	**A**	**SA**
Sourcing products from a diverse range of suppliers, both local and international, improves supply chain resilience and sustainability.					
Our supply chain is resilient to disruptions and shocks, such as unexpected events or price fluctuations.					
The flexibility and adaptability of our supplier relationships contribute to the sustainability of our business.					
We have effectively optimized lead times within our supply chain, ensuring timely product delivery and availability.					
Shorter lead times contribute to reduced waste and improved resource efficiency, enhancing sustainability.					
We actively partner with suppliers who share our commitment to environmental and social sustainability practices.					
Integrating sustainability principles into our supply					

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chain aligns with our overall sustainability goals.					
We maintain strong and collaborative relationships with our suppliers, based on mutual trust and understanding.					
Positive supplier relationships contribute to efficient communication and coordination within the supply chain, promoting sustainability.					

Section 6: External factors

This section seeks your opinion on external factors in your supermarket.

For each of the below statements kindly indicate your level of agreement based on a scale of 1-5 where;

KEY: Strongly Agree (SA) =5, Agree (A) = 4, Fairly Agree (FA) = 3, Disagree (D) =2, Strongly Disagree (SD) = 1

External factors	**SD**	**D**	**FA**	**A**	**SA**
Government policies (e.g., taxation, trade regulations) significantly affect the operations of our supermarket.					
Local county regulations (e.g., licensing, zoning laws) pose challenges to our supermarket's growth.					
Political stability in Kenya creates a favorable environment for our business sustainability.					

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The purchasing power of customers in Kiambu County supports our supermarket's sales.					
High competition from large retail chains threatens our supermarket's survival.					
Changing consumer preferences (e.g., demand for healthier products) influence our product offerings.					
Community trust and loyalty significantly contribute to our supermarket's sustainability.					
Adopting digital payment systems (e.g., mobile money) has improved our supermarket's efficiency.					
Lack of access to modern retail technologies limits our supermarket's competitiveness.					
Our supermarket faces pressure to adopt eco-friendly practices (e.g., reducing plastic use).					
Compliance with labor laws (e.g., wages, working conditions) increases operational costs for our supermarket.					

Section 7: Sustainability

This section seeks your opinion on the sustainability of the supermarket.

For each of the below statements kindly indicate your level of agreement based on a scale of 1-5 where;

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KEY: Strongly Agree (SA) =5, Agree (A) = 4, Fairly Agree (FA) = 3, Disagree (D) =2, Strongly Disagree (SD) = 1

Sustainability	**SD**	**D**	**FA**	**A**	**SA**
Our supermarket consistently generates enough revenue to cover operational costs and reinvest in growth.					
Profit margins have been stable or increasing over the past three years.					
We have sufficient cash flow to manage unexpected financial challenges (e.g., economic downturns).					
Access to credit or loans is available when needed to support business expansion.					
Our supermarket has efficient inventory management systems to minimize waste and stockouts.					
We use technology (e.g., POS systems, digital records) to streamline business operations.					
Our supply chain is reliable, ensuring consistent product availability.					
Family members share a strong commitment to the long-term success of the supermarket.					
There is a clear sense of tradition and shared values among family members working in the business.					
Non-family employees feel included and motivated by the family's business culture.					
Conflicts among family members are resolved constructively without harming the business.					
Non-family employees and family members work collaboratively to sustain the supermarket's long-term success.					
There is a clear succession plan in place for future leadership of the supermarket					

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Decision-making processes are transparent and involve key stakeholders (family and non-family).					
The management team demonstrates strong strategic planning for business sustainability.					
Corporate governance structures (e.g., advisory boards, formal policies) are in place to guide the business.					

The end

Thank you for your time

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Appendix III: Interview Guide for Qualitative Data Collection

Introduction:

Thank you for agreeing to participate in this interview. I am conducting a study on the sustainability of family-owned supermarkets in Kiambu County, Kenya. The purpose of this interview is to gain insights into key aspects such as management skills, succession planning, governance, and supply chain management, as well as to understand the influence of external factors on these areas. Your experiences and perspectives are invaluable to this research, and the

information you share will help us better understand the factors that contribute to the long-term success of family-owned supermarkets.

Please be assured that all the information you provide will be treated with the utmost confidentiality, and your responses will be used solely for academic purposes.

Once again, thank you for your time and participation. Your insights are greatly appreciated.

Section 1: Background Information

1. How long has your supermarket been in operation?
2. What are the key milestones/ achievements in its development?

Section 2: Management skills

3. How has weaknesses in leadership, decision-making, or strategic planning affected the sustainability of family-owned supermarkets?
4. What challenges do family-owned supermarkets face in adapting to market changes, and how do managerial skills (or lack thereof) influence their ability to remain competitive?

Section 2: Succession Planning

5. Do you have a succession plan in your supermarket?
6. How does succession planning impact the long-term sustainability of your supermarket?

Section 3: Governance

7. Can you describe the governance structure of your supermarket?
8. How does governance contribute to or hinder the sustainability of your supermarket?

Section 5: Supply Chain Management

9. How do you manage your supply chain operations?
10. How does effective supply chain management contribute to the sustainability of your supermarket?

