# SUPPLY CHAIN MANAGEMENT PRACTICES, COMPETITIVE ADVANTAGE AND ORGANIZATIONAL PERFORMANCE OF TEXTILE FIRMS IN NAIROBI KENYA

**BY**

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## DECLARATION

### Declaration by Candidate

This thesis is my original work and has not been presented for a master’s degree in any other university.

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## DEDICATION

I dedicate this work to my mother for the sacrifice she made for me to complete this thesis. Her love, care, concern, support, encouragement and enthusiasm inspired me to achieve this goal.

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I want to express my deep gratitude to God for blessing me with good health and allowing me to reach this point. I also wish to convey my sincere thanks to my supervisors Dr. Edwin Kimeli and Dr. Collins Kapkiyai for their guidance, patience, and support in reviewing, correcting, and perfecting this work.

## ABSTRACT

Textile firms in Kenya face numerous challenges, including high raw material costs, inadequate transportation infrastructure, heavy taxation, price fluctuations, and expensive energy, which hinder their ability to compete effectively. Despite the importance of supply chain management in enhancing organizational performance, its effectiveness is often compromised. Therefore, the main aim of this study was to assess moderating effect of competitive advantage on the relationship between supply chain management practices and organizational performance of Textile Firms in Kenya. The specific objectives of the study were: to determine the effect of green procurement practices on organizational performance; to examine the effect of reverse logistics on organizational performance and to establish the effect of outsourcing on organizational performance of textile firms in Kenya. The objective on moderation were: to determine the moderating effect of competitive advantage on the relationship between green procurement and organizational performance; to examine the moderating effect of competitive advantage on the relationship between reverse logistics and organizational performance and to establish the moderating effect of competitive advantage on the relationship between outsourcing and organizational performance. This study was guided by Just in time Theory, Theory of constraints and Resource Based View Theory. Explanatory research design was used in this study. The unit of analysis for this study was department heads from logistics and procurement. The target population was 468 respondents. The sample size 216 respondents were calculated using Yamane formulae from the 52 textile firms in Kenya. To select employees from each firm for the study, simple random sampling was employed. A questionnaire was utilized to gather the primary data required for the research. A pilot test was conducted in Uasin Gishu County to ensure the research instruments were valid and reliable. Data analysis involved both descriptive and inferential statistics. Descriptive statistics included percentages, frequencies, measures of central tendency (mean), and measures of dispersion (standard deviation). Inferential statistics involved correlation and regression analysis. The study was presented in form of tables. The study finding showed that green procurement had a positive and significant effect on organizational performance ($\beta_1$=0.282, $p<0.05$). Reverse logistics had a positive and significant effect on organizational performance ($\beta_2$=0.287, $p<0.05$). Outsourcing had a positive and significant effect on organizational performance ($\beta_3$=0.331, $p<0.05$). Competitive advantage had a negative and significant moderating effect on the relationship between green procurement and organizational performance ($\beta$=-0.069; $p<0.05$). The competitive advantage had a negative and significant moderating effect on the relationship between reverse logistics and business performance ($\beta$=-0.137; $p<0.05$). Competitive advantage had a negative and significant moderating effect on the relationship between outsourcing and business performance ($\beta$=-0.122; $p<0.05$). The study concludes that textile firms should focus on enhancing competitive advantage alongside effective supply chain management practices. It recommends that firms prioritize developing sustainable supply chain strategies while addressing the challenges posed by competitive pressures. This study contributes to managerial practice by highlighting the importance of balancing supply chain management with competitive strategies. It informs policy by emphasizing the need for regulatory support to enhance competitiveness in the textile sector. Future research should explore how different competitive strategies can be aligned with supply chain management practices to maximize organizational performance in the textile industry.

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## ABREACTIONS AND ACRONYMS

| | |
|---|---|
| **3PL:** | Third-Party Logistics |
| **CEO:** | Chief Executive Officer |
| **CESE:** | Customer Experience and Service Excellence |
| **CIPS:** | Certified Institute of Purchasing and Supplies |
| **CSR:** | Corporate Social Responsibility |
| **CTA:** | Cotton, Textiles and Apparel |
| **EABL**: | East Africa Breweries Limited |
| **EMS:** | Environmental Management System |
| **FMCG:** | Fast Moving Consumer Goods |
| **HRM:** | Human Resource Management |
| **ICT:** | Information Communication Technology |
| **KAM:** | Kenya Organization of Manufacturers |
| **KEBS:** | Kenya Bureau of Standards |
| **KMC:** | Knowledge Management Capability |
| **K-S:** | Kolmogorov-Smirnov Test |
| **MD:** | Market Driving |
| **MOIED:** | Ministry of Industrialization, Enterprise Development |
| **NACOSTI:** | National Council of Science Technology and Innovation |
| **NEMA:** | National Environment Management Authority |
| **NGO:** | Non-Governmental Organization |
| **NPD:** | New Product Development |
| **NSE:** | Nairobi Securities Exchange |
| **P&G:** | Procter & Gamble |
| **PI:** | Product Innovation |

**RBV:** Resource-Based View

**RL:** Reverse Logistics

**RPO:** Recruitment Process Outsourcing

**SCA:** Sustainable Competitive Advantage

**SCM:** Supply Chain Management

**SPSS:** Statistical Package for Social Sciences

**SSCF:** Sustainable Supply Chain Foundation

**SSCM:** Sustainable Supply Chain Management

**TBL:** Triple Bottom Line

**TCE:** Transaction Cost Economics

**TOC:** Theory of Constraints

**UK:** United Kingdom

**VIF:** Variance Inflation Factor

**WTO:** World Trade Organization

## DEFINITION OF TERMS

**Competitive advantage** refers to a strategic positioning or attribute that allows a firm to outperform its competitors. This can be achieved through cost leadership, differentiation, or focus strategies, enabling the firm to sustain profitability and market share over time.

**Green procurement** involves purchasing goods and services that have a minimal environmental impact. It incorporates human health and environmental concerns into the search for high-quality products and services at competitive prices (Ali & Ahmad, 2016).

**Organizational performance** refers to a firm's ability to achieve its goals and objectives efficiently and effectively. It encompasses various dimensions, including financial performance, customer satisfaction, operational efficiency, and sustainability.

**Outsourcing** involves engaging a third-party logistics (3PL) provider to oversee, enhance, and streamline the supply chain. This typically involves outsourcing logistics operations to an external company specializing in these services (Scott, Lundgren & Thompson, 2018).

**Reverse logistics** is the process of planning, executing, and efficiently controlling the flow of raw materials, in-process inventory, finished goods, and related information from the point of consumption to the point of origin. The purpose is to recover the primary value or dispose of them properly (Rogers & Tibben-Lembke, 2015).

**Supply Chain Management (SCM)** refers to the management of the flow of products and services from the point of raw material production to the point of final consumer consumption. It involves a network of suppliers that function as links in the chain, ensuring efficient production and delivery processes (Lambert, 2017).

**Sustainability performance** is a business's capacity to fulfill the demands and expectations of customers and other stakeholders on a long-term basis, balanced by an effective management organization (Ren & Jackson, 2020).

# CHAPTER ONE

# INTRODUCTION

## 1.0 Overview

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

## 1.1 Background of the Study

Organizational performance is defined as an entity's capacity to achieve its objectives and maximize outcomes. It is a measure of how well an organization is doing in terms of its financial, operational, and human capital performance (Bagheri, 2016). Organizational performance is an important measure of an organization's success. By tracking organizational performance, organizations can identify areas where they are doing well and areas where they need to improve. This information can then be used to make changes that helped the organization achieve its goals (Tomislav, 2018). The achievement of organizational performance means that an organization has been able to meet or exceed its goals and objectives. This can be measured in a number of ways, such as financial performance, operational performance, and human capital performance (Mensah, 2019).

The importance of organizational performance has increased rapidly. This is due to a number of factors, given the growing complexity of the business landscape, the growing importance of sustainability and environmental concerns and the increasing competition in many industries. In order to survive and thrive in this environment, companies need to be able to perform at a high level. This means being able to use resources efficiently, produce top-notch products and services, and satisfy the demands of customers and stakeholders (Norström et al., 2020). Thus, it has become crucial to assess and evaluate sustainability within a company. The textile industry, in particular, uses significant amounts of water, air, chemicals, and energy, leading to environmental challenges at nearly every stage of production from raw materials to finished products (Toprak & Anis, 2017). The pressure on textile companies to comply with environmental standards has intensified. Consequently, companies find it necessary to publicly disclose their compliance with economic, social, and environmental criteria (Sule & Nathaniel, 2021).

