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Assessment of the influence of organisational structure on business process innovation of small and medium-sized supermarkets in Kenya.

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ASSESSMENT OF THE INFLUENCE OF ORGANISATIONAL STRUCTURE ON BUSINESS PROCESS INNOVATION OF SMALL AND MEDIUM-SIZED SUPERMARKETS IN KENYA

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DECLARATION

I, the undersigned, declare that this dissertation is my original work and has not been submitted for examination in any other institution. No part of this dissertation may be reproduced without the permission of the author and Strathmore University.

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Approval

This research dissertation has been submitted for examination with my approval as the university supervisor.

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ABSTRACT

Over the last 10 years, there have been significant challenges in the retail sector in Kenya. Four of the largest supermarket chains have collapsed, while some international outlets have pulled out. All local supermarkets start as small family businesses, most of which fail or remain small. A handful, however, have grown to be large enterprises. What differentiates these successful ventures, which scale from those that remain small or collapse, is not clear. However, what is clear is that the retail industry is hyper-competitive and volatile. Previous studies have indicated the influence of organisational structure on innovation. This is such that businesses that leverage their organisational structure and innovate can adapt to market changes and competitor actions while improving productivity and increasing business survival. However, there is a dearth of studies that examine the connections between organisational structure and business process innovation. Considering this dearth of studies, the purpose of this research was to assess the influence of the organisational structure on business process innovation adoption in small and medium-sized supermarkets in Kenya. the dynamic capabilities and the organisational learning theories anchored this study. The study adopted a descriptive research design and a positivism philosophy. A population of 340 supermarkets was used to draw a sample of 183 supermarkets. The sample was selected using the simple random sampling technique. The findings of the quantitative study indicate that formalisation, centralisation, and integration are positive but non-significant predictors of business process innovation in small and medium-sized supermarkets in Kenya. Overall, organisational structure is a nonsignificant predictor of business process innovation in small and medium-sized supermarkets in Kenya. This study questions previous conclusions regarding the relationship between centralisation, formalisation, and integration and BPI in organisations. This study's findings call into question the conventional idea that organisational structure has a significant effect on business BPI. The managerial implications lie in a strategy shift away from a narrow focus on structural changes. Instead, small, and medium-sized supermarket managers should prioritise activities that are ingrained in their organisation's culture. Managers may unlock their teams' innovativeness by creating an atmosphere that prioritises employee engagement, fosters creativity, and promotes a culture of experimentation.

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LIST OF ABBREVIATIONS AND ACRONYMS

BPI	Business Process Innovation
FFV	Fresh Fruit and Vegetables
FMCG	Fast Moving Consumer Goods
OECD	The Organisation for Economic Co-operation and Development
OL	Organisational Learning
R&D	Research and Development
RETRAK	Retail Trade Association of Kenya
SMEs	Small and medium-sized enterprises

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CHAPTER ONE
INTRODUCTION

1.1 Background

Literature by Buchanan and Huczynski (2017) indicates that organisational structure is akin to an animal's skeleton; it is the structure that groups and connects individuals within an organisation. It is the formal structure of task and reporting relationships that directs, coordinates, and motivates personnel to achieve the organisation's objectives. Organisational structures are also described as being influential in producing and ensuring results, minimising, and regulating individual influences on the organisation, and providing a framework by which power is exercised and decisions are made (Tolbert & Hall, 2015). While goals are set and communicated via a company's corporate strategy, the organisational structure defines how these goals will be achieved (Buchanan & Huczynski, 2017). An inappropriate organisational structure could result in low motivation or morale, poor decision making, conflict and a top-heavy organisation, derailing an organisation's ability to achieve its goals (Child, 2015).

Brandl (2023) indicates that, intuitively, one would expect the organisational structure plays a critical role in business process innovation (BPI). The organisational structure's constructs- formalisation, centralisation, and integration- have a key role in determining how BPI dynamics are shaped (Ali et al., 2018). Elevated formalisation could impede BPI by impeding innovation and flexibility (Gentile-Lüdecke et al., 2020). Similarly, over-centralisation can hinder the flexibility required for adaptive innovation by stifling different viewpoints and encouraging a culture that is risk-averse (Gaspary et al., 2020). Conversely, the right amount of centralisation and formalisation can offer a faster decision-making process and a defined framework, which promotes an innovative atmosphere. Integration, which places a strong emphasis on teamwork and cross-functional communication, emerges as a catalyst for BPI because it promotes the sharing of various viewpoints and expertise that are necessary for original problem-solving (Nowotny et al., 2022). Finding the right balance between formalisation, centralisation, and integration is essential since

focusing too much on one could stifle the depth and entrepreneurial spirit needed for game-changing innovation the highly competitive world of business.

In contemporary organisational scholarship, the relationship between innovation and organisational structure is an important area of study. An impressive amount of research has demonstrated the significant influence that organisational structure has on a firm's ability to innovate (Alshwayat et al., 2023; Dedahanov et al., 2017; Gaspary et al., 2020; Gonzalez, 2022; Marín-Idárraga and Cuartas, 2016). An organisation's capacity to produce, nurture, and execute innovative concepts is significantly influenced by the structure and arrangement of its structural components (Alshwayat et al., 2023). The discussion explores issues of adaptability, flexibility, and the general environment of the organisation in an effort to determine how various structural frameworks either support or obstruct the dynamic processes of innovation within an organisational setting. The scholarly discourse concerning organisational structure and innovation emphasises how crucial it is for organisations to carefully match their organisational structures to the requirements of a constantly evolving environment to cultivate a strong foundation for sustained innovation (Gaspary et al., 2020).

Globalisation and the rapid introduction of technology into different facets of business have led to a competitive business environment. Innovation is critical for company success and survival in highly competitive markets (Chandrakhanthan & Karthika, n.d.). Further, Makkonen et al. (2016) note that innovation entails reorganizing a resource base and enhancing performance in order to stay competitive. BPI has been shown to be crucial in helping small firms overcome some of the limiting aspects of firm size (Matthews et al., 2017) and act as a key mechanism for improving SME productivity.

1.1.1 Business Process Innovation

Regardless of size and orientation, every business uses business processes to organise its work. Business processes are a collection of activities that have different inputs and create outputs of value to the customer (Anand et al., 2013). Based on this, BPI is defined by Wagner and Bode (2014) as the "ability to develop new processes using the latest technologies in anticipation of, or in response to customer requirements".

BPI is further categorised into incremental and radical BPI (Schniederjans, 2018). Incremental BPI is the slight improvements in a firm's business processes, whereas radical BPI refers to extensive changes and modifications in a firm's processes (Salvador & Villena, 2013).

Furhter, Ijichi (2023) indicates that understanding BPI has changed over time, with contemporary definitions emphasising the concrete results of an innovator's work and seeing it as a "result" rather than an "action" as in previous definitions. The definition of innovation has also evolved, with it now defined as the "result" of implementing a new or improved process or product. Business process innovation is the development of new or improved procedures for a wide range of corporate operations (Ijichi, 2023). The Oslo Manual 2018 defines a business process innovation as a newly developed or upgraded business process that has been deployed by an organisation for one or more business functions and is considerably different from the previous business processes employed by the firm (OCDE/Eurostat, 2018). The Oslo Manual 2018 goes beyond the strict definition of process innovation to incorporate marketing and organisational innovations, underscoring its transformative and expansive reach.

BPI has been operationalised in various ways by different researchers. For instance, Pilav-Velić and Marjanovic (2016) operationalise business process innovation as production innovation, logistics innovation (delivery and distribution of services and products), and supporting processes (market research, employees' education and training, and accounting) innovation. In a recent study, Piñera-Salmerón et al. (2023) used the Oslo Manual 2018 to operationalise business process innovation. The researchers operationalise it using production equipment innovation, production organisation methods innovation, logistics systems innovation, marketing strategies innovation, information and communication innovation, and internal processes innovation (Piñera-Salmerón et al., 2023). It is vital to emphasize that their study examined the first metric that fit their research, which concentrated on the manufacturing sector.

The Oslo Manual 2018, developed by OCDE/Eurostat (2018), operationalized business process innovation through the production of goods and services, marketing and sales, distribution and logistics, information and communication systems, product and business process development, and administration and management. Given that

this study focuses on small and medium-sized supermarkets, it will follow the Oslo Manual 2018's approach to operationalising business process innovation. Specifically, it will operationalise it through distribution and logistics innovation, marketing and sales innovation, information and communication systems innovation, and administration management. The rationale behind omitting production of goods and services, and product process development lies in the fact that supermarkets in Kenya do not produce. Rather, they act as retailers along the product and service value chain.

Take the case of supermarkets within the retail sector. Supermarkets across the world are experiencing increased competition, and as such the major players have attempted to increase their efficiencies and competitiveness by integrating innovation into their practices (Bosire et al., 2013). BPI provides an achievable avenue for organisations to generate the necessary innovation to remain competitive. Walmart is an example of a retail company that has exploited BPI to boost its competitiveness internally, to suppliers, and externally, to customers, with its cross-docking supply chain innovation in the 1990s (Azadegan, 2011). Toyota's use of Kaizen, the philosophy of continuous improvement, and General Electric's utilisation of Six Sigma are other examples of the role BPI has in value creation by enhancing the competitiveness of companies (Narasimhan & Narayanan, 2013). Though there have been few studies looking at the nature of BPI in smaller firms (Bessant & Tidd, 2013), some of the existing research, such as Laforet (2010) highlight the impact of innovation can be negative, more so for resource constrained small firms. Therefore, these types of SMEs avoid the investment in innovation unless the financial benefit is significant.

1.1.2 Organisational Structure

The study of organisational structure traces its roots back to the start of the twentieth century, with Taylorism (Asif, 2017). However, modern scholars of the field will point out that the traditional organisational designs may not work in today's rapidly changing world that demands for agility and flexibility (Asif, 2017). Organisational structure theory and practice has documented its advancement through several approaches, such as functional, divisional, matrix, networked, virtual and fractal approaches (Dzidowski, 2014). These changes to organisational structure have been necessitated by a need to remain competitive, to increase organisational efficiency, and for organisational survival (Král & Králová, 2016).

Researchers have advanced a wide range of dimensions of organisational structure that can hinder or help innovation. For instance, Nowotny et al. (2022) provide a list of four dimensions used to measure organisational structure. These dimensions include centralisation, formalisation, horizontal integration, and vertical differentiation. On their part, Ali et al. (2018) advance formalisation, centralisation, integration, and complexity as the key dimensions of organisational structure. Compared to Nowotny et al. (2022), Ali et al. (2018) have added complexity while eliminating vertical differentiation. On their part, Gaspary et al. (2020) advance three dimensions of organisational structure. These dimensions include centralisation, formalisation, and integration. From the three groups of researchers, it can be noted that centralisation, formalisation, and integration are constant dimensions of organisational structure. In this regard, this study adopted the three and used them to examine the effect of organisational structure on business process innovation.

In terms of organisational structure, centralisation is the placing of decision-making power at the top of the hierarchy to control how much lower hierarchical levels engage in strategic decisions (Ali et al., 2018; Gentile-Lüdecke et al., 2020; Gaspary et al., 2020; Nowotny et al., 2022). From this definition, centralisation is operationalised using decision-making and a hierarchy of authority (Gaspary et al., 2020). Gentile-Lüdecke et al. (2020) indicate that the centralisation of small and medium-sized enterprises (SMEs) organisational structures can have a dual influence on innovation. On one hand, a highly centralized structure may stifle creativity and responsiveness at lower hierarchical levels. This may create a risk-averse culture that inhibits the exploration of fresh ideas. On the other hand, centralisation can foster innovation by streamlining decision-making, ensuring targeted resource allocation, and speeding the implementation of strategic decisions. However, this is when combined with visionary leadership and a supportive culture (Gentile-Lüdecke et al., 2020). Striking a balance is critical, as excessive centralisation may result in a lack of varied views, impeding the agility needed for adaptive innovation in the dynamic SME landscape.

More importantly, formalisation is the degree to which an organisation uses policies and guidelines to dictate conduct (Ali et al., 2018; Gentile-Lüdecke et al., 2020; Gaspary et al., 2020; Nowotny et al., 2022). It denotes the standardisation of procedures and the creation of precisely defined policies and guidelines for specific

activities. Based on this conceptualisation, formalisation is operationalised using job codification and rule observation (Gaspary et al., 2020). Gaspary et al. (2020) further note that a high level of formalisation, as seen by comprehensive job codification and rigidity in rule compliance, may inhibit innovation. This is by imposing rigid frameworks that stifle creativity and adaptability. Employees may feel limited by procedures in overly regimented organisations. This could limit their ability to explore fresh ideas and react to changing market conditions. A modest level of formalisation, on the other hand, can provide a basis for innovation within an organisation by providing a structured framework that guides activities without stifling originality (Ali et al., 2018). Well-defined policies can serve as a point of reference, assuring a consistent understanding of organisational objectives and values and, as a result, creating an atmosphere receptive to innovative thinking (Nowotny et al., 2022). However, a delicate balance must be struck, since excessive formalisation may stifle the entrepreneurial spirit and agility essential for game-changing inventions.

Finally, Nowotny et al. (2022) conceptualise integration as the extent to employees and departments are functionally specialised. A low level of horizontal integration indicates limited integration while a high level signifies integration in work, skills, and training. Informed by this conceptualisation, integration is operationalised using hierarchical levels, horizontal integration, and communication. The authors also note that an absence of horizontal integration, which indicates a lack of collaboration and cross-functional communication, may stifle innovation in organisations. Departments that are siloed and have little integration might result in separate knowledge pools and a lack of synergy. This could hinder the exchange of ideas that are essential for innovation. In contrast, a high level of integration can act as a stimulant for organisational creativity. Collaboration between different functions leads to the development of a holistic approach to problem-solving and allows for the pooling of diverse skills, providing an environment receptive to creative thinking and the implementation of novel ideas (Gaspary et al., 2020; Gentile-Lüdecke et al., 2020; Nowotny et al., 2022). Striking the correct balance in integration is critical, as over-integration may result in a lack of specialization and attention. This could impede the depth required for breakthrough innovations.

1.1.3 Overview of Supermarkets in Kenya

According to the KPMG Consumer Retail Report (2016), the retail sector in Africa remains underdeveloped with most of the shopping happening in traditional shops. However, Kenya has a well-developed retail sector with market penetration rates of 25% to 30%, double those in Nigeria. Kenya's formal retail sector is the second largest in sub-Saharan Africa (KPMG, 2016). Three factors have fuelled Kenya's supermarket industry growth: growing urbanisation, trade liberalisation that began in 1993, and huge inflows of retail foreign direct investment (FDI).

According to a survey conducted by the Kenya National Bureau of Statistics (KNBS) in 2016, distribution services account for 57% of all licensed SMEs in Kenya and 63% of unlicensed SMEs. Distribution services is a collective term for retailers, wholesalers, distributors, franchisers, and commission agents. Distribution services are an essential part of the economy in East Africa and employ about 10% of the active population, including a high percentage of informal, unskilled, part-time, and female workers (Dihel, 2011). Supermarkets are key players in this distribution services value chain and thus are critical assets that need to be studied as they are a direct and indirect creator of jobs and trade.