Section 6: Family-Culture and Strategic drivers

11. What are some of the external factors that affect the sustainability of your supermarket?
12. How do these factors impact the relationship between strategic drivers (e.g., management skills, succession planning, governance, supply chain) and the sustainability of your supermarket?
13. Is there any other information or experiences you would like to share regarding the sustainability of your supermarket?

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Appendix IV: List of Family-Owned Supermarkets in Kiambu County

No.	Supermarket Name
1	Banana Supermarket
2	Best Prices Store Supermarket
3	Cleanshelf
4	County Supermarket
5	Delview Supermarket
6	Dia Plus
7	Diaspora Supermarket
8	Drop and Shop Supermarkets (Membley)
9	Eden Supermarket
10	Excellence Budget Supermarket
11	Fairmart Supermarket
12	Fresh Fitty Supermarket
13	Gateway Supermarket
14	Gats Supermarket
15	Glasam Supermarket
16	Goldenmart Supermarket
17	Graccier Supermarket
18	Happy Supermarket
19	Highpoint Supermarket
20	Highway Supermarket
21	Homeway Supermarket
22	Imperial Supermarket
23	Jacmil Joy Supermarket
24	Janstar Supermarket
25	Jazaribu Retail Supermarket
26	Jech Supermarket
27	Jevco Supermarket
28	Joms Suppliers Supermarket
29	Jowart Supermarket
30	Juja Ecomatt
31	Kamindi Selfridge Supermarket
32	Kapu Supermarket
33	Kassmatt Supermarket
34	Khetiyas Supermarket
35	Kikuyu Selfridges Supermarket
36	Kisau Mattress Ruiru
37	Leestar Supermarket
38	Magunas Supermarket
39	Majid Al Futtaim Hypermarkets
40	Manja Supermarket
41	Maosar Mart

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42	Mathais Supermarket
43	Mkulima Supermarket
44	Mteja Ni Mfalme Supermarket
45	Mworooto Supermarket
46	Naivas Supermarket
47	Nebima Mini Supermarket
48	PiEMC Supermarket
49	Polymatt Supermarket
50	Powerstar Supermarket
51	Quickmart Supermarket
52	Quickmatt Chania
53	Redeem Mini Mart
54	Rehoboth Supermarket
55	Rita Matt Supermarket
56	Savory Supermarket
57	Seattle Supermarket
58	Selfridges Supermarket
59	Shoppers Supermarket
60	Skytop Supermarket
61	Smart Home Supermarket
62	Spiffy Supermarket
63	Star Supermarket
64	Stedo Supermarket
65	Sumart Supermarket
66	Super Soko
67	Tjay Blessing Mini Mart
68	Wow Supermarket
69	Yukos Supermarket
70	Zippora Karimi Super Duka

Source: County Government of Kiambu (2025)

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Appendix V: Research Permits

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Private Bag 00217 Limuru,
Kenya
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Website: www.spu.ac.ke

Tel Office: +254 (0) 20-2020505/10
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(0) 736-424440

REF: SPU/657/2026 **Date: 12th March 2026**

TO: Jane Ngene
St. Paul's University

Dear Jane,

==========

REF: Strategic Drivers and Sustainability of Family-Owned Supermarkets: A Case of Kiambu County, Kenya

==========

Greetings,

This is to inform you that SPU- Institutional Scientific Ethics Review Committee has reviewed the above-named research proposal. **Your ERB approval number is 667, for the period between 12th March 2026 – 12th March 2027 (1 year).**

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SPU- Institutional Scientific Ethics Review Committee.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SPU- Institutional Scientific Ethics Review Committee within 72 hours of notification
i. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to *SPU- Institutional Scientific Ethics Review Committee* within 72 hours
ii. Clearance for export of biological specimens must be obtained from relevant institutions.

iii. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.

iv. Submission of an executive summary report within 90 days upon completion of the study to SPU- Institutional Scientific Ethics Review Committee.

v. Should there be any publications from your research, note that you are supposed to anonymize the particulars of the respondents, the identifiers and the name of institution (s) where you collected data.

vi. Please note that it is within the ISERC's mandate to monitor your research and to do random visits to the site. All research is subject to post approval monitoring. Kindly provide a closure report after the research.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) if you are collecting data in the country - https://research-portal.nacosti.go.ke **or obtain other clearances needed in the country where you will collect your data from.**

Yours sincerely,



Dr. Daniel Nzengya, PhD
Chairperson
SPU- Institutional Scientific & Ethics Review Committee



APPENDIX VI: NACOSTI APPROVAL LETTER



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 344298 Date of Issue: 25/March/2026

RESEARCH LICENSE

This is to Certify that Ms.. JANE WANGARI NGENE of Saint Paul University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu, Nairobi on the topic: STRATEGIC DRIVERS AND SUSTAINABILITY OF FAMILY-OWNED SUPERMARKETS: A CASE OF KIAMBU COUNTY, KENYA for the period ending : 25/March/2027.

License No: NACOSTI/P/26/4186760

344298

Applicant Identification Number

Ag. Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to.
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. Neither the license nor any rights thereunder are transferable.
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