Supply chain management involves overseeing the movement of goods and services, covering all steps from raw materials to finished products (Koberg & Longoni, 2019). This process aims to enhance customer value and gain a competitive edge in the market. Supply chain management (SCM) seeks to establish and maintain efficient, cost-effective supply chains that encompass manufacturing, product development, and the necessary information systems (Prayetno & Ali, 2020). Generally, SCM aims to streamline or connect production, shipping, and distribution processes. Effective supply chain management helps businesses cut unnecessary costs and expedite product delivery by maintaining strict control over internal inventories, production, distribution, sales, and supplier inventories (Lin, 2019).

Supply chain management practices are among the most important sources of competitive advantage for business in a competitive marketplace (Sulphey & Alkahtani, 2017). It entails the meticulous coordination of supply-side processes to enhance customer satisfaction and achieve competitive advantage. The primary objective of firms is to allocate the limited resources efficiently, effectively and ensure competitive advantage is realized through supply chain management practices. Such practices aim to minimize resource usage to achieve optimal outcomes (Vijayvargy, Thakkar & Agarwal, 2017). It is under these practices that it explains how costs can be minimized and profits maximized which will naturally create profitability of a company.

Companies with supply chain management can secure a competitive advantage by offering identical products at prices lower than the industry average to capture a larger market share or at industry-average prices to realize higher profits. Companies that make the brand central to their company's efficiency perform better (Zakaria, Al Mamun, Nawi & Razak, 2016). When supply chain management practices are undertaken in a company implies that capital tied up in current assets yields lower returns compared to fixed assets, representing an opportunity cost (Bilgihan & Wang, 2016). These supply chain management practices are green procurement, reverse logistics and outsourcing.

Eco-friendly procurement focuses on acquiring goods and services with minimal environmental impact (Urbański & Ul Haque, 2020). Increasing demand for recyclable products, energy-efficient systems, and clean technologies drives adoption of environmentally responsible business practices. In green procurement, companies prioritize environmental impacts of purchases over cost considerations. Policies guide businesses in acquiring materials, supplies, and services based on environmental and human health impacts (Asif, 2022).

Eco-friendly purchases minimize environmental impact and prioritize sustainable material sourcing and manufacturing practices (Sugandini, Susilowati, Siswanti & Syafri, 2020). Green procurement considers immediate and long-term effects across lifecycle stages. Strategies embrace the triple bottom line (TBL), enhancing performance in environmental, social, and financial aspects (Janjua, Sarker & Biswas, 2020).

Purchasing sustainable goods and sourcing from eco-friendly suppliers enhances resource efficiency (Khan & Farooq, 2022). Green procurement policies often guide businesses to buy products that use fewer resources, like energy-efficient bulbs or low-flow faucets. Additionally, choosing suppliers who provide products with minimal or no packaging reduces waste. These efficiency improvements lead to cost savings for businesses and broader resource conservation, benefiting everyone. Continuously buying genuine eco-friendly products and supporting sustainable businesses strengthens the green market globally (Kumar, 2020). There are more eco-friendly products available today than ever before, but having a green procurement policy helps businesses select only those products that meet rigorous standards and certifications, countering the widespread issue of greenwashing.

Reverse logistics, part of SCM, manages return of goods from customers to sellers or manufacturers (Krstev & Krstev, 2022). Customer returns initiate reverse logistics processes, including returns or recycling. This starts from consumers and moves backward through the supply chain to distributors or manufacturers. It can also include the final disposal of the product by the consumer, such as recycling, refurbishing or resale (Wang, Wang & Chan, 2020). Organizations utilize reverse logistics to recapture product value or dispose of it. Globally, returns are valued at nearly a trillion dollars annually, a figure that has grown with the rise of e-commerce (Hasan, Roni, Zaini & Jamil, 2022).

The aims of reverse logistics are to reclaim value and ensure customer satisfaction. In-store purchase returns are less than 10%, compared to at least 30% for online orders.

Smart companies use reverse logistics to foster customer loyalty and repeat business while minimizing return-related losses (Mishra et al., 2022). Traditional product flow moves from suppliers to factories or distributors, then to retailers and customers. In contrast, reverse logistics starts at the consumer and moves backward, returning products to any point in the supply chain.

Well-designed supply chains adapt to changes and handle various reverse logistics needs. This involves returning products to earlier points or suppliers and redirecting returned products to regular sales or discount channels (Gokarn & Kuthambalayan, 2019). Some companies outsource this function to specialized providers. Reverse logistics manages returns and surplus goods as well as handling leases or refurbishments (Shekarian, Ijadi, Zare & Majava, 2022). Reverse logistics practices differ across industries, with varying economic incentives for improvement.

Outsourcing involves transferring the management of certain organizational functions to a third-party provider, which were previously handled in-house (Akbari, 2018). Organizations outsource services to improve efficiency and reduce overhead costs, focusing on core business activities (Gambal, Asatiani & Kotlarsky, 2022). Outsourcing benefits include cost reduction, access to specialized expertise, increased productivity, a better corporate image, improved management focus on employee welfare, and the introduction of new systems and procedures. However, these benefits are only realized if the appropriate functions are outsourced (Phillips & Sharman, 2020). A company's decision to outsource should involve consultations with top management, staff and service providers. Firms must balance this to retain customer and supplier confidence (Tien, Anh & Thuc, 2019).

In the United Kingdom, for companies to achieve organizational performance, they must integrate supply chain management with their strategic goals for competitive advantage (Chen, 2018). Achieving performance involves selecting competitive practices and the firm's range of activities to establish a cost-effective and sustainable position against industry competition. Strategic choices for growth can be broadly categorized into intensive, defensive, joint ventures, and a combination of practices. Conditional of the competitive situation, firms choose supply chain management practices that are able to give them organizational performance (Cankaya & Sezen, 2018).

In Canada, performance of companies depends highly on environment and competitiveness which is unavoidable. Therefore, companies aiming to stay competitive should engage in appropriate supply chain management practices. Environment has been found to have direct effect on firm’s performance and growth (Ambec, Cohen, Elgie & Lanoie, 2020).

In Colombia, performance of companies on modern enterprises rely on performance measurement and analysis, serving various organizational objectives, such as planning, assessing performance, enhancing operations, and benchmarking against competitors or best practices (Bititci, Cocca & Ates, 2016). Performance metrics enable businesses to evaluate, regulate, and enhance production processes. They are also instrumental in comparing performance across different organizations, plants, departments, teams, and individuals, as well as assessing employees (Mittal, Dhiman & Lamba, 2019).

Sub-Saharan Africa is becoming more integrated into the global trading system, but their progress is slower compared to other regions. Despite starting from a higher baseline, their relative position is declining as the rest of the world advances more rapidly. Companies in the developed nations have clear brand advantages over the companies in Africa and as such there are higher costs of trade being passed on to the companies from Africa (An, Mikhaylov & Richter, 2020). In a world that is increasingly interconnected, the scale of operations influences not just trade and investment patterns, but also the geographic distribution of production. While tariffs have reached historical lows in many countries, developing nations still face significant challenges in establishing themselves within international supply chains (Kaplinsky & Morris, 2016).

In Ghana, a company's profitability hinges on its operational efficiency. The strategic focus is on building core strengths and long-term competitive advantages to support business strategies within the corporation (Rothaermel, 2016). A cost leadership strategy emphasizes a company’s value chain, producing low-cost goods and services, with minimal differentiation from competitors, aiming to capture a broad market (Fligstein, 2018).

In South Africa, the top-performing companies excel by reducing costs at every operational stage (Duggan, Jarre & Murray, 2020). Company performance is the ability to achieve results in various dimensions. There are two kinds of firm performance: perceived performance, which includes job creation and attracting foreign investment, indicating potential for regional competitiveness improvement. Studies globally suggest that operational scale strategies enhance performance (Musani, 2015).

In Nigeria, businesses, regardless of size, are part of the global community, influenced by and influencing worldwide social changes, events, and pressures (Ernst & Haar, 2019). The business environment is evolving, dynamic, and highly competitive. Key change drivers include globalization of trade, expanded operations, corporate influence, governmental shifts, and the growing strategic importance of stakeholder relationships, knowledge, and brand reputation (Ghiara & Caminati, 2017). The complexity of the business environment necessitates strategic management for effective decision-making. Executives develop strategic processes to optimally position their firms in the competitive landscape (Karadag et al., 2017).

Organizational performance improves efficiency and competitiveness, but achieving these benefits requires effective supply chain management practices (Cankaya & Sezen, 2018). Selecting and maintaining competent suppliers is crucial in procurement, influenced by factors like trust, financial stability, quality, reliable delivery, and technological capabilities (Taherdoost & Brard, 2019).

Poor supply chain management leads to resource misappropriation. Effective practices must incorporate accountability and competitive supply, ensuring fairness in bidder selection, regardless of race, nationality or politics. A World Bank report (2020) emphasizes that a good procurement process upholds integrity, responsiveness and transparency. Efficient procurement is vital for a firm's success, contributing to competitive acquisition and market edge (Sheth, Jain & Ambika, 2020). However, poor practices result in financial losses, poor-quality materials and decreased profitability (Sheth, Jain & Ambika, 2020).