ACNielsen-Kenya (2003) defined supermarkets in Kenya as self-service stores that handle fastmoving consumer goods (FMCG) with at least 150m^2 of floor space, while hypermarkets were defined to be 15 times larger than supermarkets with at least 2250m^2 of floor space. While there is no common classification of supermarkets, they can be tiered by branch number, branch size, and whether they sell fresh fruit and vegetables (FFV). Before 2017, Kenya's and East Africa's supermarket industry was dominated by local supermarkets. As of 2016, Nakumatt had 34 stores, Tuskys 45 stores, Naivas 29 stores, and Uchumi 22 stores (KPMG, 2016). However, over the last 10 years, there have been significant challenges in the retail sector in Kenya. Over this period, four of the largest supermarket chains, Nakumatt, Uchumi, Tuskys and Ukwala, have collapsed. Meanwhile, international brands such as Shoprite and Game, that entered the market have also pulled out. As of February 2022, Naivas is Kenya's largest supermarket by branch volume with 81 branches, while new upcoming supermarkets such as Quickmart and Carrefour have 48 and 16 stores, respectively. Local and homegrown supermarkets dominate the market in Kenya. All local

supermarkets start as small family businesses, with a substantial number failing in their early years due to losses occasioned by intense competition (Mutinda & Mwasiaji, 2018). Most of these small supermarkets start in residential neighbourhoods and tertiary towns and cities outside the capital city, Nairobi (Kiruga, 2020). Those that manage to grow organically, tend to attract local and international investors who complement the families in terms of capital and management direction.

According to Kadenyeka and Mwasiaji (2023), the Kenyan retail industry has grown slowly, which is due to the difficult operating climate produced by the COVID-19 pandemic. With the increased competition, challenging economic conditions, and unpredictable operating environment encountered by the retail trade business in Kenya, executives in supermarkets continue to consider ways to remain competitive, viable, and profitable (Noel, 2021). This is besides running sustainable operations while delivering value to customers. As Kadenyeka and Mwasiaji (2023) postulate, the intention is to exploit innovative capabilities coupled with internal strengths and resources.

The study examined how organisational structures affected BPI in Kenya's small and medium-sized supermarkets. The choice of supermarkets as the focal point arose from a desire to understand how these businesses, particularly small and medium-sized supermarkets, manage and adapt to organisational issues in the changing retail industry. According to KNBS (2021), small firms have 10 to 49 employees, whilst medium-sized enterprises have 50 to 99 employees. Focusing on supermarkets in this size range, the study aimed to shed light on the relationship between organisational structures and the ability for business processes innovation. This study contributes to both academic literature and practical insights for enhancing competitiveness in the retail sector in Kenya.

1.2 Problem Statement

Firms such as small and medium-sized supermarkets ideally aim for a harmonious organisational structure that promotes innovation, ensuring a balance between formalisation, centralisation, and integration (Nowotny et al., 2022). This optimal state allows them to foster a dynamic atmosphere in which innovative practices can thrive, encouraging adaptation and competitiveness in the ever-changing retail industry

(Kadenyeka & Mwasiaji, 2023). Studies investigating the association between formalisation and organisational innovation reveal a lack of consensus in findings. For instance, Gentile-Lüdecke et al.'s (2020) study in China, Marín-Idárraga and Cuartas's (2016) in Bogotá, Iranmanesh et al.'s (2021) in Malaysia, Gaspary et al.'s (2020) in Brazil, and Wedl's (2020) note that formalisation is a positive and significant predictor of organisational innovation. In contrast, Dedahanov et al.'s (2017) study in the Republic of Korea and Gonzalez's (2022) study in Brazil suggest that formalisation has a negative influence on innovation. More importantly, the study by Perez-Suarez et al. (2017) in Andalusia adds complexity by asserting that there is no relationship between formalisation and innovation in organisations.

Similarly, studies examining the relationship between centralisation and organisational innovation reveal mixed findings. Gentile-Lüdecke et al. (2020) and Iranmanesh et al. (2021) indicate centralisation positively influences innovation. In contrast, Alshwayat et al. (2023), Dedahanov et al. (2017), Gaspary et al. (2020), Gonzalez (2022), and Marín-Idárraga and Cuartas (2016) indicate centralisation negatively influences innovation. More importantly, studies examining the relationship between centralisation and organisational innovation reveal mixed findings. Gaspary et al. (2020), Gonzalez (2022), and Su et al. (2019) indicate that integration positively influences organisational innovation. In contrast, Perez-Suarez et al. (2017) indicates that integration is a negative and significant predictor of innovation. Dedahanov et al. (2017) introduces an additional layer of complexity by indicating that integration has no significant relationship to innovation.

Amid rising competition, economic challenges, and a volatile operational landscape in Kenya's retail trade industry, supermarket executives are exploring strategies to assure competitiveness, viability, and profitability (Kadenyeka & Mwasiaji, 2023; Kiruga, 2020; Mutinda & Mwasiaji, 2018; Noel, 2021). This quest is complicated further by the need to maintain sustainable operations while providing greater value to customers. The overarching goal, as defined by Kadenyeka and Mwasiaji (2023), is to leverage innovative capabilities in conjunction with internal strengths and resources. However, the research cited above shows that there is no unanimity on the relationship between organisational structure and innovation. The lack of consensus poses a significant issue for supermarket managers in Kenya, complicating their

decision-making process in implementing successful innovation initiatives aimed at increasing competitiveness (Kadenyeka & Mwasiaji, 2023; Kiruga, 2020; Mutinda & Mwasiaji, 2018; Noel, 2021). Besides, these studies predominantly focus on innovation in general, leaving a significant void regarding the distinctive impact of formalisation, centralisation, and integration on business process innovation. The generalisability and transferability of the findings are also constrained considering most studies are limited to certain regions, that is China, Colombia (Bogotá), the Republic of Korea, Malaysia, Spain (Andalusian Social Economy), Brazil (State of São Paulo), and Jordan, encompassing various sectors such as manufacturing and banking. These opposing viewpoints leave an inconclusive deduction of the association between organisation structure and innovation, particularly in the retail sector, prompting a deeper inquiry. To fill these gaps, the study assessed the effect of organisational structure on business process innovation of small and medium-sized supermarkets in Kenya.

1.3 Research Objectives

1.3.1 General Objective

To assess the influence of organisational structure on business process innovation of small and medium-sized supermarkets in Kenya.

1.3.2 Specific Objectives

I. To establish the influence of centralisation on business process innovation of small and medium-sized supermarkets in Kenya.
II. To establish the influence of formalisation on business process innovation of small and medium-sized supermarkets in Kenya.
III. To establish the influence of integration on business process innovation of small and medium-sized supermarkets in Kenya

1.4 Research Questions

I. What is the influence of centralisation on business process innovation of small and medium-sized supermarkets in Kenya?

II. What is the influence of formalisation on business process innovation of small and medium-sized supermarkets in Kenya?

III. What is the influence of integration on business process innovation of small and medium-sized supermarkets in Kenya?

1.5 Significance of the Study

To begin with, this study held significance for practical applications within the business landscape. It raised important practical considerations on the implementation of organisational structures that promoted business process innovation. The study guided strategic decisions in the development and application of organisational structures by exploring the connection between business process innovation and organisational structures. The results had the potential to provide executives and decision-makers with useful guidance in creating organisational frameworks that supported and encouraged innovation in business processes. As a result, this study had the potential to provide useful information that could improve the efficacy of organisational initiatives created to promote business process innovation.

The need to research the influence of organisational structure on business process innovation in Kenya's small and medium-sized supermarkets originated from the changing dynamics of the country's retail sector. Given the recent issues encountered by large supermarkets, the emergence of new entrants in the retail space, and the increased market competitiveness, this study was particularly timely. The aftermath of market collapses and entry highlighted the need for a comprehensive knowledge of how organisational structures affected business process innovation. This was particularly important in the context of SMEs. By looking into this complex relationship, the study hoped to uncover strategic insights that would help supermarkets navigate the difficulties of today's retail scene. The study's significance lay in its ability to not only contribute to the academic discourse on organisational dynamics and strategic management but also to provide actionable recommendations for small and medium-sized supermarkets grappling with the imperative to innovate for long-term competitiveness.

More importantly, this study had practical implications for theory. Through examining the association between business process innovation and organisational structures, it

advanced and broadened the use of current theoretical models. Scholars were able to improve their theoretical models thanks to the empirical data and subtle insights gained from this research. The findings enhanced scholarly discourse and facilitated the development of more extensive and nuanced hypotheses concerning innovation and organisational structure. This study had the ability to close the knowledge gap between academics and real-world organisational practices because of its dual impact on theoretical advancements and practical applications.

1.6 Definition of Terms

Business process innovation: the development of new or improved procedures for a wide range of corporate operations (Wagner and Bode, 2014).

Centralisation: placing of decision-making power at the top of the hierarchy to control how much lower hierarchical levels engage in strategic decisions (Marín-Idárraga and Cuartas, 2016).

Formalisation: the degree to which an organisation uses policies and guidelines to dictate conduct (Gentile-Lüdecke et al., 2020).

Integration: the extent to employees and departments are functionally specialised (Perez-Suarez et al., 2017).

Organisational structure: It is the formal structure of task and reporting relationships that directs, coordinates, and motivates personnel to achieve the organisation's objectives (Tolbert & Hall, 2015).

1.7 Scope of the Study

This study focused on 340 small and medium-sized supermarkets (unit of analysis) across Kenya, from a database provided by the Retail Trade Association of Kenya (RETRAK). The Kenya Bureau of Statistics MSME Survey (2016) classified small enterprises as companies with between 10 and 49 employees and medium-sized enterprises as companies with between 50 and 99 employees. The unit of observation for this study were managerial staff. This ranged from managing directors to senior executives of marketing, finance, purchasing and supply chain management, business development, human resources, and information technology. The study selects the

managerial staff due to the central role within small and medium-sized supermarkets as well as the availability of the personnel across different organisations.

CHAPTER TWO
LITERATURE REVIEW

2.1. Introduction

This chapter examines the theoretical and empirical foundations that support the investigation. In the theoretical review, two theories that anchor this study are addressed: dynamic capabilities theory and organisational learning theory. The empirical review addresses previous literature on organisational structure and business process innovation. Additionally, the chapter presents the gaps in the reviewed literature, using this information to develop the conceptual framework.

2.2. Theoretical Review

Theories of innovation are usually developed from studies of technology-based innovations. However, as the subject of this research is centred on the organisation, this review investigates theories that tackle non-technical innovations. For this study, dynamic capabilities and the organisational learning theories are applied to explore the configuration and set-up of organisational structures on BPI.

2.2.1 Dynamic Capabilities Theory

The dynamic capacities theory guides the selection of BPI. Dynamic capabilities are described as the firm's ability to combine, generate, and reengineer its internal and external capabilities in response to a rapidly changing business environment (Teece et al., 1997). The theory of dynamic capability originates from the resource-based view of the firm (Gonzalez, 2022). This theory was developed as a framework for examining competitive advantages in highly competitive environments. Dynamic capabilities are defined as processes or as containing processes, thus are dynamic in nature as they develop over time (Ambrosini & Bowman, 2009). Dynamic capabilities theory posits that managerial and organisational processes define an organisation's competitiveness (Teece et al., 1997).

Teece et al. (1997) note that the dynamic capabilities theory argues that organisational processes have three roles: coordination, learning, and reconfiguration. The authors indicate that coordination is done via managerial controls and functions. Learning is a

dynamic process that increases productivity and efficiency via repetition and experimentation while allowing for the discovery of opportunities to improve. They also suggest that reconfiguration is the ability to change a firm's structures to achieve the desired goal internally and externally. By extending the knowledge-based view, Zahra and George (2002) proposed the dynamic capabilities are based on knowledge.

Teece et al. (2016) contended that dynamic capabilities are underpinned by managerial and organisational competence for both reading and shaping the environment. They argue that three dimensions are the antecedents of dynamic capabilities: sensing, seizing, and shifting. Sensing is linked and built on individual capabilities and organisational processes oriented to spotting innovative opportunities. Seizing capabilities are linked to business models, investment in R&D, organisational boundaries, and decision-making processes. Lastly, shifting (reconfiguration) capabilities are concerned with decentralisation, specialisation, governance, and knowledge management (Eriksson, 2014). Any organisation that lacks one of these antecedents' dimensions of dynamic capabilities will likely lack successful innovation adoption, as they might fail to spot opportunities to innovate or take advantage of these opportunities when they spot them (Teece, 2007).

The dynamic capabilities theory is ideal in guiding the investigation into business process innovation. Theoretically, dynamic capabilities theory provides an excellent framework for comprehending the complex relationships that exist between innovative business process evolution and organisational structure. Dynamic capabilities theory asserts that businesses with dynamic capabilities- that is, those that are skilled at identifying, seizing, and realigning resources- are better positioned to maintain a competitive edge over time (Teece et al., 2016). This idea is in perfect harmony with the concept of business process innovation, which places a strong emphasis on responsiveness, flexibility, and the capacity to leverage new opportunities (Salmerón et al., 2023). Through the use of dynamic capabilities theory, this study seeks to explore how particular organisational structures either facilitate or obstruct SME supermarkets' ability to respond dynamically to changing market conditions.

The theory of dynamic capabilities provides a useful framework for analysing the relationship between organisational structure and business process innovation. Formalisation, centralisation, and integration are considered aspects of organisational

structure that are considered dynamic capabilities. The dynamic capacities hypothesis states that organisations that are adept in locating, grabbing, and reallocating resources are better suited to maintain a competitive edge over an extended period of time (Teece et al., 2016). This is in perfect harmony with the core tenets of BPI, which emphasise adaptability, responsiveness, and the capacity to seize new chances (Salmerón et al., 2023).

Similarly, literature has shown that organisational structure dimensions- integration, formalisation, and centralisation- can affect employees' commitment and motivation to their organisation (Teece et al., 2016). This affects their ability to develop or rebuild new skill capable critical in adapting the organisation to new strategies. Similarly, this study has selected the dynamic capabilities theory for it describes the flow of knowledge between employees, teams, and departments within organisations. It also delineates the flow of knowledge between organisational hierarchical levels (Gonzalez, 2022). These elements combine to help firms innovates, eventually developing dynamic capabilities. This study employs the dynamic capabilities theory to investigate how formalisation, centralisation, and integration, organisational structures that are seen as dynamic capabilities, can help or impede small and medium-sized supermarkets' ability to adapt quickly to changing market conditions.

2.2.2 Organisational Learning Theory

Organisational learning (OL) theory anchors the selection of organisational structure for this study. OL theory has its origins in the behavioural theory of the organisation (Greve, 2017). Some researchers have posited that learning is an individual activity (Grant, 1996). However, OL theory has a contrary view and stresses the importance of shared learning at an organisational level (Greve, 2017). OL is based on improving the behaviour and capabilities of employees and management so that the organisation can be more responsive to change and more innovative (Murray & Donegan, 2003). It also portrays an innovative organisation as one that can create new knowledge (Damanpour, 2020).

OL differs from individual learning in several ways. To begin with, it requires that the organisation has ways to share knowledge internally within teams and among people. Second, it is based on past lessons and experiences centred around organisational

routines (Damanpour, 2020). Organisational routines or processes are thought of as the processes and actions that are learned and held stable in an organisation to allow recurring tasks to be performed reliably and economically (Greve, 2017). OL initiates innovation, through learning that knowledge is gained and synthesised into actionable changes to power innovations (Greve, 2017). Innovation is also a learning process in which external and internal knowledge are combined to develop new products and processes that allow the business to adapt to disruptions in the environment (Damanpour, 2020). A critical component of OL is performance feedback which acts as a major driver for change, as it signals when the performance levels drop below acceptable standards or fail to meet expected standards, thus creating a trigger for learning to start (Greve, 2017).

Despite interest and years of research, the elements influencing the formation of OL are still not completely identified (Martínez-León & Martínez-García, 2011). However, four factors that affect the probability of OL occurring are the organisational structure, corporate culture, strategy and work environment (Martínez-León & Martínez-García, 2011). OL has been seen to be particularly suited to organisations with high levels of professionalism. High levels of education and experience have been suggested to boost an organisation's learning capacity (Walker, 2014). However, the same study established that there was no significant association between organisational learning and the adoption of innovation unless the organisation learning was paired with social collaborative actions in the organisation.

Organisational structures are regarded to play a crucial impact in a company's ability to locate and integrate knowledge resources (Martínez-León & Martínez-García, 2011). As a result, SMEs are encouraged to reorient their learning behaviours around certain organisational practices in order to profit from OL. Though OL has also been proposed as a suitable theory for the study of organisational management (Amundson, 1998), it has been ignored by several researchers (Matthews et al., 2017).

This study has chosen OL as a robust foundation for examining the dimensions of organisational structure. These dimensions include formalisation, centralisation, and integration. OL has been selected as the study's anchor because of its emphasis on how organisations acquire, understand, and utilize knowledge to improve performance and adapt to changes in their environment. OL theory contends that an organisation's

structure affects the experience-based learning it absorbs and applies to improve performance (Damanpour, 2020).

Organisational learning also anchors this study because it influences performance not just directly but also indirectly through innovation (Patky, 2020). It promotes the development of talents that drive innovation. This in turn improves performance outcomes. Innovation requires the acquisition and dissemination of knowledge both inside and externally. The organisation's ability to absorb external knowledge is determined by its ability to understand, digest, and effectively apply new concepts. Organisational learning improves assimilation ability. This is by allowing the transformation and application of existing knowledge for innovation (Patky, 2020).

Further, Do et al. (2022) argues that organisational structure shapes how knowledge is acquired, shared, and utilised in an organisation. When people share their knowledge throughout the organisation, it generates new insights and promotes innovation. Organisational learning encourages creativity by using techniques including memory sharing, referencing other sources of information, and following set protocols to retain knowledge. This is consistent with the value of organisational structure in organisations (Do et al., 2022). Formalisation, integration, and centralisation are three structural features that can affect how information circulates, accumulates, and is utilised inside an organisation. OL theory provides an advanced lens through which to look at how organisational structures facilitate or obstruct the acquisition, exchange, and use of knowledge for business process innovation.

In summary, given the research aim, which was to analyse the effects of organisational structure on BPI in small and medium-sized supermarkets in Kenya, the use of dynamic capacities theory and organisational learning theory appears appropriate. The dynamic capabilities theory emphasises an organisation's ability to adapt and innovate in response to changing conditions. The concept of dynamic capacities refers to the processes of perceiving, seizing, and reconfiguring resources, which are consistent with the goal of understanding how organisational structures drive business process innovation. Centralization, formalization, and integration, for example, can be considered as organisational processes that help to detect market possibilities, capitalise on them effectively, and reconfigure resources to adopt innovative business processes. Organisational learning theory focuses on how organisations acquire,

exchange, and apply knowledge to improve performance and adapt to change. In the context of the research aim, organisational learning theory has shed light on how centralisation, formalisation, and integration influence learning processes inside supermarkets, hence affecting their potential to innovate business processes.

2.3 Empirical Review

This section places the investigation into a larger academic discourse, which argues for the study's relevance. As such, the section identifies knowledge gaps that this study will fill after reviewing the body of existing evidence that the study relies upon. Moreover, the empirical review develops a methodology for assessing the research outcomes. The research objectives serve as a guide for the review.

2.3.1 Formalisation and Business Process Innovation

A large number of existing studies in the broader empirical literature have assessed the association between formalisation and BPI. For instance, Gentile-Lüdecke et al. (2020) examined how organisations structure affects outbound in inbound open innovation. One of the variables used to operationalise organisational structure was formalisation. The study employed a cross-section survey using Chinese SMEs. It used snowball sampling to collect data from 156 respondents from an initial 197 using quantitative surveys. The study established that formalisation has a positive nad significant association to outbound and inbound open innovation. While Gentile-Lüdecke et al.'s (2020) research contributes invaluable knowledge into the impact of organisational structure on outbound and inbound open innovation in Chinese SMEs, certain gaps warrant consideration. To begin with, the findings may be context-specific to Chinese SMEs, limiting generalisability to a broader global context. Conceptually, the study does not address the specific innovation in business process innovation.

Further, Marín-Idárraga and Cuartas (2016) conducted a study to investigate how organisational structure determinants affect innovation in the commercial, industrial, and services sectors within SMEs situated in Bogotá. The study operationalised organisational structure using differentiation, decentralisation, and formalisation. Using a structural equation model, a sample of 383 SMEs within the industrial, services, and commercial sectors in Bogotá were selected using simple random

sampling. The study collected the data from middle management and strategic apex directors using a self-administrated survey. As such, the research found that organisational structure is a positive significant predictor of innovation in SMEs. Specifically, formalisation was shown to positively influence innovation in Bogotá SMEs (Marín-Idárraga & Cuartas, 2016). Although the study provides insightful information regarding the relationship between formalisation and innovation in Bogotá SMEs, questions concerning its generalisability to other contexts emerge from its narrow geographic emphasis. This could limit the transferability of results to other contexts with different social and cultural settings such as Kenya. A conceptual gap emerges from the study overlooking the association between formalisation and BPI within SMEs, a critical aspect of SME development.

On their part, Dedahanov et al. (2017) investigated the association between organisational structure and organisational innovation performance. The study operationalised organisational structure using centralisation, formalisation, and integration. Data was collected using quantitative surveys from 140 functional managers sampled from manufacturing organisations in the Republic of Korea. The results indicate that formalisation has a negative significant association with the innovation behaviour of employees. However, there are some significant gaps in the knowledge about the association between formalisation and organisational innovation. To begin with, the generalisability and transferability of these findings to diverse industries and cultural settings remains unclear. Contextual and cultural differences between the Republic of Korea and Kenya mean these perceptions could change. Further, the study does not also address formalisation and BPI in SMEs.

Iranmanesh et al. (2021) investigated the impact of organisational structure on innovation capabilities and operational performance of manufacturing enterprises in Malaysia. The study employed quantitative surveys to collect data from a sample of 212 medium and large manufacturing firms selected using simple random sampling. Five variables were used to operationalise the organisational structure. They include specialisation, decentralisation, formalisation, link mechanism, and information social relations. The study established that formalisation is a positive association to innovation within Malaysian medium firms.

In another study, Perez-Suarez et al. (2017) examined the association between organisational structure dimension and type of innovation. The organisational structure was conceptualised using formalisation, centralisation, coordination, and preparation. Worker-owned and cooperative businesses were the main subjects of the study within the framework of the Andalusian Social Economy in Spain. Data were collected using a semi-structured questionnaire consisting of ten items. A simple random sampling method was used to select a sample of 515 firms. Findings indicate that organisations with high levels of formalisation did not innovate, or if they did, it was at negligible levels.

In a recent study, Gonzalez (2022) investigated the association between organisational structure and knowledge-based dynamic capability on team innovation performance in industrial firms in Brazil. The study focused on 7,012 industrial enterprises listed in the State of São Paulo's Industrial Register, and it was directed towards CEOs, managers, and project coordinators in various industries in Brazil. A random sample of 1,200 businesses was chosen for participation from this group. 262 responses from 65 firms were used for analysis. The study found that formalisation is a negative significant predictor of knowledge-based dynamic capability leading to negatively affecting innovation in firms (Gonzalez's, 2022). The study reveals that, as organisational structure formalisation increases, it tends to have a negative effect on knowledge-based dynamic capability. Eventually, this impedes innovation in organisations.

Gaspary et al. (2020) examined the impact of organisational structure factors on the creation of a creative work environment in Brazilian organisations. These dimensions include formalisation, integration, and centralisation. A mixed method was employed to attain the objective. The study used a single case study concentrating on the 3M subsidiary in Brazil that was named the country's most innovative business in 2012 and 2013. Eight managers participated in in-depth interviews that yielded qualitative data about the organisational structure and aspects of the innovation ecosystem. Further, 39 employs from the corporate lab participated in a quantitative survey using validated questionnaires to measure the work environment for innovation and organisational structure. The study found that formalisation as measured using job codification and rule observation is a positive significant predictor of organisational

innovation. The study suggested that higher levels of organisational formalisation led to lower perceptions of work challenges. This facilitated the ability of people to innovate in the 3M subsidiary in Brazil.

Similar, Wedl (2020) examined how formal organisation, specifically formal control, affects the processes of innovation. Taking a process-oriented approach to innovation, the empirical investigations address the divergent viewpoints in the body of current literature. Study I investigated how the development and use of formal control mechanisms affect innovation processes. The study was based on a five-year single-case study. Study II examined the effects of innovation-strategy formality on the evaluation and ideation processes of organisational members in the front end of innovation through a multi-case analysis of two businesses. A comprehensive study of the literature, Study III, explained the connection between formal structure and innovation. The findings underline the importance of the formal control creation process. It indicates how formalised organisation influences innovation processes, and highlights the role of agency in the formal organisation's creation and implementation.

2.3.2 Centralisation and Business Process Innovation

Over time, literature has developed on the association between centralisation and innovation. Alshwayat et al. (2023) conducted a qualitative exploratory case study addressing the changing environment and challenges in the banking sector by examining the senior management's perceptions of the impediments to innovation and transformation in a Jordanian commercial bank. Using a grounded theory-based qualitative systematic approach, the study interviewed eight senior managers to extract complex insights. High levels of bureaucracy, poor communication, low levels of employee engagement, middle managers' opposition, and risk aversion were found to be major obstacles to innovation and transformation (Alshwayat et al., 2023). In other words, centralisation within an organisation impeded innovation. However, the study has some shortcomings that should be noted. Concerns remain over the generalisability of the study's findings beyond the narrow context of the Jordanian banking sector. Besides, centralisation is not explored against a specific innovation, in this case, BPI.

Similarly, Marín-Idárraga and Cuartas's (2016) study in Bogotá found that centralisation was a negative significant predictor of innovation. This shows that the higher the level of centralisation within an SME, the lower the level of innovation. Further, the findings underscore the importance of having an ideal organisational structure towards enhancing innovation. Yet, the results might not apply to SMEs in other international contexts due to their limited capacity to be generalised outside of the unique context of Bogotá. This necessitated a study of this nature in Kenya.

More importantly, Dedahanov et al.'s (2017) study in the Republic of Korea found that centralisation has a negative association with innovative behaviour. While Dedahanov et al.'s (2017) investigation sheds light on the negative association between centralisation and innovative behaviour, critical considerations emerge. The results might only apply to the Republic of Korea. This begs the question of how broadly applicable the findings are to other parts of the world, including Kenya. Besides, the study is conceptually shallow in explaining the association between centralisation and BPI since it only concentrates on innovative behaviour. These are gaps that this study fills by conducting the study in Kenya.

On their part, Gonzalez's (2022) investigations in Brazil found that centralisation has a negative significant influence on knowledge-based dynamic capability leading to negatively affecting innovation in firms. The findings underscore the detrimental impact of centralisation on knowledge-based dynamic capability. Consequently, centralisation impedes innovation in firms. However, the findings are context-specific to the Brazilian corporate environment. This raises concerns about how broadly the findings may be applied to contexts such as Kenya that share different social and cultural dimensions considering the cultural distance from Brazil. From a conceptual framework perspective, the study has gained more depth by delving deeper into the exact mechanisms that centralisation uses to limit BPI in SMEs, which this study has filled.

Similarly, the study by Gaspary et al. (2020) in Brazil found that low centralisation measured by decision-making and authority hierarchy positively influenced the level of innovation in the Brazilian. This means that centralisation is a negative predictor of organisational innovation. This supports the notion that less centralisation fosters increased flexibility, responsiveness, and collaboration, all of which lead to improved

innovation capabilities. One drawback of the findings is their generalisability to different industries and organisational contexts. Another drawback is the failure to address the specific innovation in BPI.

On their part, Gentile-Lüdecke et al. (2020) found that centralisation is a positive and significant predictor of outbound and inbound open innovation. This was contrary to the expectation that the higher the centralisation, this would lead to diminished employee motivation and the likelihood of employees seeking innovative external knowledge. Similarly, Iranmanesh et al. (2021) study in Malaysia found that decentralisation has no association to manufacturing companies' innovation capability. This means that centralised organisational structures may have a positive significant influence on the level of innovation within these firms. However, these findings may lack generalisability beyond Tehran and Malaysia, limiting the transferability of the conclusion to a setting such as Kenya. While logistics innovation is part of BPI (Tabatabaie & Nik, 2016), more could be achieved by addressing the association between the latter and centralisation. This is a gap that this study fills by incorporating exploring the relationship between centralisation and BPI.

In summary, the studies on centralisation and innovation yield varied results. Gentile-Lüdecke et al. (2020) and Iranmanesh et al. (2021) studies find there exists a positive association between centralisation and innovation. In contrast, Alshwayat et al.'s (2023) banking sector case study highlights centralisation as an obstacle, echoing Gaspary et al. (2020) and Marín-Idárraga and Cuartas (2016). Dedahanov et al.'s (2017) study in the Republic of Korea and Gonzalez's (2022) research in Brazil also suggest a negative impact of centralisation on innovation. These contrasting findings necessitated an inquiry into the association between centralisation and business process innovation in Kenya.

2.3.3 Integration and Business Process Innovation

Su et al. (2019) explored the association between organisation structure and managerial innovation. The study operationalised organisational structure using organic structure and cross-functional integration. The study used a questionnaire-based interview on Chinese manufacturing companies across six regions to obtain data. After conducting face-to-face interviews with two top managers in each of the

263 randomly chosen organisations from a list of 1000, responses were reduced to 212 usable responses following data screening. The findings show that both cross-functional integration and organic structure have a positive significant influence on managerial innovation. Overall, Su et al. (2019) concluded that integration within organisations is a positive predictor of management innovation. As such, integrated organisational structure serves as a catalyst for fostering innovative practices within managerial domains. The results emphasise the crucial link between structure and innovative management. This implies that integration is instrumental in creating an environment conducive to the emergence and implementation of novel innovation practices.

Similarly, Gaspary et al.'s (2020) study in Brazil found that integration, as measured using hierarchical levels, horizontal integration, and communication, is a positive significant predictor of organisational innovation. The study indicated that high integration implies that an organisation that is rich in collaboration and communication environment among departments and people has high levels of innovation. Similarly, Gonzalez's (2022) study in Brazil found that integration has a positive significant influence on knowledge-based dynamic capability positively affecting innovation in firms.