According to the Kenya Association of Manufacturers, Kenya's industry comprises over 600 formal sector enterprises, organized under the Kenya Organization of Manufacturers (KAM), established in 1959 to promote trade and investment. The sector has 13 categories based on raw materials, with the largest being the food and beverage sector with over 122 industries.

Textiles and clothing contribute 12% to Kenya's manufacturing value. The industry grew from 1960 to 1980 due to private and government investments, but has stagnated recently due to raw material shortages, increased second-hand imports, outdated machinery and export issues following the collapse of the East African common market. This led to low-capacity utilization and rising costs (Mosomi, Osanjo & Mwiti, 2022).

The textile industry, one of Kenya's earliest modern manufacturing activities, began in the 1930s with Indian investors. Sunflag, the first integrated textile plant, began in 1936, followed by other Indian-owned firms (Taifa & Lushaju, 2020). The industry expanded through foreign joint ventures in the 1960s. By 1992, there were 47 medium- and large-scale textile firms, with 15 integrated mills accounting for 85% of total capacity. The industry is expected to grow with new mills in Nairobi and Mombasa's Export Processing Zones.

The industry initially relied on cotton yarn but shifted to synthetic materials in the 1960s due to global trends and issues with locally produced cotton. High costs, poor quality, and inefficient marketing structures led to this shift. Government protectionism, through high tariffs on imported cotton, further contributed to inefficiency and a lack of focus on export markets (Kabissa, Elobu & Muriithi, 2022).

Kenyan textile firms, particularly government-owned lack specialization. Optimal spinning plant size is 25,000-30,000 spindles, but Kenya's average is about 8,000 (Krishnan, Were, & te Velde, 2019). Most produce small quantities of various products, hindering specialization benefits. Domestic market demands lead to specific fabric production on order, maintaining customer relations. The industry needs better foreign market understanding, technology adoption, market research, quality promotion, and strict control (Maureen, 2022).

The sector divides into export-oriented firms with modern technology (Mukherjee, 2018) and government firms using conventional technology for domestic markets. The existing data is insufficient to draw conclusions about the supply chain management practices and organizational performance of Kenyan textile firms, highlighting the need for further research.

In this context, competitive advantage is an important moderator in the relationship between firm size, age, and performance. Firms with a competitive advantage, whether through cost leadership or innovation, are more likely to utilize their resources effectively and perform better in the marketplace (Zakaria et al., 2016). Competitive advantage can help firms optimize their supply chain practices, maximize profitability, and ensure long-term sustainability. It plays a critical role in determining the efficiency of supply chain strategies, influencing firm performance in both the short and long term.

The textile industry, particularly in Nairobi County, is a key focus of this study. Nairobi County is home to numerous textile companies, both large and small, making it an ideal location for examining the performance of firms in this sector. Nairobi is Kenya's economic and industrial hub, with a diverse range of businesses that contribute significantly to the national economy. The textile industry in Nairobi has a long history, dating back to the 1930s, and has undergone significant transformation over the years. However, it faces various challenges, including outdated technology, reliance on synthetic materials, and competition from imports, which affect the performance of firms in the region (Krishnan, Were, & te Velde, 2019). Moreover, the impact of environmental regulations and sustainability concerns further complicates the operational landscape for textile firms.

Nairobi County was chosen for this study because it offers a representative sample of the textile sector in Kenya. The county houses a mixture of local and multinational companies, many of which are involved in both domestic and international markets. The urban environment, coupled with the presence of modern infrastructure and a skilled labor force, makes Nairobi an ideal location for examining the factors that influence textile firms' performance. Additionally, the city’s proximity to key markets, both local and international, provides further insights into the challenges and opportunities facing the industry. By focusing on Nairobi, this study seeks to explore the specific factors affecting the performance of textile firms in this region and to identify best practices that could lead to improved organizational performance.

## 1.2 Statement of the Problem

Performance has become a crucial factor in assessing the effectiveness of any supply chain. Organizational performance, particularly within supply chains, is heavily influenced by the practices and sustainability of the supply chain. Sustainable supply chain management (SSCM) integrates environmental and social responsibility, which can significantly impact a firm's long-term growth, efficiency, and competitiveness. As firms increasingly shift towards sustainable practices, they gain benefits such as improved operational performance, cost savings, and stronger market reputation. However, the relationship between sustainable supply chain practices and organizational performance varies by industry, making it essential to understand its role within specific sectors.

In the textile industry, particularly in Kenya, firms face several challenges that hinder their ability to perform effectively. These include high raw material costs, inadequate transport infrastructure, high taxes, price volatility, and rising energy costs. These barriers reduce competitiveness and limit the sector's overall performance. Procurement and supply chain management (SCM) are critical to the success of textile firms, yet SCM performance in this sector has increasingly been ineffective in delivering the desired outcomes. This creates challenges for managers who must ensure their firms perform well within both regional and global markets.

This study focuses on performance in supply chain practices because, despite the growing importance of sustainability, few studies have examined how sustainable supply chain management influences the performance of textile firms in Kenya. Research conducted by Okello and Were (2017) and Gichuru, Iravo, and Arani (2015) has focused on general SCM practices in different industries, but there is a gap in understanding the specific impact of sustainable supply chain practices on the performance of textile firms.

The gap this study intends to fill is the lack of research on the direct relationship between sustainable supply chain management practices and organizational performance within the textile industry in Kenya. By addressing this gap, the study aims to create new knowledge on how integrating sustainability into supply chain practices can enhance overall performance. Additionally, the study will explore how competitive advantage serves as a moderating factor in the relationship between supply chain practices and organizational performance, offering insights into strategies that could help textile firms achieve higher performance levels in both local and global markets.

### 1.3 General Objective

To assess the moderating effect of competitive advantage on the relationship between supply chain management practices and organizational performance of Textile Firms in Kenya

### 1.3.1 Specific Objective

i. To determine the effect of green procurement practices on organizational performance of textile firms in Kenya.

ii. To examine the effect of reverse logistics on organizational performance of textile firms in Kenya.

iii. To establish the effect of outsourcing on organizational performance of textile firms in Kenya.

iv. a) To determine the moderating effect of competitive advantage on the relationship between green procurement and organizational performance of textile firms in Kenya.

   b) To examine the moderating effect of competitive advantage on the relationship between reverse logistics and organizational performance of textile firms in Kenya.

   c) To establish the moderating effect of competitive advantage on the relationship between outsourcing and organizational performance of textile firms in Kenya.

## 1.4 Research Hypotheses

**$H_{01}$:** Green Procurement has no significant effect on organizational performance of textile firms in Kenya.

**$H_{02}$:** Reverse logistics has no significant effect on organizational performance of textile firms in Kenya.

**$H_{03}$:** Outsourcing has no significant effect on organizational performance of textile firms in Kenya.

**$H_{04a}$** Competitive advantage has no significant moderating effect on the relationship between green procurement and organizational performance of textile firms in Kenya.

**$H_{04b}$** Competitive advantage has no significant moderating effect on the relationship between reverse logistics and organizational performance of textile firms in Kenya.

**$H_{04c}$** Competitive advantage has no significant moderating effect on the relationship between outsourcing and organizational performance of textile firms in Kenya.

## 1.5 Significance of the Study

### 1.5.1 Government and Policy Makers

Government Policy Makers understanding and analyzing SCM practices in manufacturing firms can aid policymakers in government ministries and state agencies such as National Environment Management Authority (NEMA) and Kenya Bureau of Standards (KEBS) in developing sound policies and programs that stimulate growth and sustainability in the manufacturing industry and the broader economy. Collaborative relationships within the supply chain are key drivers of successful green supply chain practices. The government should allocate more resources to research and development in SCM and raise awareness about the importance of this area.

### 1.5.2 Kenya Association of Manufacturers

The findings of this study would provide valuable policy recommendations to guide the activities of corporate members of the Kenya Association of Manufacturers (KAM), promoting business sustainability. KAM plays a crucial role in supporting large manufacturing firms by promoting trade and investment, upholding trading standards, and advocating for policies that create a competitive business environment and reduce production costs. This study would highlight the importance of adopting green supply chain practices, improving environmental performance and competitiveness in the manufacturing sector.

### 1.5.3 Academicians and Scholars

The study was significant to future researchers who would be interested in the field of supply chain sustainability practices and performance of textile firms. Additionally, the study is expected to lay the groundwork for further research into the challenges of implementing sustainable supply chain practices.