These findings contrast those by Dedahanov et al. (2017) in the Republic of Korea who found that integration has no significant relationship to innovation behaviour. In contrast, Perez-Suarez et al. (2017) findings indicate that integration is a negative significant predictor of social economy firms not innovating. These contrasting conclusions necessitate an inquiry into the association between integration and business process innovation in the Kenya context, particularly for supermarkets. Besides, all the reviewed studies have not explicitly examined the association between organisation structure and BPI. This creates a contextual gap that the study fills.

2.4 Research Gap

The synthesised literature on formalisation reveals several noteworthy research gaps that this study addresses. The lack of specificity in discussing the relationship between formalisation and BPI is a common limitation among research undertaken in China, Bogotá, the Republic of Korea, Malaysia, Andalusia, Brazil, and Jordan. The majority

of research primarily concentrates on the notion of innovation in general, ignoring the subtleties of formalisation's influence on the particular domain of innovation: BPI. More importantly, most of these studies are context-specific, which raises questions regarding the applicability of results to various international settings with different cultural and social contexts. Noteworthy, these studies have taken either a quantitative or qualitative methodology.

The deduction of findings from the studies on centralisation from China, Bogotá, the Republic of Korea, Malaysia, Brazil, and Jordan have also shown notable gaps. A recurring issue is the findings' transferability outside of the particular environment of each study. This means potential limitations in applying the results to various global settings. This includes the absence of exploration in different cultural and organisational contexts, such as Kenya. Moreover, the specific focus on BPI is also lacking in the literature on centralisation. This creates a significant conceptual gap regarding the precise ways in which centralisation affects this aspect of organisational structure.

In terms of integration, studies investigated show similar gaps. Like centralisation and formalisation, the studies fail to specifically examine how integration specifically affects BPI. The generalisability and transferability of the findings are also difficult considering most studies are limited to certain regions.

Finally, there has been contrasting finding regarding the association between formalisation, centralisation, and integration. While some studies show that formalisation is a positive predictor of innovation, others show this is not the case. Similarly, some studies have shown that centralisation is a positive predictor of innovation while others have shown the contrary is true. Also, some studies have established that integration positively influences innovation while others have shown there is no relationship. Others have shown that the relationship is negative. Generally, the reviewed studies show there are no consensus on the influence of organisational structure on innovation, as shown in table 2.1. These contrasting findings necessitate an inquiry into the association between organisational structure variables and BPI in Kenya.

Table 2. 1 Research gaps

Authors	Country	Purpose	Methodology	Findings	Research gaps
Marín-Idárraga and Cuartas (2016)	Bogotá, Columbia	Investigate how organisational structure determinants affect innovation in the commercial, industrial, and services sectors within SMEs	Quantitative	• Formalisation positively influences innovation in Bogotá SMEs. Centralisation was found to be a negative significant predictor of innovation.	• The problem of findings transferability to other contexts. • Fails to specifically address organisation structure and business process innovation. Findings contrast others.
Dedahanov et al. (2017)	Republic of Korea	Examined the connection between the performance of organisational innovation and organisational structure.	Quantitative	• Formalisation has a negative significant association with the innovation behaviour of employees. • Centralisation was shown to have a negative association with innovative behaviour. • Integration has no significant relationship to innovation behaviour.	• The problem of findings transferability to other contexts. • Fails to specifically address organisation structure and business process innovation. • Also, findings contrast those that show a positive association.
Perez-Suarez et al. (2017)	Andalusia	Establish the association between organisational structure dimension and type of innovation.	Qualitative	• Formalisation does not influence innovation in Andalusian organisations. Integration is a negative significant predictor of social economy firms not innovating.	• May only be generalised to Andalusia. • Fails to specifically address business process innovation. Findings contrast others.
Su et al. (2019)	China	Examined the association between organisation structure and managerial innovation.	Qualitative	Cross-functional integration has a positive significant influence on managerial innovation.	• May only be generalised to China. • Fails to specifically address business process innovation. Also, contrasts other findings.

Gaspary et al. (2020)	Brazil	Investigated the impact of organisational structure characteristics on the creation of a creative work environment in Brazilian organisations.	Mixed methods	• Formalisation as measured using job codification and rule observation is a positive significant predictor of organisational innovation. • Centralisation is a negative predictor of organisational innovation. Integration enhances knowledge-based dynamic capabilities, leading to increased creativity in organisations.	• May only be generalised to Brazil. • Fails to specifically address business process innovation. • Findings contrast others.
Gentile-Lüdecke et al. (2020)	China	Examined how the organisation's structure affects the outbound in inbound open innovation.	Quantitative	• Formalisation positively impacts both inbound and outbound open innovation. Centralisation is a positive and significant predictor of outbound and inbound open innovation.	• May only be generalised to China. • Fails to specifically address business process innovation. • Findings contrast others. •
Wedl (2020)	Not disclosed	Investigate how formal organisation, specifically formal control, affects the processes of innovation	Qualitative	Formal organisation influences innovation processes.	• Fails to specifically address business process innovation. Also, contrasts other findings.
Iranmanesh et al. (2021)	Malaysia	Investigated how Malaysian manufacturing organisations' operational performance and capacity for innovation were affected by their organisational structure.	Quantitative	• Formalisation is a positive and significant predictor of innovation within Malaysian medium firms. Decentralization does not significantly impact industrial organisations' innovation capabilities.	• May only be generalised to Malaysia. • Fails to specifically address business process innovation. Findings contrast others.

Gonzalez (2022)	Brazil	Investigated the association between organisational structure and knowledge-based dynamic capability on team innovation performance in industrial firms in Brazil	Quantitative	• Formalisation is a negative significant predictor of knowledge-based dynamic capability leading to negatively affecting innovation in firms. • Centralisation impedes innovation in firms. Integration is a positive significant predictor of organisational innovation.	• The problem of findings transferability to other contexts. • Fails to specifically address organisation structure and business process innovation. Findings contrast others.
Alshwaya t et al. (2023)	Jordan	Examining the senior management's perceptions of the impediments to innovation and transformation in a Jordanian commercial bank.	Qualitative	Centralisation within the organisation impeded innovation	• May only be generalised to Jordan. • Fails to specifically address business process innovation. Also, contrasts other findings.

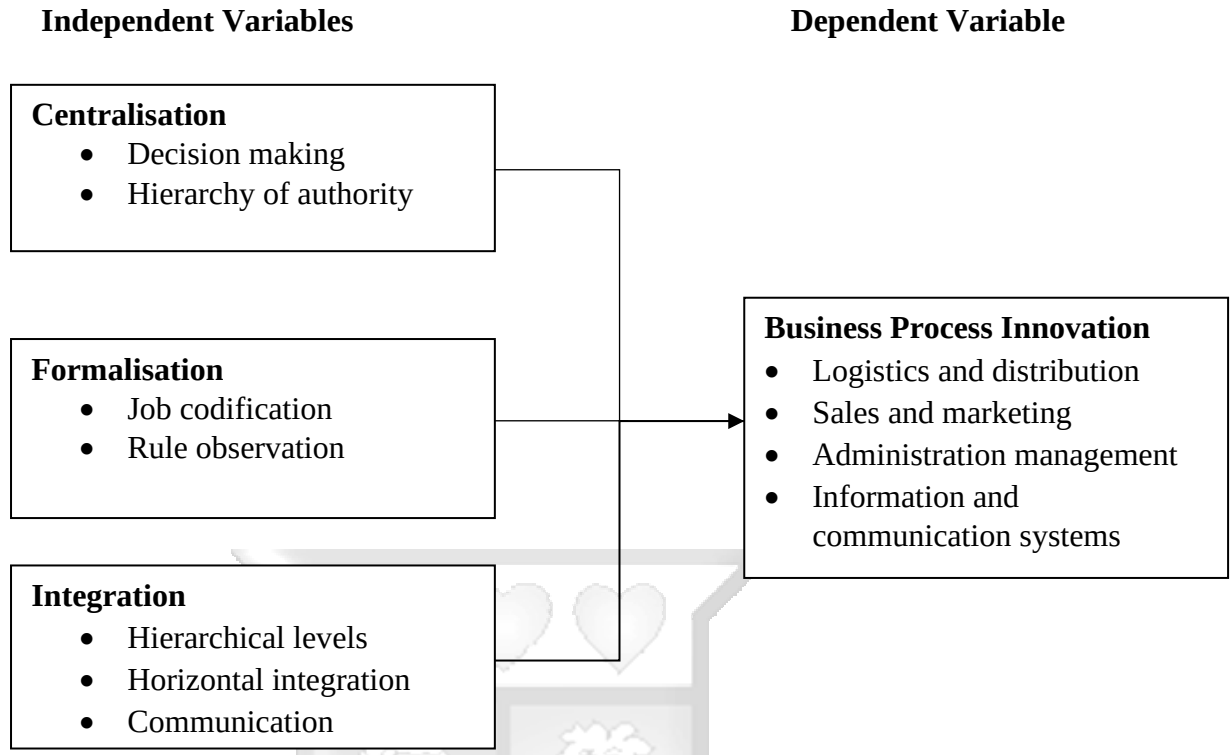
(Author, 2023)

2.5 Conceptual Framework

The conceptual framework in figure 2.1 presents the different variables and shows the associations between the dependent and independent variables. This is to inform the formulation of the research design. Centralisation, formalisation, and integration are the constructs of the independent variable (organisational structure). Business process innovation is the dependent variable. Centralisation is measured using decision-making and a hierarchy of authority. On the other hand, formalisation is measured using job codification and rule observation. Integration is measured using hierarchical levels, horizontal integration, and communication. Finally, business process innovation is assessed through advancements in distribution and logistics and marketing and sales. It is also assessed through information and communication systems and administration management.

The conceptual framework is based on dynamic capacities theory and organisational learning theory, which give theoretical foundations for understanding how organisational structures affect BPI. Dynamic capacities theory states that organisational processes such as coordination, learning, and reconfiguration are crucial for preserving competitiveness and fostering innovation. Centralisation, formalisation, and integration are conceptualised as organisational processes that help to generate dynamic capacities. Centralization influences coordination and decision-making processes, formalization influences organisational learning through rule observation and job codification, while integration influences the ability to rearrange resources and adapt to changing market conditions. On the other hand, organisational learning theory emphasises the significance of knowledge acquisition, sharing, and application in promoting innovation and performance improvement. Within the conceptual framework, centralisation, formalisation, and integration have an impact on the organisation's learning processes. Centralisation influences information dissemination and decision-making authority, formalization modifies knowledge codification and transfer via established rules and processes, and integration promotes knowledge sharing across hierarchical levels and functional areas.

Figure 2.1 Conceptual framework



(Author, 2023).

Table 2.2 Research variables operationalisation

Variable	Type	Indicator	Explanation	Measurement	Data Collection Method	Reference
Business process innovation	Dependent variable	Distribution and logistics innovation	This is an innovation in warehousing, shipping, service delivery, and order processing.	5-Point Likert	Questionnaire	OCDE/Eurostat (2018); Piñera-Salmerón et al. (2023)
		Marketing and sales innovation	Marketing innovation includes advertising, direct marketing, pricing strategies and tactics, as well as sales and after-sales activities.			
		Information and communication systems innovation	Information and communication system provision and maintenance are the focus of this innovation.			
		Administration management innovation	Innovation within the function of comprehensive business management. This includes cross-functional decision-making, organisational responsibilities, corporate governance, financial activities human resources management, procurement, and the management of external relationships stakeholders.			
Centralisation	Independent variable	Decision making	Involvement in decision-making.	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez (2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)
		Hierarchy of authority	How authority is distributed.	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez (2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)
Formalisation	Independent variable	Job codification	The clear outlining of jobs and roles.	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez

						(2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)
		Rule observation	The extend to which employees observe the set rules	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez (2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)
Integration	Independent variable	Hierarchical levels	The layers of organisational levels.	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez (2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)
		Horizontal integration	The extent to which functional specialisation occurs among works and departments.	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez (2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)
		Communication	Communication between cross-functional teams.	5-Point Likert	Questionnaire	Ali et al. (2018); Dominguez Gonzalez (2023); Dedahanov et al. (2017); Gaspary et al. (2020); Nowotny et al. (2022)

(Author, 2023).

It is important to note that the sales and marketing function, as outlined in Table 3.1, is an important component of BPI. It entails a variety of operations aimed at promoting products, entering new markets, developing pricing strategies, and managing customer relationships, all of which help to strengthen the firm's competitive position and drive innovation. Also of note is that the supermarket industry's characteristics justify the omission of product and business process development and production of goods or services as indicators for measuring BPI in Kenya's small and medium-sized supermarkets. Kenyan supermarkets normally do not engage in major product creation operations. Instead, they focus on retailing and distributing products purchased from a variety of suppliers. Further, supermarkets frequently rely on external vendors to produce items. This limits their direct involvement in manufacturing operations. As a result, the indicators used to measure business process innovation are specialized to supermarket-specific tasks such as distribution, transportation, marketing, sales, and administration.

2.6 Chapter Summary

The chapter starts by addressing the relevant theories applicable to the study. The dynamic capabilities and the organisational learning theories are discussed as the anchors of this study and in selecting the variables. The chapter also reviews empirical studies including formalisation, centralisation, and integration. The research gap drawn from the differences in empirical results and conceptualisation of variables is called out. The chapter ends by proposing a conceptual framework and discussing the operationalisation of the variables under study.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter advances the methods used in conducting this study. This section covers the research philosophy, research design, population, sampling, data collecting and analysis, and ethical considerations.

3.2 Research Philosophy

According to Saunders et al. (2019), a research philosophy or paradigm is a set of presumptions and beliefs that researcher use to develop knowledge, which is underpinned by the fact that all research contributes to the development of knowledge, whether new or not. This research was based on the positivity philosophy. Positivism promises unambiguous and accurate knowledge by deductively collecting and analysing the happenings in the subject area and determining if a relationship exists between the analysed subjects (Saunders et al., 2019). This study sought to determine if organisational structure influences business process innovation adoption in small and medium-sized supermarkets in Kenya. Positivism assisted in establishing if a relationship exists between the variables and then allowed for generalisations to a larger population.

3.3 Research Design

Cantrell (2011) conceptualises a research design as a plan that an investigator employs to answer the research questions while meeting the study's aim and objectives. The study adopted a descriptive research design. Aggarwal and Ranganathan (2019) notes that a descriptive design is a research blueprint that involves a fact-finding enquiry that describes the state of the variables under study, in this case the influence of formalisation, centralisation, and integration on the business process innovation of SME supermarkets in Kenya. The descriptive design was ideal for analysing and elucidating the connection between variables that have not been extensively explored (Aggarwal & Ranganathan, 2019), in this case, the organisational structure variables and business process innovation. Therefore, the descriptive design determined which variable has the strongest influence with lower or higher business process innovation.

Based on the descriptive design, the study adopted the quantitative research method. Bloomfield and Fisher (2019) postulate that the quantitative research method applies statistical tests to detect trends or confirm associations scientifically. This method is characterised by collecting and analysing numerical data. The goal of using numerical data is to describe, control, explain, or predict associations (Bloomfield & Fisher, 2019; Creswell & Creswell, 2018). The choice of the quantitative method for this study lies in its reliability, replicability, result orientation, and generalisability of results. Further, the design's objectivity ensured that research bias was minimised (Bloomfield & Fisher, 2019; Creswell & Creswell, 2018).

3.4 Population

This section outlines the population that the research considered in meeting the research objectives and the sampling techniques and sample size used.

3.4.1 Target Population

Saunders et al. (2019) assert that all of the elements from which a sample is drawn is referred to as the population. The population for this study comprises all small and medium-sized supermarkets in Kenya. While Kenya hosts many small and medium-sized supermarkets, the Retail Trade Association of Kenya (RETRAK) (2024) database lists approximately 340 establishments. These supermarkets represent a diverse range of business models, operational structures, and market positioning within the retail sector. This means that the unit of analysis was drawn from the 340 supermarkets. The choice of supermarkets as the unit of study is supported by the research aim, which was to analyse the effect of organisational structure on BPI in this specific sector of the retail industry. Small and medium-sized supermarkets were chosen as the unit of research due to their importance in Kenya's retail industry and representation of a varied range of business models, operational structures, and market positioning (Kiruga, 2020; Mutinda & Mwasiaji, 2018). This is consistent with the aim of undertaking an in-depth research into organisational structure and BPI in the retail sector.

The unit of observation consisted of the managerial staff within these 340 supermarkets, ranging from managing directors to senior executives across various functional areas, such as marketing, finance, purchasing and supply chain management, business development, human resources, and information technology. This selection ensured a focused investigation into the

organisational structure and business process innovation within the identified subset of supermarkets.

3.5 Sampling

Cooper and Schindler (2006) refer to sampling design as the procedure for drawing a specific sample from a population. Sampling is used when it is not possible to study the entire population (Creswell & Creswell, 2018). The Slovin formula $n = \frac{N}{1+N(e)^2}$ (Adam, 2020) was used in this study to determine the sample size. N was the population size, e was the sampling error, and n the sample. Results are presented as follows: $n = \frac{340}{1+340(0.05)^2}$ and the sample size was 183.

Simple random sampling was used to select the sample from the population. Simple random sampling is a probability sampling method in which each unit in the population has a (greater than zero) chance of being chosen for the sample, and this probability can be properly calculated (Saunders et al., 2019). The choice of simple random sampling emerged from its applicability when a population is small, in this case 340 small and medium-sized supermarkets, homogenous, and readily available (Saunders et al., 2019). The technique also allowed all the elements of the population an equal probability of selection (Creswell & Creswell, 2018).

The unit of observation for this study were managerial staff. This ranged from managing directors to senior executives of marketing, finance, purchasing and supply chain management, business development, human resources, and information technology. The study selects the managerial staff due to the central role within small and medium-sized supermarkets as well as the availability of the personnel across different organisations. These are the individuals occupying strategic roles across these functional domains in the small and medium-size supermarkets in Kenya.

3.6 Data Collection Instrument

The study collected primary data and adopt a quantitative cross-sectional survey conducted using a standard questionnaire, in Appendix II, which used closed questions. The closed questions adopted the five-point Likert ordinal scale to measure the extent of the organisational structure constructs influence on business process innovation in small and

medium-sized supermarkets. Part A (the first section of the questionnaire) contained questions regarding the demographics of the respondents. Part B contained questions related to each of the independent and dependent variables.

3.7 Data Collection

The study collected primary quantitative data from respondents within the selected supermarkets. Specifically, the researcher administered a standard questionnaire to establish the association between formalisation, centralisation, and integration on business process innovation within small and medium-sized supermarkets using RETRAK Kenya's database. The researcher initiated the recruitment process by obtaining permission from the managerial staff of the selected 183 small and medium-sized supermarkets selected randomly from the database provided by RETRAK Kenya. Once approval was obtained from the management of each supermarket, the researcher distributed the standard questionnaire to the managerial staff covering a variety of functional areas like marketing, finance, purchasing, supply chain management, business development, human resources, and information technology, as demonstrated in table 3.1. The researcher informed the respondents about the study's purpose, sought their voluntary participation, and sought their informed consent. This was to ensure a comprehensive and accurate representation of views across different organisational roles.

Table 3. 1 Representation of managerial staff who took part in the study.

Functional Area	Number of Questionnaires Returned	Percentage
Marketing	25	15.92%
Finance	20	12.74%
Purchasing	18	11.46%
Supply Chain Management	30	19.11%
Business Development	15	9.55%
Human Resources	22	14.01%
Information Technology	27	17.20%
Total	**157**	**100.00%**

The researcher distributed the self-administered physical questionnaires via drop and collect. A web version of the questionnaire, in Appendix II, was generated for respondents who wished to fill it online. The web version was generated on Google forms and the link distributed to those respondents who wished to fill it out virtually. This was key because web-based self-administered questionnaires have a higher completion rate than drop questionnaires

(Rada & Domínguez-Álvarez, 2014). For the physical questionnaires, the researcher dropped them off at the headquarters of the supermarkets or their management offices. The researcher dropped off the questionnaires in the mid-morning hours, between 10 am and 12 pm. Further, the questionnaires were delivered in the middle of the week in the second and third week of the month. The rationale for adopting this data collection strategy was to ensure that the questionnaires were not dropped off during busy periods, thus increasing the likelihood of response. The researcher sent reminders to respondents who had not returned the filled questionnaires every two weeks for two months.

3.7 Research Quality

The researcher examined and verified the reliability and validity of the questionnaire in order to preserve the study's quality. This was done by conducting a pilot study on 10% of the planned respondents selected from small and medium-sized supermarkets from the population.

3.7.1 Reliability

The researcher conducted a pilot study that shared 20 questionnaires distributed to the management of small and medium-sized supermarkets extracted from the RETRAK database. Once the researcher collected the responses, an analysis was conducted to assess the questionnaire's internal consistency. This was using Cronbach's alpha in SPSS Statistics software version 29. According to Tiamiyu et al. (2022), to ensure that a questionnaire is reliable, a Cronbach alpha should cross the 0.70 threshold. For the study, the range for the alpha were between 0.7 and 0.9 (Saunders et al., 2019). This made 0.9 the cut-off point. This is because a high value of alpha, in this case over 0.9, may indicate the presence of redundancies in the questionnaire, suggesting that the test length be shortened (Tiamiyu et al., 2022).

Table 3. 2 Scale reliability statistics

Variable	**Cronbach's α**
Formalisation	0.709
Centralisation	0.754
Integration	0.884
Business process innovation	0.715

3.7.2 Validity

According to Saunders et al. (2019), validity is characterised by the suitability of the measurements employed, as well as the precision and generalisability of the results. The researcher conducted a content validity test to ascertain that the items in the questionnaire appropriately and sufficiently operationalise the variables as intended (Jamil, Mohammad, & Ramu, 2019). Therefore, the researcher consulted subject matter experts and scholars from Strathmore Business School who possess special knowledge of the retail industry, specifically supermarkets.

Moreover, the 20 pilot questionnaires helped in locating any issues within the questionnaire. These issues ranged from gaps in covering the constructs for each variable or the presence of unclear questions. The iterative process of expert evaluation and pilot testing supported the development of the measuring instrument and validation of the study's construct validity.

3.8 Data Analysis

The research employed the Statistical Package for Social Sciences (SPSS Version 29) program in the data analysis. Both descriptive and inferential statistics were used to analyse the data in order to determine the relationships between the independent and dependent variables. Regression and correlation analysis were complementary techniques that the researcher used to evaluate the type and degree of associations between variables (Cooper & Schindler, 2006). Descriptive statistics were used to provide summaries about the population. This included measures such as the mean and standard deviation.

As such, the first set of inferential statistics was computed using Spearman's rank correlation analysis, which provided correlation coefficients and p-values. The second set of inferential statistics used ordinal linear regression to establish the influence of formalisation, centralisation, and integration on the business process innovation in SME supermarkets in Kenya. The analysed data was charted or displayed in tabular form where necessary and presented in the findings chapter. The model regression model $Y = \alpha + \beta 1X_1 + \beta 2X_2 + \beta 3X_3 + \varepsilon$ was used.

Where:

Y = Business process innovation.

α = The model intercepts.

$\beta 1 - 3$ = Coefficient of independent variables.

X_1 = Centralisation.

X_2 = Formalisation.

X_3 = Integration.

$\varepsilon =$ error term.

The model was fitted using ordinal linear regression analysis in SPSS Version 29. This analysis estimates the coefficients ($\beta 1$, $\beta 2$, $\beta 3$) and intercept (α) for small and medium supermarkets in Kenya based on data on centralisation, formalisation, integration, and BPI. The obtained coefficients and intercept shed light on the links between the independent variable (organisational structure) and the dependent variable (business process innovation).

3.9 Ethical Considerations

What is deemed acceptable behaviour in terms of right and wrong in research is referred to as ethics (Farrimond, 2013). It is imperative to adhere to ethical guidelines when doing research for a number of reasons. The most significant is to advance the research's objectives, which are knowledge, truth, and the avoidance of error. The second reason is that research involves cooperation and coordination between multiple people and organisations and only by adhering to ethical norms will researchers ensure to promotion of the values necessary for collaboration such as trust, accountability, and fairness (Resnik, 2020).

This study adhered to research ethics standards and ensured that all participants were informed of their rights to participate. This also included any potential hazards they could experience from their participation, which was accomplished through an email to them. The researcher acquired ethics approval from Strathmore University. Also, the investigator obtained research authorisation from the National Commission for Science, Technology, and Innovation. The research did not collect any sensitive or identifiable information and kept the confidentiality of the participants in accordance with academic research ethics.

CHAPTER FOUR
PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the research findings following the quantitative data analysis. The findings are guided by the objectives: to establish the influence of centralisation on business process innovation of small and medium-sized supermarkets in Kenya, to establish the influence of formalisation on business process innovation of small and medium-sized supermarkets in Kenya, and to establish the influence of integration on business process innovation of small and medium-sized supermarkets in Kenya. The chapter begins with a presentation of the response rate, followed by the presentation of the findings of the background information. Further, the descriptive results are presented informed by the study variables. This is followed by the presentation of the correlation and regression analysis findings for each study objective.

4.2 Response Rate

The researcher administered 183 questionnaires each targeting a small and medium-sized supermarket in Kenya that was part of the sample. These supermarkets were the unit of analysis for the study. Each questionnaire was administered to a managerial staff representing each supermarket who were the unit of observation for this study. Of the 183 questionnaires administered, only 157 were returned. The researcher calculated the response rate for this study as 85.79%, as shown in table 4.1. The 85.79% response rate is a generally good response rate that provides sufficient data for data analysis that enhanced the reliability of the study's findings. This is considering that Wu et al. (2022) suggest that the average response rate for online surveys is 44.1%. This study was able to achieve this response rate through the salience of the topic to the supermarkets' managerial staff, personalised respondent invitation, pre-notifications of respondents, and scheduled reminders to the respondents.

Table 4. 1 Online survey response rate

Response	Frequency	Percentage
Returned	157	85.79
Unreturned	26	14.21

Total Questionnaires Administered	**183**	**100**

(Survey data, 2024)

4.3 Background Information

It was important to understand the demographics and background information of the respondents who took part in the study. The aim was to comprehend the relevance of their perspectives and experiences to this study. This is towards helping in a grounded interpretation of the results. The background information accounted for in this study includes the gender of the respondents, their age distribution, education, number of years working in the organisation, and the number of years of the supermarket's existence.

Table 4. 2 Background information

Variable	Category	Counts	% of Total	Cumulative %
Gender	Female	84	53.5%	53.5%
	Male	63	40.1%	93.6%
	Prefer not to say	10	6.4%	100.0%
Age	18-29	38	24.2%	24.2%
	30-39	52	33.1%	57.3%
	40-49	40	25.5%	82.8%
	50-59	21	13.4%	96.2%
	Over 60	6	3.8%	100.0%
Level of education	Diploma	62	39.5%	39.5%
	Doctoral Degree	4	2.5%	42.0%
	High school	14	8.9%	51.0%
	Master's Degree	14	8.9%	59.9%
	Undergraduate Degree	63	40.10%	100.0%
Years of supermarket's existence	1-5 years	64	40.8%	40.8%
	6-10 years	46	29.3%	70.1%
	Above 10 years	47	29.9%	100.0%
Years working in the organisation	1-5 years	81	51.6%	51.6%
	6-10 years	41	26.1%	77.7%
	Above 10 years	35	22.3%	100.0%

(Survey data, 2024)

Table 4.2 presents the distribution of the respondents based on their gender. From the results, the majority of the survey respondents were female at 53.5%. Male respondents were 40.1% in this study while 6.4% of the respondents chose not to disclose their gender. This distribution shows a generally fair representation of genders, with a slightly higher number of female participants. This balanced representation implies that the study gathered various viewpoints from both genders in small and medium-sized supermarkets in Kenya. Insights from both male and female respondents provided a complete picture of how organisational structure influences BPI in these firms.

The distribution of respondents by age group in table 4.2 gives critical information on the study's demographic mix. The 30-39 age group made up the largest cohort in the study. It accounted for 33.1% of the survey participants. The 18-29 age group followed closely with 24.2%. The 40-49 and 50-59 age groups represented 25.5% and 13.4% of the study respondents, respectively. Notably, respondents above the age of 60 made up a smaller distribution of the respondents at 3.8%. The predominance of respondents in the middle-age ranges indicates that most of those within the managerial level of small and middle-sized supermarkets in Kenya are middle aged. These demographics indicate that the study was conducted with professionals who had extensive knowledge and insights relevant to the study's objectives.

This study considered the education level of respondents as necessary because it would aid in understanding organisational structure and BPI. The majority of respondents (40.1%) highest level of education was an undergraduate degree. Individuals with a diploma as the highest level of education follow closely at 39.5%. Master's degree holders account for 8.9% of the respondents. Similarly, 8.9% of respondents' highest education was a high school certificate. Notably, only 2.5% had a doctoral degree, as shown in Table 4.2. These findings suggest that all the respondents in the study had foundational academic qualifications sufficient to adequately answer the research questions related to organisational structure and BPI. Further, the study's analysis was enriched and strengthened by the inclusion of a diverse spectrum of experience and knowledge levels.

According to the data in table 4.2, 40.8% of the represented supermarkets have operated between one to five years. More importantly, 29.3% of supermarkets have operated between

6 and 10 years. Finally, 29.9% of the supermarkets have operated for more than ten years. These results indicate that, on average, the small and medium-sized supermarkets represented by the respondents exhibited significant tenure. This longevity is an ideal context for studying the relationship between organisational structure and BPI, as these supermarkets have likely faced a variety of operational challenges and changes throughout time. This allowed for a comprehensive analysis of the association between organisational structure and BPI. Besides, the diversity of the profiles of the surveyed supermarkets offers depth to the data collected.

Finally, the results in Table 4.2 present the range of years the respondents have worked in the supermarkets represented. From the results, 51.6% of the respondents have worked between 1-5 years with their current organisation. This is followed by 26.1 % working between 6-10 years. Finally, 22.3 % of the respondent's tenure with their current organisation extends beyond 10 years. This tenure distribution indicates that the respondents have an extended and well-informed understanding of their organisational structure and the BPI practices within their firms to meet this study's objectives. This allowed for a more nuanced understanding of the association between organisational structure and BPI at various phases of organisational experience.