## 1.6 Scope of the Study

The study focused on effect of supply chain management practices on organizational performance of textile firms in Kenya. The study focused on specific of the effect of environmental conservation, reverse logistics and outsourcing as independent variables while and dependent variable was organizational performance of textile firms. The study was carried out among textile firms in Nairobi Kenya. This study was guided by Just in time Theory, Theory of constraints and Resource Based View Theory. Explanatory research design was used in this study. The unit of analysis for this study was department heads from logistics and procurement. The target population was 468 respondents. The sample size 216 respondents were calculated using Yamane formulae from the 52 textile firms in Kenya. Descriptive statistics included percentages, frequencies, measures of central tendency (mean), and measures of dispersion (standard deviation). Inferential statistics involved correlation and regression analysis. The study was presented in form of tables. The study was done from textile firms in Kenya, as from the beginning of July 2023 to September 2023.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.0 Overview

This chapter reviewed key concepts and theories related to supply chain sustainability practices, followed by an empirical review of past studies. An overview of these investigations is presented, highlighting research gaps identified through the empirical evaluations. The section also discussed the theoretical framework of variables. The theoretical framework outlines how study variables are defined in practice.

## 2.1 Concept of Organizational performance

Organizational effectiveness pertains to an organization's ability to satisfy the needs and expectations of clients and stakeholders over an extended period. This is achieved through competent administration, employee awareness, learning, and applying suitable improvements and innovations (Holbeche, 2018). Ensuring organizational performance involves recognizing responsibilities to various stakeholders and adapting activities, methods, and tools to enhance performance. The concept of sustainable development emerged about 30 years ago in response to global environmental issues and resource depletion, particularly energy-related concerns. The 1972 Stockholm Conference on the Human Environment marked the recognition that human activities contribute to environmental damage, posing a threat to humanity's future (Journeault, 2016).

Since the 1990s, there has been increasing acknowledgment among governments, corporations, consumers, investors, and other stakeholders of the significance of sustainability and the influence of corporations on society and the environment (Wang, Tong & George, 2016). Companies have realized that focusing solely on profit maximization, without considering their interaction with the environment, is not sustainable. Concurrently, there has been a rising demand for eco-friendly products and processes, such as hybrid and electric vehicles replacing traditional petrol or diesel ones. Adopting a sustainable business model presents both challenges and opportunities for organizations (Hoang, 2018).

The increased emphasis on organizational performance significantly impacts performance management and the role of accountants in producing and reviewing management information (Saratun, 2016). Businesses now need to consider a range of performance metrics, beyond financial results, to measure their overall success. This requires information that is relevant, reliable, and presented in a meaningful and comparable manner. The triple bottom line approach has emerged as a method to define organizational performance, measuring not only the economic value businesses create but also their broader impacts on operational and human factors (Ansari & Kant, 2017).

Organizational performance is a multifaceted and intricate concept that covers a wide range of issues, from operational efficiency to financial outcomes and stakeholder satisfaction (Panagopoulos & Dimitriou, 2020). Performance measurement, in this context, includes both internal factors such as productivity and external factors such as customer satisfaction and market position. Assessing organizational performance holistically involves examining both the internal workings of a company and the performance of its entire value chain, including suppliers and customers (Bejinariu, 2020).

## 2.2 Concept of Supply Chain Management Practices

Supply chain management (SCM) is a comprehensive strategy that encompasses the planning and regulation of materials, logistics, services, and information flow from suppliers to manufacturers or service providers and eventually to the end-user. It signifies a significant transformation in business management methodologies (Christopher, 2016). SCM stands as one of the most efficient tactics for firms to elevate their performance, integrating suppliers, manufacturers, distributors, and customers to enhance the long-term performance of both individual firms and the entire supply chain (Abdelkafi & Pero, 2018). Implementing SCM successfully can strengthen the relationship between upstream suppliers and downstream customers, thereby boosting customer satisfaction and firm performance (Gorane & Kant, 2017). Effective SCM practices are crucial for improving firm performance. The objective of a supply chain manager is to connect end customers, distribution channels, production processes, and procurement activities in a way that exceeds customer service expectations at a lower total cost than competitors (Masudin & Kamara, 2017).

SCM practices involve a comprehensive set of actions aimed at enhancing the internal supply chain's efficiency (Palang & Tippayawong, 2018). Modern SCM practices include supplier partnerships, outsourcing processes, cycle time reduction, continuous process flow, and technology and information sharing to improve purchasing quality and customer relationships. SCM entails planning and strategizing to coordinate the supply chain, including internal collaboration across functions and external collaboration with partners (Gawankar, Kamble & Raut, 2017).

Supply chains involve multiple areas and actors with varying interests, posing a challenge to align expectations and provide appropriate service and quality to customers. SCM practices involve activities that promote effective supply chain management by integrating internal functions and linking them with external operations of suppliers, customers, and other stakeholders (Blass & Corbett, 2018). There are many SCM practices to explore, including forecasting, inventory management, collaboration, warehouse development, and site factories. However, recent research has not fully addressed these dimensions (Gereffi & Lee, 2016).

### 2.3 Concept of Competitive Advantage

Competitive advantage can be acquired by creating unique methods and capabilities that differentiate a firm from its rivals. According to World Bank research (2017), the efficiency and effectiveness of a company's operations directly influence competitive priorities such as cost, availability, product and service flow, and meeting consumer expectations. Advantages that allow a company to surpass its rivals in terms of quality and pricing depend on its competitive advantages. Factors such as cost structure, brand identity, product quality, intellectual property, and customer service play key roles in establishing a company's competitive advantage (Kumar & Pansari, 2016).

A company's ability to maintain superior performance, such as higher sales or profit margins compared to competitors, is heavily influenced by its competitive advantages. These factors significantly contribute to a company's edge in the market, providing significant value to both the company and its shareholders. The more sustainable the competitive advantage, the harder it is for competitors to replicate or diminish it (Prabowo, Sriwidadi, & Ikhsan, 2021).

In the past, companies like Walmart and Dell gained a competitive advantage through innovative operational strategies, while today, firms like Procter & Gamble (P&G) leverage digital technologies to enhance their operations and improve overall efficiency (Vazquez, Sartal & Lozano-Lozano, 2016).

Competition in business can shape the future of a company, pushing it to adapt and improve over time. Competitive advantage refers to a company's ability to maintain a strategic position that allows it to earn higher profitability compared to its competitors. To achieve and maintain this advantage, a business must demonstrate superior value—either through offering lower-priced products or through unique qualities that customers are willing to pay a premium for (Distanont & Khongmalai, 2020).

### 2.4 Theoretical Review

Theoretical frameworks are designed to elucidate, predict, and comprehend phenomena, challenging and expanding current knowledge within set assumptions. A theoretical framework supports and explains the research problem under study (William, 2006). This study utilized the Just-in-Time Theory, Theory of Constraints, Resource-Based View Theory, and Transaction Cost Economic Theory to explore the research questions.

#### 2.4.1 Theory of constraints

The Theory of Constraints (TOC), introduced by Eliyahu M. Goldratt in 1984, is a comprehensive procurement management philosophy aimed at helping organizations consistently achieve their objectives. Goldratt extended this concept to project management in his 1997 book Critical Chain. Earlier, Wolfgang Mewes in Germany had propagated similar ideas. The core premise of TOC is that companies can be evaluated and managed based on three key metrics: throughput, operational expense, and inventory. Inventory encompasses all the money invested in purchasing items for sale or use. Operational expense includes all costs associated with converting inventory into throughput. Throughput refers to the rate at which the system generates money through sales.

Before achieving the primary goal, certain prerequisites must be met, such as safety, quality, and legal requirements. Critics argue that for most businesses, the main goal is profit generation. However, for many organizations, including non-profits, generating revenue is essential to pursuing their mission. Regardless of the goal, making sound financial decisions based on throughput, inventory, and operational expenses is crucial. TOC posits that the system's throughput is limited by at least one constraint, implying that without constraints, the throughput would be infinite, which is unrealistic.

TOC is relevant to procurement and sustainable supply chain activities because it advocates for Constraint Management through Continuous Improvement. The idea is to address the constraint preventing the system from achieving its primary goal, thereby maximizing profits and sustainability. TOC assists managers in identifying and devising win-win solutions among the system's components.

### 2.4.2 Resource Based View Theory

Resource Based View Theory was developed by Edith Penrose's in 1959. The theory states that for effective procurement performance, managers need to identify and analyze company's sustainable strategic supply chain which has benefits rooted in the investigative field and its unique combination of competencies, resources, intangibles, and organizational capacities. The Resource-Based View (RBV) theory asserts that organizations are fundamentally different due to their unique mix of tangible and intangible resources and capabilities. This theory posits that firms within an industry or strategic group can be heterogeneous regarding their resource bundles. Resource heterogeneity may persist because some resources are not easily transferable or imitable. Resource uniqueness is vital for gaining a competitive advantage. If all firms had identical resources, no single firm could implement a strategy that others could not also adopt (Cool, Almeida Costa, and Dierickx, 2002).