4.4 Descriptive Analysis

A descriptive analysis was carried out for all four study variables. Each of the variables was transformed from the constructs used to measure them. Likert scale data is intrinsically ordinal. This means that the constructs measuring each variable display a meaningful order but lack reliably quantifiable intervals. Transformation was required for statistical analyses based on interval-level data. This normalisation method made the Likert scale responses more compatible with the regression analysis. The goal of the transformation was to ensure that parametric test assumptions were met. More importantly, the researcher distilled the constructs from the Likert scale items. This led to the generation of composite scores transformed using the means of each construct. Each composite score for each variable was used for the descriptive analysis. The results of the descriptive analysis for the independent variables (formalisation, centralisation, and integration) and the dependent variable (business process innovation) are presented in Table 4.3 to 4.6.

Table 4. 3 Descriptive statistics for formalisation

	Mean	Std. Dev
The way tasks are performed in my organisation is left to the discretion of the individual doing the work.	2.11	1.196
Employees have flexibility in deciding how tasks are executed in their roles	2.03	1.146
There is a standardized approach to job tasks within the organisation	3.99	1.016
Employees feel their job responsibilities are clearly defined and codified.	4.08	.866
Staff are constantly being examined for rule violations.	4.41	.717
My organisation has strict enforcement of rules	4.47	.721
Employees feel monitored for adherence to established rules	4.31	.758
Rule violations are consistently addressed within the organisation	4.32	.744
Mean	**3.7166**	**.45344**

(Survey data, 2024)

From the results in table 4.3, on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the mean for formalisation was 3.72 (SD = 0.45). The findings indicate that employees generally believe their organisation has clear and consistent approaches to task performance and rule enforcement. They believe that their job obligations are well stated, and that the organisation consistently enforces the rules. However, some employees believed that they are extensively scrutinized for adherence to these regulations, indicating a potential concern about the organisation's level of monitoring. Despite this, on average, there was an above average level of agreement among the respondents with the phenomenon of formalisation. This indicates that, on average, the respondents agree that their organisational structure has an above average level of formalisation. The low standard deviation indicates that the responses are clustered around the mean. This suggests that there is a high level of agreement with the formalisation variable within the respondents. In other words, there is less variability in opinions on formalisation in supermarkets within the sample.

Table 4. 4 Descriptive statistics for centralisation

	Mean	Std. Dev
Staff at my organisation are encouraged by management to participate in decision-making.	4.01	1.035

Decision-making processes are typically top-down in this organisation	4.38	.780
The level of employee involvement in decision-making processes is low	4.22	.872
Important decisions are made by higher-ups without much input from employees.	4.21	.899
Even minor issues must be reported to someone higher up for a final determination.	4.18	.883
Employees feel they need approval from higher authorities for minor decisions.	4.17	.886
There is a rigid hierarchy of authority in decision-making within the organisation	4.31	.831
The highest echelons of the organisation have the majority of the decision-making authority.	4.22	.850
Mean	**4.2118**	**.58999**

(Survey data, 2024)

The results in Table 4.4 further indicate that on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the mean for centralisation was 4.2 (SD = 0.59). According to the descriptive statistics for centralization, employees generally perceive organisational decision-making procedures as top-down and hierarchical. They express a high level of agreement that critical decisions are decided by upper management with little input from employees, and that even minor concerns require higher-level approval. Furthermore, there is a sense of a rigid hierarchy of authority in decision-making within the organisation, with the highest echelons maintaining the majority of decision-making power. This indicates that, on average, there is a strong level of agreement among the surveyed respondents that their organisational structure is more centralised. Similarly, the low standard deviation suggests that the responses to the centralisations' construct were clustered around the mean. The result indicates that the level of agreement on supermarkets adopting a centralised organisational structure is high and the variability low.

Interestingly, the integration has a mean of 2.9634 (SD = 0.93). This mean implies a moderate level of agreement among respondents about organisational integration. The moderate mean reflects neither strong agreement nor strong disagreement. The results suggest a balanced perspective on organisational integration. Further, the standard deviation of 0.93 indicates a variation in how participants perceive integration in the supermarkets they represent. This variation could result from respondents' varying perceptions of organisational procedures or experiences. As such, these descriptive statistics show that respondents typically agree that

the organisational hierarchy has few tiers and that the structure fosters contact among different hierarchical levels, although there is less agreement on cross-functional collaboration and communication. Respondent did not agree with statements promoting active cross-functional collaboration, frequent collaboration between departments, and simple communication among workers across the firm.

Table 4. 5 Descriptive statistics for integration

	Mean	**Std. Dev**
There are a few tiers in our organisational hierarchy.	4.29	.870
The organisation's structure encourages interaction between different hierarchical levels.	3.16	1.337
Our employees are assigned to operate in cross-functional teams.	2.72	1.305
Cross-functional collaboration is actively promoted in our organisation.	2.78	1.333
Teams from different departments frequently collaborate on projects.	2.58	1.272
Communication flows easily among workers in different parts of the organisation.	2.82	1.295
The organisation promotes open and transparent communication channels.	2.77	1.330
Employees find it easy to communicate with colleagues in different departments.	2.60	1.334
Mean	**2.9634**	**0.92684**

(Survey data, 2024).

Finally, as represented in Table 4.6, on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the mean for business process innovation was 3.9 (SD = 0.72). The results indicate that, on average, the survey respondents agree that the supermarkets they represent engage in business process innovation. Respondents typically believe that their firms actively seeks and implements innovative distribution and logistics techniques, embrace creative marketing and sales strategies, and constantly examines and adopts innovative information and communication technology. Further, respondents believe that new approaches are included into administrative management processes to improve efficiency and effectiveness. Besides, the standard deviation indicates that the responses are spread around the mean. This suggests a level of consensus on the positive perception of BPI within small and medium supermarkets in Kenya. Also, the variation in opinions among the respondents is low.

Table 4. 6 Descriptive statistics for BPI

	Mean	Std. Dev
The organisation actively seeks and implements innovative practices in the distribution and logistics processes.	3.72	1.000
The organisation embraces innovative strategies in marketing and sales to stay competitive in the market.	3.91	.943
The organisation consistently explores and adopts innovative technologies to enhance its information and communication systems.	3.93	.968
Innovative practices are integrated into the administration management processes to improve efficiency and effectiveness.	4.01	.913
Mean	**3.896**	**0.71665**

(Survey data, 2024)

4.5 Inferential Analysis

4.5.1 Normality Test

Table 4.7 displays the results of the normality distribution test of all the variables. As such, all the results were statistically significant. The low p-values (<.001) reject the null hypothesis that formalisation, centralisation, integration, and business process innovation follow a normal distribution. When selecting statistical tests, it is crucial to take the implications of non-normality into account. This is to ensure that the ideal test is performed. Considering that the dependent variable for this study is an ordinal scale (BPI), and since the data is not normally distributed, non-parametric tests should be performed. In this case Spearman Rank Correlation analysis and Ordinal regression analysis.

Table 4. 7 Kolmogorov-Smirnova normality tests

	Kolmogorov-Smirnov[a]		
	Statistic	**df**	**Sig.**
Formalisation	.100	157	<.001
Centralisation	.124	157	<.001
Integration	.131	157	<.001
Business process innovation	.163	157	<.001

(Survey data, 2024)

4.5.2 Correlation Analysis Results

Spearman Rank correlation analysis was carried out to investigate the level of correlation between the independent variables and the dependent variable. These results are presented in Table 4.8. From the results, formalisation has no positive and statistically significant correlation to BPI (coefficient = 0.127, p = 0.112). The result suggests that there is no sufficient evidence to indicate that formalised structures in small and medium supermarkets in Kenya moderately increase as BPI increase.

Table 4. 8 Correlation analysis

		Formalisation	**Centralisation**	**Integration**	**Business process innovation**
Formalisation	Coefficient	1.000			
	Sig. (2-tailed)	.			
Centralisation	Coefficient	.275**	1.000		
	Sig. (2-tailed)	<.001	.		
Integration	Coefficient	-.008	-.222**	1.000	
	Sig. (2-tailed)	.917	.005	.	
Business process innovation	Coefficient	.127	.000	.030	1.000
	Sig. (2-tailed)	.112	.996	.709	.

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

(Survey data, 2024)

With a statistically insignificant coefficient of 0 (P = 0.996), the results indicate that centralisation has no significant correlation to BPI. Finally, the results in Table 4.8 indicate that there is no statistically significant correlation between integration and BPI. This is with a statistically insignificant coefficient of .030 (P = 0.709). In summary, no independent variable has a positive significant correlation to business process innovation.

4.5.3 Ordinal Regression Analysis Results

Before interpreting the regression results, an ordinal regression model goodness of fit test was conducted. The results indicate that the model fitted the data perfectly. This is because the

Pearson Chi-Square was non-significant at 0.56 while the Deviance Chi-Square was non-significant at 1. These results are presented in Table 4.9.

Table 4. 9 Ordinal regression model goodness-of-fit

	Chi-Square	**df**	**Sig.**
Pearson	2281.983	2292	.555
Deviance	731.692	2292	1.000
Link function: Logit.			

(Survey data, 2024)

The aim of this study was to assess the influence of organisational structure on business process innovation of small and medium-sized supermarkets in Kenya. The results of the analysis that attain this aim are presented in Table 4.10. From the results, it can be noted that the Nagelkerke Pseudo-R-Square was 2.1%. This indicates that only a predicted 2.1% of the changes in business process innovation in small and medium-sized supermarkets in Kenya are attributed to the organisational structures of these entities. In other words, only 2.1% of changes in business process innovation in supermarkets are attributed to formalisation, centralisation, and integration. However, this result is not statistically significant. In other works, changes in business process innovation in small and medium sized supermarkets in Kenya is not explained by the organisational structure of these organisations. Other factors other than those addressed by this study could explain this relationship.

Table 4. 10 Pseudo R-Square

Cox and Snell	**.020**
Nagelkerke	.021
McFadden	.004
Link function: Logit.	

(Survey data, 2024)

The results of each of the objectives are presented in Table 4.11. Each objective is addressed by showing the coefficients of each variable in relation to business process innovation. Also, the p-values are presented in the table.

Table 4. 11 Parameter estimates

Business process innovation	Estimate	Std. Error	Sig.
Constant	3.047	1.499	.042
Formalisation	.524	.321	.103
Centralisation	.134	.248	.588
Integration	.080	.153	.603

(Survey data, 2024)

The first objective of this study was to examine the influence of centralisation on business process innovation of small and medium-sized supermarkets in Kenya. The results indicate that centralisation has a weak positive but insignificant association with business process innovation in supermarkets in Kenya. The results indicate that the coefficient of centralisation is 0.134 with a p-value of 0.588. These results show that a unit increase in centralisation in small and medium-sized supermarkets in Kenya leads to a predicted increase of 0.134 in business process innovation. However, this result cannot be relied on because of the nonsignificant p-value result. This suggests that other dimensions beyond centralisation affect business process innovation in small and medium-sized supermarkets in Kenya.

The second objective of this study was to examine the influence of formalisation on business process innovation of small and medium-sized supermarkets in Kenya. The results presented in Table 4.11 indicate that the coefficient of formalisation is moderately strong at 0.524 with a p-value of 0.103. In other words, a unit increase in formalisation in small and medium-sized supermarkets in Kenya leads to a predicted increase in business process innovation by 0.524. However, this result is not significant as represented by the p-value of 0.103. This means that, while formalisation is the variable with the highest effect on business process innovation, this relationship is not significant. Other dimensions within small and medium-sized supermarkets in Kenya contribute to business process innovation other than formalisation.

The third objective of this study was to examine the influence of integration on business process innovation of small and medium-sized supermarkets in Kenya. The coefficient of integration presented in Table 4.11 is 0.080. This is a weak positive coefficient. Additionally, the P-value for this coefficient is 0.603. This coefficient indicates that there is an odds of business process innovation increasing by 0.080 from a unit increase in integration in small and medium-sized supermarkets in Kenya. This result indicates that, besides the weak positive

association between integration and business process innovation in small and medium-sized supermarkets in Kenya, this relationship is not significant. This means that other aspects other than integration influence the level of business process innovation in small and medium-sized supermarkets in Kenya.

The triangulation of the descriptive statistics with the inferential statistics demonstrates that respondents agree on centralisation, formalisation, and integration within small and medium-sized supermarkets in Kenya. This consensus indicates that these structural components are prevalent and important to the operational frameworks of the supermarkets. Despite the prevalence of these structural traits, the absence of significant influence on BPI raises interesting issues about the processes at work in these supermarkets.

One possible explanation on the absence of a significant association between organisational structure and BPI may be due to exogenous factors influencing innovation dynamics. According to OECD & Eurostat. (2018), this can be explained by the systems view of innovation. The systems view places a strong emphasis on the significance of outside variables that may affect a firm's incentives to innovate, the kinds of innovative activities it engages in, and its capacity and results for innovation. Additionally, public policy, corporate strategies of other actors within the value chain of supermarkets, or coordinated action by interest groups, in this case suppliers and distributors in supermarkets, can explain business process innovation in these entities (OECD & Eurostat, 2018).

Intuitively, in today's quickly changing corporate environment, innovation is fuelled not only by internal organisational variables, but also by external market forces, technical breakthroughs, and shifting consumer preferences. It is possible that supermarkets facing these dynamics may prioritise innovation as a strategic imperative, independent of organisational structure. Also, the lack of a significance association between organisational structure and BPI points to the complexity of innovation processes. While structural features help to shape organisational dynamics, they are only one aspect of the complex interaction of forces that influence innovation (OECD & Eurostat, 2018). For instance, leadership vision, organisational culture, resource allocation, and external collaborations with suppliers may have a major impact on BPI outcomes. This explanation is supported by Albors-Garrigos (2020) where drivers of innovation within the retail sector were identified as market changes, competition, strategic alignments and relationships with suppliers, and a focus on customers.

Albors-Garrigos (2020) also found that technology, consumer-employee retail interactions, lean supply chain management, multichannel integration, regulatory drivers, and team group management were significant drivers of innovation. This may outweigh the direct influence of organisational structure on BPI.

4.5.4 Chapter Summary

In summary, this study has established that organisational structure is not a significant predictor of business process innovation in small and medium-sized supermarkets in Kenya. This is because, while all the coefficients of the dimensions of organisational structure, that is centralisation, formalisation, and integration are positive, the results have a non-significant P-value. Besides, only 2.1% of changes in business process innovation in small and medium-sized supermarkets in Kenya is attributed to centralisation, formalisation, and integration. These findings are comprehensively discussed in Chapter 5.

CHAPTER FIVE
DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter engages in a comprehensive discussion of the findings from the investigation into the association between organisational structure and business process innovation. The discussion of findings centres around the effects of centralisation, formalisation, and integration on business process innovation in small in medium-sized supermarkets in Kenya. This chapter further offers a conclusion informed by the findings. Recommendations are presented under policy and practice. The chapter also provides the theoretical contribution of this study, its limitations, and suggests areas that future investigations could focus on.

5.2 Discussion of Findings

The discussion of findings is presented under each objective. The discussion also triangulates the findings with the literature reviewed in chapter two of this study. This is also in relation to the anchoring theories of the study.