When a firm develops strong competencies from its unique resources, these competencies become the source of its competitive advantage (Pearce & Robinson, 2007). This theory highlights the importance of resources in strategic implementation, as strategies without the necessary resources remain mere plans.

Resource Based View Theory is applicable in this study because sustainable supply chains strategies are basis for effective procurement performance. Procurement underpins the entire company resources and are critical for ensuring continual availability of cost-effective, high-quality diagnostic and therapeutic products in accessible locations for the target population. Proponents of RBV view supply chain sustainability practices as foundational to a firm's competitive advantage, leveraging valuable resources effectively.

### 2.4.3 Transaction Cost Economics Theory

The Transaction Cost Economics (TCE) theory, first proposed by Williamson in 1981 and later expanded by Sarkis et al. (2011). The theory investigates the effort and expense involved in completing an economic exchange or transaction, including search costs, negotiation costs, and control costs. Costs connected with learning about new technologies, concepts and competitive landscapes are among those related with environmental practices' information costs. Due to the time and effort required to negotiate and produce an agreement, bargaining expenses rise. The amount of time spent on bargaining activities reduces the amount of time that can be used for other tasks.

A key idea of the TCE theory is that it explains why certain operations should be carried out within the company and others should be outsourced to third parties via the market processes. Environmental considerations can be factored into the standard make-or-buy choice. It's possible for companies to outsource ecologically destructive procedures in order to decrease liability, clean-up and image costs, or to acquire environmental knowledge. Outsourcing firms with environmental specialty can have capabilities and skills in areas such as environmental restoration, hazardous-materials transportation, and environmental product design, while the outsourcing firm can focus on core competencies rather than building additional talents.

Assumptions of transaction costs are an alternative to those made by the agency model of governance. Instead of referring to external contractual agreements, describes governance structures based on the net impacts of internal and external transactions. Control of transactions and, consequently, costs, can be determined by the organizational structure of a corporation. To minimize transaction costs and the associated pricing and quality risks and uncertainties, it is in the best interest of management to fully internalize all transactions. Transaction costs are still incurred between departments or business divisions inside a firm. Director or management opportunism can be seen as a form of constrained rationality.

### 2.4.4 Theory of Performance

The Theory of Performance (ToP), developed by Elger in 2007, is a framework explaining performance and performance improvements. The TOP states that performance is a function of six foundational concepts identity which is the performer's sense of self-efficacy and belief in their ability to succeed. Learning skills which is the performer's ability to learn new information and skills, knowledge which the performer's understanding of the task or activity they are performing, context which is the environment in which the performance is taking place, personal factors which is the performer's individual characteristics such as personality, motivation and values. Fixed factors which factors that are outside of the performer's control, such as physical limitations or access to resources. The ToP can be used to diagnose performance problems and develop strategies for improvement. It can also be used to set goals and track progress.

The Theory of Performance (ToP) is a framework that can be used to understand and improve organizational performance. It is based on the idea that there are four key drivers of performance: The organization's overall strategy and how it is implemented, the way the organization is structured and how it operates, the organization's culture and values, the skills, knowledge and motivation of the organization's people.

The ToP can be applied to the organizational performance of textile firms in Kenya in a number of ways. Identify the key drivers of performance for textile firms in Kenya. Assess the current performance of textile firms in Kenya. Identify areas where textile firms in Kenya can improve their performance. Develop and implement improvement initiatives. The ToP is a powerful framework that can be used to improve organizational performance. It is particularly useful for textile firms in Kenya, which are facing increasing competition from both domestic and international firms. By applying the ToP, textile firms in Kenya can identify the key drivers of performance, assess their current performance, and identify areas where they can improve. This helped them to become more competitive and achieve their business goals.

## 2.5 Empirical Review

Victoria, Nyamwange and Harley (2017) conducted a study to explore the relationship between Supply Chain Management (SCM) integration and the performance of international humanitarian organizations. They found that SCM integration significantly influenced the performance of these organizations. Many international humanitarian organizations in East Africa have integrated their SCM functions, leading to faster and more efficient delivery of goods, services, and works to beneficiaries.

Mulwa (2015) examined SCM practices in disaster response among international humanitarian organizations in Kenya. The study identified various SCM practices, including evaluating the needs of vulnerable populations, procuring services and materials, optimizing donation management, promoting best practices in warehousing, documentation, cataloging, consolidation, recording, and ensuring efficient flow of products, finances, cash, and inventory management.

### 2.5.1 Green Procurement and Organization Performance

Environmental conservation involves protecting, preserving, managing, or restoring natural environments and the ecological communities that inhabit them. Conservation aims to protect vital resources and combat irresponsible business practices (Ferreira & Lacerda, 2016). Environmental sustainability is defined as maintaining factors and practices that contribute to the long-term quality of the environment. It encompasses ecosystem integrity, carrying capacity, and biodiversity, requiring the maintenance of natural capital as both an economic input source and a waste sink.

Gazzola and Querci (2017) assessed the effect of environmental performance on financial performance, finding a positive link between financial performance and environmental initiatives. Similarly, Worae and Ngwakwe (2017) examined the impact of sustainability pro-activeness on financial performance, demonstrating that sustainability management enhances corporate competitiveness, although some practices may have negative effects. Latan, Jabbour, de Sousa Jabbour, Wamba, and Shahbaz (2018) employed a structural equation model to show that environmental sustainability positively correlates with financial performance. Schrecker (2016) found a correlation between corporate environmental initiatives and sales returns, while Lopez-Maldonado and Berkes (2017) identified a causal relationship between proactive environmental strategies and financial resources. Environmental performance has a link with financial performance link a demonstrated a negative association. Ameen, demonstrated a link between environmental initiatives and financial performance during 2001-2007.

### 2.5.2 Reverse Logistics and Organization Performance

According to Jain and Khan (2017), reverse logistics involves planning, executing, and efficiently controlling the movement of raw materials, work-in-process inventory, finished goods, and related information from consumption points back to their origin points. The purpose of reverse logistics is to recover the primary value or properly dispose of them. Implementing reverse logistics practices offers several benefits to organizations, including legislative compliance, market advantages, reduced production costs, enhanced environmental responsibility, and customer satisfaction. Additionally, reverse logistics can protect aftermarkets and pre-empt regulation, thereby avoiding financial penalties (Guta, 2016).

Yogi and Kotzab (2019) conducted research on performance metrics influencing reverse logistics activities and constructing a framework for establishing an efficient reverse logistics network in Indian liquefied petroleum gas agencies. They identified critical metrics such as order fulfillment, lead time, inventory carrying costs, stock turnover ratio, volume flexibility, cylinder utilization ratio, and the working stock ratio. However, this study did not explore the correlation between reverse logistics and operational effectiveness.

Shaik and Abdul-Kader (2018) examined the performance indicators of reverse logistics and their impact on the product lifecycle. They identified facilitating strategies for reverse logistics, including integrating new technologies, enhancing customer satisfaction, forming strategic partnerships, promoting eco-compatibility, improving environmental performance, recovering value, and managing knowledge. They also suggested using a balanced scorecard to evaluate reverse logistics performance.

Guta (2016) investigated reverse logistics and its impact on competitive advantage, focusing on water bottling companies in Nairobi. The study identified a strong link between reverse logistics and competitive advantage, highlighting practices like returning defective products, screening, refurbishing, reuse, recycling, and remanufacturing as common. Building and maintaining strong stakeholder relationships were also crucial for effective reverse logistics operations. The study concentrated on competitive advantage rather than operational performance.

Ebenezer and Zhuo (2019) analyzed reverse logistics practices and profitability among large-scale manufacturing firms in Nairobi. They concluded that the adoption of reverse logistics among large firms was limited due to lack of awareness and knowledge. Many manufacturing firms disposed of materials in landfills without harnessing the energy released from landfill gases. The study focused on the implementation of reverse logistics practices and their impact on profitability, rather than operational performance.

Odock (2016) investigated the adoption of reverse logistics in the information and communications technology sector in Kenya. The study found that many ICT operators embraced reverse logistics due to its significance in their operations. Challenges to effective adoption included insufficient financial resources, human capital, poor collaboration among supply chain partners, inadequate IT infrastructure, and company size. Drivers of reverse logistics adoption included government support, resource allocation, product quality upon return, and performance evaluation. However, Odock's study did not delve into aspects of operational performance.

Wangui (2018) researched the influence of reverse logistics on the operational efficiency of sisal processing firms in Nakuru County. The study indicated that product reuse had a statistically significant positive impact on operational efficiency because reused products were more cost-effective than newly manufactured materials, providing a cost advantage. Product reuse also reduced the time required for material acquisition, thereby enhancing processing efficiency. However, the study focused solely on practices related to reuse and product recovery.

Salim (2016) conducted a study on the connection between reverse logistics and organizational performance. He observed a substantial adoption of reverse logistics in manufacturing firms in Kenya. Salim's findings indicated that recycling and reuse had a negative impact on organizational performance, whereas remanufacturing improved it. Yogi and Kotzab (2019) conducted research on performance metrics influencing reverse logistics activities and constructing a framework for establishing an efficient reverse logistics network in Indian liquefied petroleum gas agencies. They identified critical metrics such as order fulfillment, lead time, inventory carrying costs, stock turnover ratio, volume flexibility, cylinder utilization ratio, and the working stock ratio. However, this study did not explore the correlation between reverse logistics and operational effectiveness.

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### 2.5.3 Outsourcing and Organization Performance

Engaging a third-party provider to undertake tasks, manage operations or deliver services for a company is a common business approach known as outsourcing. In the context of supply chain management, this entails employing third-party logistics (3PL) firms to enhance, streamline, and optimize supply chain activities. E-commerce enterprises benefit from this by offloading storage and complex fulfillment duties, thereby saving costs and boosting supply chain efficiency. Mwangi (2017) study established the relationship between human resource training outsourcing on organizational performance. The study findings indicated that human resource outsourcing affects organizational performance. Training affects performance positively of the employee and overall organisations performance. This study informs the current study on the adoption of theories to confirm the relationship of concepts and comparing them to the outcome of research although the current study did not use same theories as this preceding study.

Agburu, Anza and Iyortsuun (2017) investigated the effect of training outsourcing on the organizational performance (employee placement and training) in Rwanda. Research indicates that Rwandan organizations outsource to leverage specialized expertise, as evidenced by unanimous respondent approval (100%), and to cut down on recruitment expenses of having to do recruitment for many times seeking appropriate candidate as shown by respondents at rate of 96%. This is an indication that outsourcing takes the burden of recruitment and training off the employers including cost and time loss while ensuring that the best and suitable employees are sourced. This research was based in Rwanda and used mixed research methods for their study whereas the current study only employed descriptive research design and guided by the variable of Training outsourcing practices on organisation performance as main focus.

Kayumba (2019) explored the impact of outsourcing training on the performance of private enterprises in Rwanda, using Rwanda Telecommunication Limited as a case study. The findings revealed that outsourcing at Uganda Telecommunication Limited significantly enhanced cost efficiency and marginally improved profitability at Rwanda Telecommunication Limited.

Ko (2019) discussed the outsourcing of human resource management (HRM) functions, such as training, recruitment, rewards, and restructuring, in Greece. Drawing on both primary and secondary data, including the 1999 CRANET survey and a study of Greek HRM service providers, the analysis is framed. In-depth interviews with HR managers and senior consultants supplement the quantitative data, indicating that the Greek HRM services market is nascent with limited credibility, and customers are inexperienced in managing outsourcing relationships, often hesitant to form partnership-style HRM outsourcing agreements.

Oburu and Atambo (2016) investigated the influence of payroll systems on employee performance in microfinance institutions, focusing on Wakenya Pamoja Sacco in Kisii County, Kenya. According to expectancy theory, employees are more motivated when they perceive a strong connection between performance and rewards. The study, analyzed both quantitatively and qualitatively, found that non-financial payroll incentives in the microfinance sector, particularly at Wakenya Pamoja Sacco, effectively motivate employees, enhance performance, and improve staff retention.

Chawla (2019) examined how recruitment process outsourcing (RPO) impacts employer branding. The study concluded that talented employees are crucial for organizational success and play a key role in enhancing brand image and shaping customer perceptions. RPO services reduce HR costs, allow HR professionals and senior management to focus on core activities, and help in building a positive employer brand.

Gilani and Jamshed (2016) assessed whether outsourced recruitment services meet the needs of line managers. The study, conducted within a large organization via an online survey targeting line managers with recent hiring experience, used quantitative methods such as correlation, multiple regression, and binary logistic regression. Findings indicate that while internal service aspects like operations and recruiter provision are rated highly, external elements of the recruitment process are perceived as less effective.

Murage, Sang and Ngure (2018) investigated the influence of ethical considerations in recruitment and selection on employee performance in public universities located in Nyeri County, Kenya. Employing a descriptive research approach and using stratified random sampling, the study revealed that ethical aspects in recruitment and selection positively and significantly impact employee performance. Discrimination emerged as the most unethical practice identified.

### 2.5.4 Competitive Advantage and Organizational performance

Competitiveness can be analyzed from different perspectives, including the firm, country, and industry levels (Aghion, 2016). At the organizational level, competitiveness is seen as a company's ability to create superior products compared to its rivals. Competitive advantage can stem from cost reductions or unique products and services that command premium prices. Key factors of competitiveness include flexibility, capability, speed, agility, and adaptability (Theyel & Hofmann, 2020).

Viewing competitiveness through a competency approach emphasizes the importance of internal factors such as strategy, structure, competencies, and innovation capabilities, including resource allocation, for achieving competitive success (Ferreira, Coelho & Moutinho, 2020). Competitiveness involves evaluating the performance of key processes like technology, operations management, and human resources. Competitive advantage is assessed by customer satisfaction, cost efficiency, and value addition. The focus has shifted towards the creation and integration of knowledge as a source of competitive advantage (Makira, 2018).

A competitive advantage strategy includes methods a company uses to attract customers, withstand competition, and improve its market position (Mintzberg, Ahlstrand & Lampel, 2020). Sustainable competitive advantage involves implementing a value-generating strategy that competitors are not simultaneously using. It is the ability of an organization to outperform rivals in achieving goals over a prolonged period. In banking, competition means providing highly customized services to better meet client needs. Evaluating competitiveness in the environment and developing appropriate strategic responses is necessary. Firms combat competition by creating strategies to manage strategic repositioning.

Sustainable competitive advantage is a business strategy based on a company's resources, helping it maintain its competitive edge by outperforming others in the market (Rothaermel, 2016). Employing customer-focused strategies by leveraging unique competencies and resources brings sustainable competitive advantage. Close relationships with suppliers, customers, and employees enable firms to refine their business strategies for competitive advantage. Sustainable competitive advantage involves achieving financial and market benefits, and developing unique dynamic capabilities, which has become a crucial research area (Advantage, 2020).

## 2.6 Critique of the Existing Literature

Mulwa (2015) examined sustainable supply chain management practices and their impact on the performance of humanitarian organizations in Kenya. His findings indicated that these organizations have adopted various levels of SCM practices, positively affecting their performance. However, the study did not comprehensively address Sustainable Supply Chain practices. Similarly, Kovacs (2014) evaluated sustainability perspectives in humanitarian supply chains, identifying four key perspectives: societal, beneficiary, supply chain, and program. Nevertheless, Kovacs did not thoroughly explore how these perspectives impact the performance of humanitarian organizations.

Platonova, Asutay, Dixon and Mohammad (2018) sought to investigate the relationship between outsourcing and the performance of organizations. The research revealed that factors such as larger board size, board skills, management expertise, longer-serving CEOs, audit committee size and independence, foreign ownership, institutional ownership, dividend policies, and annual general meetings are positively correlated with organizational performance. However, the study did not provide a detailed explanation of how board size, board skills, and dividend policies specifically influence organizational performance. Bery, Otieno, Waiganjo and Njeru, sought to explore the effect of stake holder's engagement on organization performance in Kenya's horticultural sector. The conclusion emphasized the existence of clear policies on stakeholder supervision and performance development, along with explicit guidelines on work hours. Nonetheless, the study did not put forward how the policy and the guidelines deeply affect the stakeholder's engagement on organization performance.

A supply chain encompasses all processes involved in satisfying customer demands, involving the movement and transformation of goods from raw materials to the end consumer, along with the related information and financial flows. As Rogosic (2014) describes, a supply chain is composed of four stages: the supply network, internal supply chain (manufacturing facilities), distribution systems, and end users.

Sustainable development aims to fulfill current needs without hindering future generations' ability to meet their own needs (Salim, 2016). Sustainability encompasses social, environmental, and economic systems. Social dimensions involve adhering to relevant laws and international agreements, employing open and transparent participatory processes that actively involve stakeholders, defining rights and duties, and implementing a long-term sustainability plan with regular monitoring. It also ensures fair wages, good working conditions, worker safety, and the right to organize and bargain collectively (Wangui, 2018). Environmental sustainability is achieved when systems, processes, and activities minimize the environmental impact of an organization's facilities, products, and operations. Economic sustainability pertains to strategies that optimize the use of socio-economic resources. This model advocates for the fair distribution and efficient allocation of resources, promoting their responsible use to ensure long-term benefits and profitability.

Mulwa (2015) asserts that supply chain sustainability encompasses a comprehensive view of supply chain processes and technologies, extending beyond traditional concerns of delivery, inventory, and costs. This new approach is founded on the idea that socially responsible products and practices benefit the environment and are crucial for sustained profitability. Sustainability is thus a business strategy aimed at fostering long-term corporate growth and profitability by integrating environmental and social considerations into the business model. The goal is to maximize value for the company, consumers, and employees by seizing opportunities and managing risks associated with environmental and social changes.