5.2.1 Centralisation and Business Process Innovation

This study examined the relationship between centralisation and business process innovation anchored on the existing lack of consensus in the literature on the association between these two variables. This study has found that there is a nonsignificant association between centralisation and business process innovation. Despite the centralisation of decision-making in small and medium-sized supermarkets in Kenya, this study has shown it does not affect BPI. The findings have also shown that the level of employee involvement in decision-making in small and medium-sized supermarkets in Kenya is average. Besides, authority is concentrated centrally, and this also has been shown not to affect BPI in small and medium-sized supermarkets in Kenya.

Intuitively, one would expect a highly centralised structure such as that of most small and medium-sized supermarkets in Kenya to hamper opportunities for employees to collaborate towards BPI. The rationale is that, with decentralised decision structures and a distributed hierarchy of authority within the organisation, opportunities for creating new knowledge or

knowledge solutions decline. However, this study has found that this is not the case. Despite the existence of a centralised structure (centralised decision-making and less distributed hierarchy of authority) among small and medium-sized supermarkets in Kenya, this has not been associated with BPI.

This study's findings contrast those by Gentile-Lüdecke et al. (2020) and Iranmanesh et al. (2021) who suggested that there exists a positive association between centralisation and innovation. Similarly, it contrasts findings by Alshwayat et al. (2023), Dedahanov et al. (2017), Gaspary et al. (2020), and Marín-Idárraga and Cuartas (2016) who suggest that centralisation has a negative association with innovation. While these two groups of studies have shown that centralised structures either support or hamper innovation, this study challenges these findings since it has found that neither is the case. As such, other dimensions other than those addressed in this study could be associated with BPI in supermarkets.

This study's findings contradict the notion that centralisation hampers opportunities for collaboration and knowledge creation. This is as suggested by the Dynamic Capabilities Theory. Teece et al. (2016) argue that dynamic capacities are critical for creativity. Notably, this is through coordination and learning processes. However, this study's findings show that prospects for BPI are not affected in any way even with a highly centralised structure. This contradicts the expectation drawn from dynamic capabilities theory.

More importantly, the study's findings also call into question the Organisational Learning (OL) Theory. OL emphasises the relevance of shared learning at the organisational level. The theory suggests that organisational structures influence the acquisition, exchange, and application of knowledge for BPI (Damanpour, 2020). This study's findings, however, contradict this viewpoint. This is because it suggests that centralisation, a structural factor, has no substantial impact on BPI in small and medium-sized supermarkets in Kenya. This mismatch calls into question the expected relationship between centralisation and organisational learning in the context of BPI. The findings imply that other attributes may be associated to BPI other than centralisation.

5.2.2 Formalisation and Business Process Innovation

This study's second objective was to establish the association between formalisation and business process innovation. As the findings have indicated, there is no significant association

between these two variables. This means that, despite jobs being codified for employees in small and medium-sized supermarkets in Kenya, this level of formalisation does not in any way contribute to BPI. Similarly, despite the employees in the small and medium-sized supermarkets in Kenya observing rules provided to formalise operations, processes, and procedures, this does not contribute to BPI.

While small and medium-sized supermarkets in Kenya emphasise a balance between job task standardisation and rule observation by employees, this fails to contribute to BPI. As such, strict enforcement of rules and consistent addressing of rule violations do not affect BPI. Similarly, staff perception of being monitored by the supermarkets and the regular examination of staff for rules violation point to formalised organisations. Intuitively, moderate formalisation would be expected to create well-defined policies that can serve as supermarket staff's point of reference. This could provide a consistent understanding of the objective of the supermarkets and their values. Such could lead to the creation of positive workplace environments for innovative thinking (Nowotny et al., 2022). Similarly, highly formalised organisations suggest the need for rigidity in rule compliance. Also, comprehensive job codification suggests supermarkets have high levels of formalisation. Both of these could inhibit innovation. However, this study challenges both of these positions since it supports neither.

This study's findings challenge those of prior research by Gaspary et al. (2020), Gentile-Lüdecke et al. (2020), Iranmanesh et al. (2021), Marín-Idárraga and Cuartas (2016), Perez-Suarez et al. (2017), and Wedl (2020) who indicated that formalised organisations influence innovation processes. This is due to the formal controlled creation process in these firms. According to these studies, formalised organisational structures offer a clear framework for innovation. They also offer standardised processes and well-defined policies. When these frameworks are moderate, they may enable supermarket employees to comprehend goals, principles, and regulations. This would result in a productive work environment that promotes creative problem-solving. Moreover, a moderate level of formalisation might allow staff members to contribute to BPI. This is by striking a balance between providing employees with guidance and some level of autonomy to innovate. However, this study contrasts these assertions in the case of small and medium-sized supermarkets in Kenya.

Similarly, the study challenges the assertion by Dedahanov et al. (2017) and Gonzalez (2022) who indicate that formalisation is a negative significant predictor of innovation in organisations. This could be explained by the possible downsides of overly formalisation. Rigid rule compliance may be prioritised in highly formalised firms. This would limit flexibility and stifle creativity. Strict rule enforcement, extensive job codification, and ongoing oversight can all prevent employees from being flexible and sensitive to shifting market conditions. Collectively, these could stifle innovation. Further impeding the innovative potential within the corporate context is the possibility that the emphasis on formality would foster a risk-averse culture. Such a culture could be hostile to experimentation and new ideas. Again, this premise is challenged by the findings of this study.

More importantly, this study's findings call into question the assumptions of the OL and the Dynamic Capabilities theories. Formalised organisational structures with well-defined policies and standard procedures are predicted to positively impact innovation processes. This is because they give employees a clear framework and facilitate knowledge exchange. This is according to the OL Theory and the Dynamic Capabilities Theory (Teece et al., 1997, 2016; Damanpour, 2020). Nevertheless, the study finds no evidence of a substantial association between formalisation and BPI in small and medium-sized supermarkets in Kenya. Overall, this study indicates that other attributes other than formalisation are instrumental in explaining the level of BPI in small and medium-sized supermarkets in Kenya.

5.2.3 Integration and Business Process Innovation

The third objective this study sought to achieve was to determine the association between integration and business process innovation. The study has found that there is no statistically significant association between these two attributes. As such, the layers of organisational levels within a supermarket, the horizontal integration, and the communication between cross-functional teams have no relationship to BPI. This study has found that small and medium-sized supermarkets in Kenya exhibit multiple tiers within the organisational hierarchy. The findings also show that there is limited encouragement of interaction between these hierarchical levels. With such constraints to integration, one would expect that this would negatively affect business process innovation.

Similarly, the findings also show a comparatively lower emphasis on cross-functional cooperation. This is evident from the moderate level of human resources allocated to cross-functional teams. Besides the study has established that there is a moderate level of actively promoting cross-functional collaboration within small and medium-sized supermarkets in Kenya. Further, the findings indicate that there is a low number of teams from several departments who commonly collaborate on projects within small and medium-sized supermarkets in Kenya. This is coupled with communication challenges noted between employees from different departments. Intuitively, these findings should point to a negative effect on the innovation capabilities of small and medium-sized supermarkets in Kenya. Similarly, one would expect that the low integration with the small and medium-sized supermarkets in Kenya would negatively affect BPI. However, this study concluded that there is no statistically significant association between the two.

This study's findings are consistent with those by Dedahanov et al. (2017) who found that integration has no significant relationship to innovation behaviour. Respondents may have failed to realise that integration specifically facilitated innovative behaviour because they thought that the lack of formal procedures and rules, along with the absence of centralisation, could dissolve departmental boundaries and promote integration, information sharing, and communication (Dedahanov et al., 2017). This could be the possible explanation for the non-significant association observed in this study. Put differently, small and medium-sized supermarket employees in Kenya may have believed that an organisation's various departments and employees could interact and collaborate under decentralised structures and with less formal policies and procedures. As a result, they may not have considered integration to be a major barrier to their creative behaviour.

Further, this study challenges the findings by Perez-Suarez et al. (2017) who indicated that integration is a negative significant predictor of innovation in organisations. These findings also contrast those of Gonzalez (2022) and Su et al. (2019) who concluded that integration within organisations is a positive predictor of innovation. As such, the integrated organisational structure fosters innovative practices within organisational domains. This implies that integration is instrumental in creating an environment conducive to the emergence and implementation of novel innovation practices. These studies argue that integration fosters interaction, collaboration, horizontal communication, coordination between units, and

information sharing. These aspects of integration then increase the dissemination of explicit and tacit knowledge critical in triggering new ideas. These new ideas are the trigger for innovation. Additionally, the argument is that integration facilitates innovation by creating a platform within an organisation where different process experiences, expertise, and skills are combined. Since these elements are critical to product and process innovation, they are expected to enhance BPI within firms such as supermarkets. Moreover, Gonzalez (2022) and Su et al. (2019) argue that integration leads to the dispersion of a variety of perspectives among employees in an organisation, which is a prerequisite for innovation.

Overall, the expectations drawn from the OL and the Dynamic Capabilities theories are challenged by the non-significant association between integration and BPI. According to the Dynamic Capabilities Theory, organisational structures that are integrated should encourage interaction, collaboration, horizontal communication, coordination between units, and information exchange. However, the results of this study cast doubt on the Dynamic Capabilities Theory's claim that integration promotes creative activities. Further, it raises the possibility that other factors explain the level of BPI in small and medium-sized supermarkets in Kenya.

The study's findings also call into question the OL Theory's expectations. The theory's expectations place a premium on organisational shared learning as a means of enhancing adaptability and creativity. However, this study concludes that integration does not affect BPI. This is despite the minimal stimulation of interaction between hierarchical levels and the comparatively weaker emphasis on cross-functional cooperation. This incongruence calls into question the assumed link between organisational learning and integration. It implies that the relationship between integration and BPI might not follow the patterns that the OL theory expected. Therefore, this calls for a reassessment of the variables affecting BPI beyond those covered in this study.

5.3 Conclusions

This study concluded that organisational structure was a nonsignificant predictor of business process innovation in small and medium-sized supermarkets in Kenya. The three dimensions of organisational structures examined in this study, that was centralisation, formalisation, and integration, all returned non-significant positive coefficients. In conclusion, this study

questioned previous conclusions regarding the relationship between centralization and BPI in organisations. The results showed that in contrast to expectations based on existing literature and theories like OL and Dynamic Capabilities, a highly centralised decision-making structure had no significant effect on promoting or impeding opportunities for knowledge creation and collaboration towards BPI. This surprising outcome suggested a re-examination of the conventional wisdom regarding the interplay between innovation and centralisation in the particular setting of supermarkets. The study made the case that BPI in these establishments may have been significantly influenced by other attributes that were not explored in this research.

Similarly, this study concluded that formalisation was not a significant predictor of BPI in small and medium-sized supermarkets in Kenya. This research challenged the existing conclusion that indicated that codified job tasks and employees' adherence to rules were critical to innovation. The conclusions of this study challenged the assumptions of dynamic capabilities and OL theories which predicted that an organisation with well-defined standard procedures and policies would be able to coordinate innovation activities. This conclusion called for a revaluation of the attributes influencing BPI within small and medium-sized supermarkets in Kenya. This was because the findings suggested that other attributes beyond formalisation explained BPI in these firms.

Finally, this study concluded that integration had no significant effect on BPI. This was contrary to assumptions held by the dynamic capabilities and OL theories that when the organisation was better integrated, this optimised knowledge sharing, cross-functional collaboration, and communication. These eventually affected the level of innovation. While the study found that, on average, small and medium-sized supermarkets in Kenya had constrained cross-functional collaboration within layered organisation hierarchies that made effective communication challenging, these factors were found not to have any significant effect on BPI. In other words, they neither hindered nor fostered BPI. Therefore, this study concluded that other dimensions other than integration influenced BPI in small and medium-sized supermarkets in Kenya.

5.4 Recommendations

5.4.1 Policy Recommendations

Instead of focusing exclusively on structural changes, retail organisations' policymakers should implement a holistic approach that fosters innovation. This means supporting programs that go beyond structural aspects. This study recommends that policymakers should promote the development of a creative culture. Additionally, they should provide resources for extensive research and development initiatives towards BPI in supermarkets. The aim is to shift the focus from solely depending on structural changes to creating a comprehensive environment that actively fosters innovation. This way, policymakers will create retail environments that support Kenya's small and medium-sized supermarkets toward optimal BPI.

5.4.2 Managerial Recommendation

For managers of small and medium-sized supermarkets in Kenya, this study's findings call into question the conventional idea that organisational structure has a significant effect on business BPI. The managerial implications lie in a strategy shift away from a narrow focus on structural changes. Instead, small and medium-sized supermarket managers should prioritise activities that are ingrained in their organisation's culture. Managers may unlock their teams' innovativeness by creating an atmosphere that prioritises employee engagement, fosters creativity, and promotes a culture of experimentation. As such, this study concludes that stringent formalisation and centralised decision-making may not be intrinsic barriers to BPI. Taking these findings into consideration, progressive managers can lead programs that proactively support cross-functional cooperation. They can also put in place dynamic knowledge-sharing mechanisms. This is besides developing incentive structures that acknowledge and promote innovativeness. By fostering an organisational culture that is more dynamic, adaptable, and challenges the status quo, there is a potential to maximise BPI in Kenya's small and medium-sized supermarkets.

5.5 Theoretical Contribution

This study theoretically advances and contributes to the concept of business process innovation by relating it to small and medium-sized Kenyan supermarkets' organisational

structures. Small and medium-sized supermarkets in Kenya operate in the retail sector which is characterised by a constant demand for innovation. This is because of intense rivalry in the industry and the ever-increasing customer demands. These supermarkets are forced to develop dynamic capabilities and adapt to their changing operating landscape through organisational learning. Both enable constant competency renewal. The renewal leads to BPI. Therefore, this study adds to the existing literature by showing that the BPI in small and medium-sized supermarkets in Kenya is not affected by their organisational structures, specifically centralised, formalised, and integrated structures. These findings point out a need for more investigations into the association between organisational structure and BPI to understand which attributes other than those addressed in this study affect the latter.

5.6 Limitations

Two limitations were identified in this study. First, the study only collected primary data using quantitative methods. While quantitative data is critical to the study remaining objective and scientific, in addition to allowing for the generalisation of the results to the entire small and medium-sized supermarket population in Kenya, qualitative insights would have provided strength to the explanation of why centralisation, formalisation, and integration are non-significant positive predictors of BPI. Second, this study was cross-sectional. This means that the findings are limited to one point in time. This does not guarantee that if the same variables are examined over time, the results will remain the same.

5.7 Suggestions for Further Research

This study recommends that future studies could look the effect of organisational structures on BPI in large supermarkets since SME supermarkets generally operate with structures that are not properly evolved and so maybe a study there may reveal different levels of formalisation, centralisation and integration. This study recommends that future studies could investigate expanding the methodology to include qualitative approaches. A mixed methods study could help provide comprehensive explanations of why the quantitative findings are so. Further, this study recommends that future studies could spread the investigations period beyond one point in time in a longitudinal study. This is to observe if the findings from this study stand over time or if there is a period-related attribute that led to these findings.

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APPENDICES

Appendix A: Introduction Letter

The Managing Director

Dear Respondent,

REF: Request to Conduct a Research in Your Organisation

I am an MBA student at Strathmore University's Business School. As part of the prerequisites for receiving my degree, I am conducting research to fill a knowledge gap and improve managerial practices in the retail industry, specifically in small and medium-sized supermarkets across the country. The study is on the "Influence of Organisational Structure on Business Process Innovation Among Small and Medium-Sized Supermarkets in Kenya."

I would want to request that you grant me access to the relevant information and personnel within your organisation so that I can address the research problem. The study's findings will contribute to the empirical knowledge in the field of management, as well as benefit all supermarkets in the country. Additionally, participation in this study is both voluntary and optional. The survey data will only be used for educational and research purposes. All the respondents and their organisations will remain anonymous and confidential. If requested, the study's findings will be shared with you. Any help offered will be much appreciated.

Regards,

Benson Maina

Appendix B: Questionnaire

Section A- Demographics

1. **Education Level**
    - High school
    - Diploma
    - University Degree
    - Master's Degree
    - Doctoral Degree
2. **How many branches does your supermarket currently have?**
    - 1
    - 2 to 4
    - 5 to 7
    - 8 to 10
    - 11 to 13
    - 14 to 20
    - More than 20
3. **How many years has your supermarket been in existence?**
    - 1-5 years
    - 6-10 years
    - Above 10 years
4. **Years of experience with the current organisation**
    - 1-5 years
    - 6-10 years
    - Above 10 years

Section B: Formalisation, Centralisation, Integration, and Business Process Innovation.

To what extent do you agree or disagree with the following statements? Please appropriately tick the box with your level of agreement:

N	Item	Strongly-Disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly-Agree (5)
	Part A: Formalisation					
1	The way tasks are performed in my organisation is left to the discretion of the individual doing the work.					
2	Employees have flexibility in deciding how tasks are executed in their roles					
3	There is a standardized approach to job tasks within the organisation					
4	Employees feel their job responsibilities are clearly defined and codified.					
5	Staff are constantly being examined for rule violations.					
6	My organisation has strict enforcement of rules					
7	Employees feel monitored for adherence to established rules					
8	Rule violations are consistently addressed within the organisation					
	Part B: Centralisation					
1	Staff at my organisation are encouraged by management to participate in decision-making.					
2	Decision-making processes are typically top-down in this organisation					
3	The level of employee involvement in decision-making processes is low					
4	Important decisions are made by higher-ups without much input from employees.					
5	Even minor issues must be reported to someone higher up for a final determination.					
6	Employees feel they need approval from higher authorities for minor decisions.					
7	There is a rigid hierarchy of authority in decision-making within the organisation					
8	The highest echelons of the organisation have the majority of the decision-making authority.					
	Section C: Integration					
1	There are a few tiers in our organisational hierarchy.					

2	The organisation's structure encourages interaction between different hierarchical levels.					
3	Our employees are assigned to operate in cross-functional teams.					
4	Cross-functional collaboration is actively promoted in our organisation.					
5	Teams from different departments frequently collaborate on projects.					
6	Communication flows easily among workers in different parts of the organisation.					
7	The organisation promotes open and transparent communication channels.					
8	Employees find it easy to communicate with colleagues in different departments.					
	Section D: Business Process Innovation					
1	The organisation actively seeks and implements innovative practices in transportation and service delivery.					
2	The organisation actively seeks and implements innovative practices in Warehousing.					
3	The organisation actively seeks and implements innovative practices in order processing.					
4	The organisation uses innovative marketing practices in advertising, direct marketing, exhibits, and market research, to expand into new areas.					
5	The organisation embraces innovative strategies in pricing strategies and methods.					
6	The company supports creative approaches to sales and customer service, including customer relationship management, help desks, and extra customer assistance.					
7	The organisation consistently explores and adopts improved hardware and software.					
8	The organisation consistently explores and adopts improved data processing capabilities and database.					
9	The organisation consistently maintains and repairs information and communication systems.					

10	The organisation is always exploring and implementing novel web hosting operations and other computer-related information operations.					
11	Innovative methods are integrated into strategic and cross-functional decision-making. This includes organizing job responsibilities.					
12	Innovative practices are integrated into corporate governance. Examples include regulations, public relations, and planning.					
13	Accounting, auditing, bookkeeping, payments, and any other financial operations all incorporate innovative approaches.					
14	Human resources management incorporates innovative approaches, including training and education, staff recruiting, workplace organisation, payroll administration, and health and medical support.					
15	Innovative practices are integrated into procurement					
16	Innovative approaches are integrated into the management of external associations, such as suppliers and alliances.					

Adapted from Ali et al. (2018), Dedahanov et al. (2017), Dominguez Gonzalez (2023), Gaspary et al. (2020), Nowotny et al. (2022), OCDE/Eurostat (2018) and Piñera-Salmerón et al. (2023).

Appendix C: Population

Name	Region
7 to 7	Coast
A One	Coast
A.K.K.	Central
Acacia	Nairobi
Admart	Nairobi
Africana	Nyanza
Akshar	Nyanza
Al Jazeera	Eastern
Al- Hashmiya	Coast
Alpha Self	Nairobi
Ambika	Coast
Antipa	Nairobi
Awendo	Nyanza
B.S.	Nairobi
Bansi	Nyanza
Baraka	Coast
Basabara	Rift valley
Bawani Store	Rift Valley
Ben Mart	Nyanza
Benich	Rift Valley
Best	Western
Bestchoice	Rift Valley
Bhachu	Coast
Bhafaghi	Coast
Bhavin	Nyanza
Bidii	Eastern
Binka	Nairobi
Bondo Dicount	Nyanza
Brilliant	Eastern
Budget mini	Central
Cajo	Nyanza
Capris	Nairobi
Central	Central
Centreline	Nairobi
Chandarana Food Plus	Nairobi
Chawaka	Rift Valley
City Grocers	Coast
Cleanshelf	Nairobi
County Supermarket	Central

Name	Region
Mesora	Nairobi
Mimo	Nairobi
Mini Price	Nairobi
Miracle	Rift Valley
Mkulima	Nairobi
Morning Star	Nairobi
Muga	Central
Mugos	Rift Valley
Multy	Nairobi
Multy Grocers	Coast
Mum Price	Nairobi
Mumu	Eastern
Mvika	Central
Mwangaza	Nairobi
Mwiko Self	Nairobi
Mwireri	Eastern
Mzalendo	Nairobi
Mzipa	Central
Nafuu Matt	Nairobi
Naivas Ltd	Nairobi
Naks	Nairobi
Nan Matt	Central
Ndungi	Rift Valley
Neeama	Nairobi
Neema	Nairobi
Neiben	Nairobi
Nessy Matt	Nairobi
New Discount	Western
New Nyanza	Western
New Vision	Eastern
Ngawa	Nairobi
Ngong Hill	Nairobi
Ngooni	Eastern
Nice	Eastern
Niko	Nairobi
Njimeri	Eastern
Njoro	Rift Valley
North End	Nairobi
North view	Nairobi

Dacha	Nairobi	Nunguni	Eastern
Dan	Nairobi	Nyandis	Nairobi
Delta	Western	Obama	Nairobi
Dimples	Nairobi	One 'o' One	Central
Dubai matt	Nairobi	One Way	Nairobi
Duka Matt	Nairobi	Onn the way	Nairobi
Eastmatt	Nairobi / Central	Oshwal	Nyanza
Easy Matt	Nairobi	Oyugis	Nyanza
Eco Matt	Nairobi	P.B.K.	Nairobi
Economy	Nairobi	Park Shop	Nairobi
Eden	Nairobi	Parlema	Nairobi
Elburgon Matt	Rift Valley	Patt Matt	Nairobi
Eldo Matt	Eldoret	Pawa	Nairobi
Elipa	Nairobi	Peace	Central
Emanueli	Central	Penda Care	Nairobi
Equitorial	Central	Penny	Nairobi
Eunica	Nairobi	Penny Wise	Western
Even Matt	Nairobi	Perifix	Nyanza
Fair Deal	Nairobi	Pet	Nairobi
Fair Mart	Nairobi	Peter Mulei	Eastern
Fair Sale	Central	Pick and Pay	Nyanza
Fairlane Supermarkets	Nairobi	Popular	Central
Family Mall	Nairobi	Powerstar	Nairobi /Central
Femi mini mart	Nairobi	Pramukh	Nyanza
Fomat	Western	Price Worth	Nairobi
Fourty Six	Nairobi	Quick Budget	Nairobi/Central/ Mombasa
Frama	Nairobi	Quick Matt	Nairobi
Frank Matt	Western	Rafael	Nairobi
Fun Shop	Nairobi	Rafiki	Nairobi
G - Matt	Nairobi	Rangers	Nairobi
Gakenia	Nairobi	Ray Mart	Nyanza
Gal Matt	Nairobi	Rikana	Nairobi
Generations	Nairobi	Rivanas	Rift Valley
Genesis	Nairobi	Road Map	Central
Gift	Nyanza	Rogers	Nairobi
Gilanis	Rift Valley	Ronak	Western
Gill Matt	Rift Valley	Roskam	Central
Go - Fruity	Nairobi	Roy Matt	Nairobi
Good days	Central	Royal	Western
Grand	Nairobi	Royal Matt	Nairobi
Green Matt	Nairobi	Royale	Nairobi

Happy	Juja	Runners	Nairobi
Happy Family	Eastern	S. Anand	Coast
Hardy	Nairobi	S.M.S	Nairobi
Helly's	Nyanza	Safeways Hypermarkets	Nairobi
Hema	Central	Sagi Matt	Nairobi
Heshima	Nairobi	Salem	Nairobi
Hill Satart	Nairobi	Saltes Ltd	Nairobi
Hill Side	Western	Sambasa	Nairobi
Homa Bay	Nyanza	Samco	Nyanza
Home Choice	Nairobi	Satellite	Nairobi
Home Depo	Nairobi	Sawa	Nairobi
Home Link	Nairobi	Seasons	Nairobi
Home Matt	Nairobi	Seraben	Nairobi
Home Pride	Central	Settlers	Central
Homechoice	Nairobi	Shirikisho	Rift Valley
Hooly wood	Nairobi	Shito	Nairobi
Horia	Nairobi	Shoppers	Nyanza
Humart	Nairobi	Siaya	Nyanza
Huzefa	Coast	Sidai	Nairobi
Iko Matt	Nairobi	Signet	Nairobi
Imani	Nairobi	SilMatt	Central
Ingine	Rift Valley	Simba Telecom	Nairobi
Isiolo Nyika	Central	Slopes	Central
Jack Nice	Nairobi	Smart Communications	Nakuru
JackMill	Nairobi	Smart Homes	Nairobi
Jaharis	Nairobi	Smart Price	Nairobi
Jahpik Enterprises	Nairobi	Sony Mega	Nyanza
Jai Haris	Coast	South End	Nairobi
Jamaa	Rift Valley	Spears	Rift Valley
Jamal Sumca	Eastern	Stage Matresses	Rift Valley
Jamastar	Central	Stage View	Nairobi
Jamii Fresh Foods	Nairobi	Stanmatt	Nairobi
Jatomy	Central	Star	Western
Jazz	Western	StarMatt	Nairobi
Jeska	Nairobi	Steffa	Nairobi
Jilvic	Western	Stewa	Central
Jirani	Eastern	Stewel	Nairobi
Jitahidi	Rift valley	Suam	Western
Joa Self	Nairobi	Suera	Rift Valley
Joma	Central	Sum Kam	Rift Valley
Jose Nice	Central	Sun Lucky	Eastern

Josfloss	Nyanza	Sungura	Rift valley
Josta	Nairobi	Suntec	Rift valley
Joster	Nairobi	Sweet World	Nairobi
Joy Land	Nairobi	Taito	Western
Jua Kim	Nairobi	Tamu	Central
Jubilee Mechant	Western	Target	Eastern
Just Home	Eastern	Tesia Supermarket	Busia
K - Matt	Nairobi	Tessia	Western
Kagemu	Nairobi	The Masters Self	Eastern
Kahawa Valley	Nairobi	The People	Nairobi
Kaka	Central	Thika Matt	Nairobi
Kamindi's	Nairobi	Three In One	Nairobi
Kangemi Self	Nairobi	Tigers	Nairobi
Kanyange	Central	Times Convinent	Nairobi
Kapsile	Rift valley	Tradena	Central
Karia	Nairobi	Transmatesses	Western
Kassmatt	Nairobi	Trezza Land	Nairobi
Kasturi	Eastern	Tricom- KE	Nairobi
Kenphy	Nairobi	Trinity	Nairobi
Keria	Central	Trizerland	Nairobi
Khetia's Supermarkets	Kitale	Trolley & Basket	Nairobi
Kibuye Matt	Nyanza	Tukara	Central
Kikuyu Self Ridges	Nairobi	Tulin	Rift valley
Kimsa	Nairobi	Twinkle	Nairobi
Kio Matt	Rift Valley	Uchumi	Rift Valley
Kisii Matresses	Nyanza	Uhuru	Nairobi
Kitugani	Eastern	Ultimate	Nyanza
Kwa Njogu	Central	Uncle Jim	Nairobi
Lango	Nairobi	Unity	Nairobi
Leestar	Nairobi	Ushanga	Rift valley
Lifa	Nairobi	Valley Matt	Nairobi
Lucky Star	Nairobi	Village	Nairobi
M.M.S.	Nairobi	vision Matt	Rift Valley
Maathai	Central	Vison 2030	Nairobi
Magunas	Nairobi / Central	Wabuti	Nairobi
Makutano stores	Matuu	Waciama	Nairobi
Mama Kim	Nairobi	Wakulima	Central
Mama liz	Nyanza	Walia	Nyanza
Mama Watoto	Western	Walias	Western
Mamba	Nairobi	Wamkoko	Nairobi
Mana	Nairobi	Wamumbi	Western

Mary Ben	Nairobi	White Candle	Nairobi
Mary Land	Nairobi	Wima	Central
Matunda Self	Western	Woolmatt	Rift Valley
Matuu	Eastern	Yako	Western
Mboys Logistics	Eastern	Yako	Rift Valley
Meet Mega	Nyanza	Yatin	Nyanza
Melosa	Eastern	Yogi	Nyanza
Zuberi	Coast	Zayuni	Nairobi

Source: RETRAK – December, 2023

Appendix D: NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **879224**

Date of Issue: **04/March/2024**

RESEARCH LICENSE

This is to Certify that Mr.. Benson Ngunjiri Maina of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Embu, Garissa, Homabay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makueni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Tanariver, Tharaka-Nithi, Transnzoia, Turkana, Uasin-Gishu, Vihiga, Wajir, Westpokot on the topic: Assessment of the Influence of Organisational Structure on Business Process Innovation of Small and Medium-Sized Supermarkets in Kenya for the period ending : 04/March/2025.

License No: **NACOSTI/P/24/33573**

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See overleaf for conditions

Appendix E: Strathmore Approval

Strathmore UNIVERSITY

26th February 2024

Mr Maina Benson,
maina.benson@strathmore.edu

Dear Mr Maina,

RE: Assessment of the Influence of Organisational Structure on Business Process Innovation of Small and Medium-Sized Supermarkets in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC1962/24.** The approval period is from **26th February 2024 to 25th February 2025.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
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 SU-ISERC within 72 hours of notification.
iv. 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 SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

STRATHMORE UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICAL REVIEW COMMITTEE
(SU-ISERC)
27-Feb-2024
Email:ethicsreview@strathmore.edu
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