## 2.7 Summary of Review Literature

Sustainability represents the ultimate aim of all development assistance, defined as the ability of local entities in the host country to continually apply new and evolving skills and sustain achievements by providing dependable resources generated through the country's own efforts (Salim, 2016). Benefits of outsourcing on Organization Performanceof the banks in Bosnia and Herzegovina, Croatia and Montenegro stated that in times of high expansions the benefits of the firm are for the most part low along these lines the organizations might be more averse to act in socially capable way since buyer certainty is frail and profitability development is low. Additionally, standardized management systems aid in the implementation and integration of social responsibility within technology companies, examining how social responsibility affects their reputation and performance, and whether it positively impacts the economic outcomes of the company. An important aspect of CSR and performance measurement involves the collection and reliability of data samples.

Mulwa (2015) explored sustainable supply chain management within the United Kingdom (UK) private sector. The study revealed that most private companies in the UK are dedicated to sustainability and have established sustainability policies. However, this research focused solely on private sector companies, indicating a need to investigate humanitarian organizations. Salim (2016) examined the sustainability strategies adopted by international Non-Governmental Organization (NGO) based in Nairobi. The study found that these organizations employed strategies such as consultancy work, strategic planning, green procurement, income-generating activities, partnerships and collaborations, community capacity building and empowerment, transparency, good management practices, staff training and development, and better pay. However, the study did not thoroughly examine the sustainability aspects of these supply chain practices.

**Table 2.1 Summary of Research Gaps**

| Author(s) | Topic | Knowledge/Methodology Gap addressed | Findings/ Conclusion |
|---|---|---|---|
| Worae and Ngwakwe (2017) | Sustainability pro-activeness effect on financial performance | The study did not indicate the intervention of Green Procurement has it is the case of the current study | Managing sustainability improves corporate competitiveness, even though certain sustainability measures may lead to adverse outcomes. |
| Lopez-Maldonado and Berkes (2017) | Environmental Proactive Strategies Relation with Financial Performance | The study focused much on Environmental proactive strategies other than greening environment as it is the case of the current study | Cause-effect connection between ecological durability and financial reserves. |
| Yogi and Kotzab (2019) | Performance Indicators Affecting the Reverse Logistics Activities | This research did not delve into the correlation between inverted logistics and functional efficiency, but concentrated instead on the principal performance gauges influencing inverted logistics. | Completion of requests, time of delivery, maintaining expense of inventory, permissible turnover percentage of merchandise, adaptability in volume, percentage utilization of cylinders, temperature tolerance of working cylinder stocks at dealers and percentage of working stocks are the key performance gauges of successful implementation of inverted logistics. |
| Guta (2016) | Reverse Logistics and Competitive Advantage with A Focus on Water Bottling Companies in Nairobi | The analysis largely emphasized the adoption of inverted logistics practices and their association with profitability rather than their impact on operational performance. | They identified that reusing products has a statistically significant positive influence on the operational efficiency of sisal processing companies, as reused materials are more cost-effective compared to newly manufactured materials, thereby creating a cost advantage for the organization. |
| Wangui (2018) | Effect Of Reverse Logistics on Operational Performance of Sisal Processing Firms in Nakuru County | However, their research only concentrated on two inverted logistics practices, specifically reuse and product recuperation. | The results indicated that recycling and reusing have a detrimental impact on organizational performance, while remanufacturing enhanced the quality of organizational performance. |

| | | | |
|---|---|---|---|
| Salim (2016) | Profitability But the Link Between Reverse Logistics and Organizational Performance as A Whole | The study did not address operational performance. | The findings revealed that recycling and reuse has a negative effect on organizational performance while remanufacturing improved the quality of the organizational performance. |
| Hussain, Rigoni and Cavezzali (2018). | Outsourcing on procurement performance | The study did not however did not show how procurement performance | outsourcing spending parts of supply chain comprise of understanding the monetary spending effects of the company’s tasks |
| Galant and Cadez (2017) | Outsourcing on Organization Performanceof the companies | The study however was not specific on cost effective | Monetary burning through segment is a vital duty to partners for instance clients, social orders, representatives. This is essential for business development. |

## 2.8 Conceptual Framework

The conceptual framework Figure 2.1 outlined that the dependent variable organizational performance of textile firms in Kenya is based on the independent variable's environmental conservation, social responsibility, outsourcing and reverse logistics

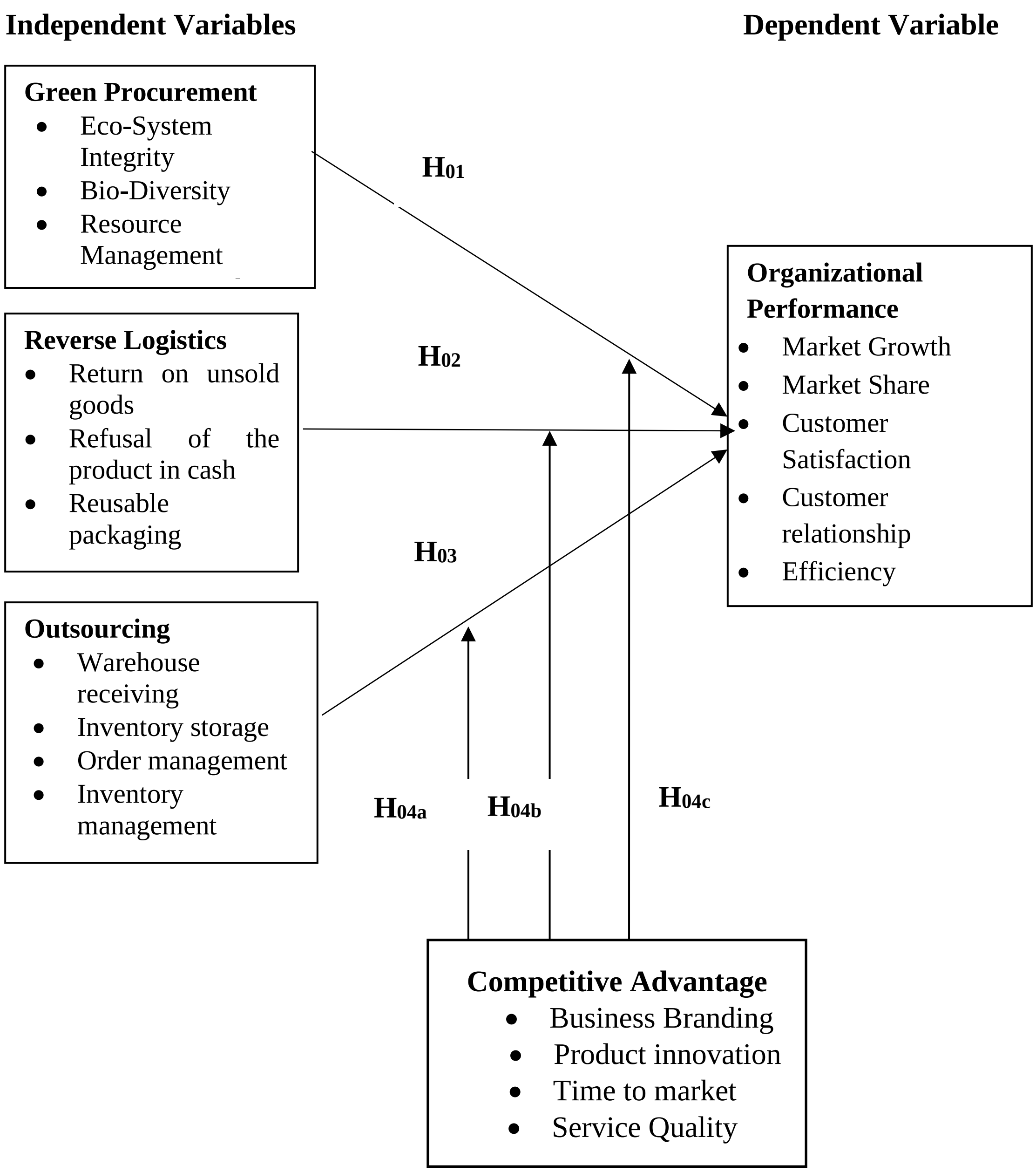


**Figure 2.1: Conceptual Framework**

**Source: Researcher (2025)**

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.0 Introduction

This chapter presents the research methodology procedures to be used in the identification of target population, selection of a sample size, data collection and data analysis. Specifically, the chapter encompasses a research design, target population, sample size and sampling technique, data collection and data analysis and presentation.

## 3.1 Research Design

Explanatory research design was used in this study. An explanatory research design proved most suitable for this investigation. This approach significantly deepened the researcher's comprehension of environmental preservation, reverse logistics, outsourcing, social responsibility on organizational performance of textile firms. Bryman and Cramer (2012) define explanatory research as aiming to uncover the extent and nature of cause-and-effect relationships. This design played a pivotal role in identifying the underlying reasons behind various processes and evaluating the impact of supply chain management practices on the operational performance of textile companies in Kenya.

## 3.2 Area of Study

The study was conducted within Kenya's textile industry. Kenya, situated in Africa, comprises 47 semi-autonomous counties governed by elected officials. Covering an area of 580,367 square kilometers (224,081 sq mi), Kenya ranks as the world's 48th largest country by total area. Historically, the clothing and textile sector played a crucial role in the industrialization of developed nations due to its labor-intensive nature and interconnectedness with sectors like agriculture. Some studies even suggest that developing countries aspiring to industrialize should prioritize the clothing and textile industries.

Kenya aims to bolster its domestic textile sector but faces challenges within this industry. The influx of second-hand clothing donations and the increasing trend of imported second-hand garments pose dilemmas for the Kenyan economy. Government data indicates that in 2014, second-hand clothing contributed $95 million to Kenya's economy, a figure that rose to $128 million by 2016. Economic activity in Kenya showed notable sluggishness in the first quarter of 2019 compared to the previous year, with a growth rate declining from 6.5 percent to 5.6 percent, as reported by the Kenya National Bureau of Statistics.

Kenya's cotton, textiles, and apparel (CTA) industry ranks as the country’s second-largest manufacturing sector after food processing and is considered a core industry. The CTA value chain in Kenya involves various stakeholders including researchers, ginners, farmers, spinners, input suppliers, textile manufacturers and extension service providers.

The Kenyan textile and apparel value chain comprises input providers, yarn spinning companies, semi and fully integrated weaving/knitting/dyeing/finishing mills, and design and sewing firms. Oversight of the sector falls under the Ministry of Industrialization, Enterprise Development (MOIED) and enjoys support from extensive private sector associations and training institutions. However, there is no unified association representing the apparel and textile sector comprehensively vis-à-vis the government and among themselves.

### 3.3 Target Population

The target population refers to the entire group of entities, individuals, or subjects from which a researcher aims to draw general conclusions regarding the variables being investigated (Cooper & Schindler, 2013). This study focused on textile firms in Kenya. The unit of analysis was the 52 textile firms operating in the country. Within these firms, the target population consisted of department heads from the key departments involved in the supply chain: logistics, procurement, and stores.

The target population for this study was determined based on the total number of individuals working in these departments across the 52 textile firms. The figures provided are based on data obtained from industry reports and direct communication with relevant industry bodies. The breakdown of the target population is as in Table 3.1.

**Table 3.1 Target Population**

| Department | Target population |
|---|---|
| Procurement staff | 208 |
| Logistics officers | 260 |
| **Total** | **468** |

**Source: Ministry of Trade and Industrialization (2022)**

The total of 468 individuals was derived by aggregating the number of department heads from the procurement, logistics, and stores departments across the 52 textile firms. This number was not arbitrarily chosen but is based on industry data and the current staffing levels in these departments. The justification for selecting this specific target population will be discussed in further detail in the methodology section, where the data sources and criteria for inclusion will be clarified.

## 3.4 Sampling Frame

A sampling frame is a comprehensive roster of all units available for selection in a sample, as defined by Kombo and Tromp (2006). These units may represent individuals or organizations that constitute the population of interest. When delineating the population, specificity is crucial for accuracy. Therefore, the unit of analysis for this study was logistics and procurement department of the 52 textile firms in Kenya.

## 3.5 Sample Size

A sample size is a small number that represents the entire population. From the target population of 468 Yamane (1967) (as cited by Dieudonne, 2015) sample size formula was used to select a sample size as shown below;

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

Where n is the sample size required

N is the population size =468

e is the level of precision =0.05

$$n = \frac{148}{1 + 148(0.05)^2} = 216$$

Thus, sample size was 216 respondents.

**Table 3.2 Sample Size**

| Department | Target population | Sample Size |
|---|---|---|
| Procurement staff | 208/468*216 | 96 |
| Logistics officers | 260/468*216 | 120 |
| **Total** | **468/468*216** | **216** |

**Source: Researcher (2022)**

### 3.6 Sampling Design and Procedures

Sampling is the process of systematically selecting representative elements from a population. The method used to select a subset of the population ensures that the findings can be generalized to the entire population. For this study, a stratified sampling technique was applied to categorize employees within each textile firm. This technique ensured that each department (procurement, logistics, and stores) was adequately represented in the sample.

After the population was divided into strata, simple random sampling was employed to select individuals from each department. This approach is justifiable as it provides every member within each stratum with an equal chance of being selected, ensuring a fair and unbiased representation. The combination of stratified and random sampling is appropriate for ensuring that different segments of the population are represented proportionally and that the sample is reflective of the entire target population.

### 3.7 Data Collection Instruments

For this study, a structured questionnaire was employed as the primary data collection instrument. The questionnaire was developed specifically for this research to capture relevant information from respondents. It comprised both closed-ended questions, where respondents could select from predefined choices, and a few open-ended questions to gather qualitative insights.

Surveys, as described by Jankowicz (2015), are written tools used to collect data by asking respondents to answer a series of questions. In this study, the use of a structured questionnaire allowed for standardized responses, making it easier to analyze and compare the data collected across all respondents.

The questionnaire was designed to address key areas of the study, ensuring that the questions were aligned with the research objectives. Its design aimed to minimize bias and enhance reliability by providing clear, concise, and relevant questions. The choice of this instrument was based on several advantages, including ease of distribution, efficiency in data collection, the ability to analyze responses systematically, and the standardization of questions across all respondents.

Furthermore, the questionnaire was pretested with a small group of respondents before being distributed to ensure clarity and comprehensibility. Based on the feedback from this pretest, minor adjustments were made to improve the instrument's effectiveness.

**3.8 Data Measurements**

Research instruments employed in this study were fashioned using metrics derived from prior research endeavors. Participants were requested to express their levels of agreement or disagreement with statements relating to study variables using a 5-point Likert scale, ranging from (5) strongly agree to (1) strongly disagree. Each variable consisted of five distinct items. Data transformation from Likert scale to numeric format was conducted using SPSS software. Transformation of data for each objective was carried out based on the items/questions related to that objective in order to perform regression analysis.

**Table 3.3 Data Measurements**

| Type | Variable | Measurement | Measurement scale | Source |
|---|---|---|---|---|
| Independent variable | Green Procurement | • Eco-System Integrity<br>• Bio-Diversity<br>• Resource Management<br>• Environmental Protection | 5-point Likert scale | Clarkson, 2015 |
| Independent variable | Reverse Logistics | • Return on unsold goods<br>• Refusal of the product in cash<br>• Reusable packaging | 5-point Likert scale | Rogers &Tibben-Lembke, 2015 |
| Independent variable | Outsourcing | • Warehouse receiving<br>• Inventory storage<br>• Order management<br>• Inventory management | 5-point Likert scale | Scott, Lundgren & Thompson (2018). |
| Moderator variable | Competitive advantage | • Business Branding<br>• Product innovation<br>• Time to market<br>• Service Quality | 5-point Likert scale | Kumar & Pansari, 2016) |
| Dependent variable | Organizational performance | • Profit Ratio<br>• Customer base<br>• Return on Investment | 5-point Likert scale | Mukanga, 2016 |

### 3.9 Data Collection Procedure

Data collection process started by getting a formal letter from Moi University Graduate School. This allowed the researcher to apply for a research permit from the National Council of Science Technology and innovation (NACOSTI) before going to the field. The letter together with the consent statement then presented to the respective textile companies as a means of seeking authority to collect data from the institution. Data were collected using researcher-administered questionnaires. This method allowed the researcher to clarify questions for the respondent and to ask follow-up questions. In this method, the consent statement was issued and then questionnaire were administered. The respondents were assured of their confidentiality of information provided which improved the response rate. Arrangement were made to collect the questionnaire later at pre-agreed time.

### 3.10 Pilot Test

Pilot survey is a small-scale replica and rehearsal of the main study. It assists in determining the suitability and ease of use of the research instruments and the operational aspects of administering the questionnaires. The purpose of a pilot test is to discover possible weaknesses, inadequacies, ambiguities and problems in any aspect of the research process. A pilot-test was conducted at Uasin Gishu County where 22 questionnaires were distributed to department heads in store and logistics department. Data collected from the pilot study were not incorporated in the main study.

#### 3.10.1 Reliability Test

Reliability is a measure of the degree to which a research instruments yields constant results or data after repeated trials (Kothari, 2014). Reliability enables the researcher to estimate error and make the necessary corrections if any. This is because the larger the reliability the smaller the error and conversely, the larger the error, the smaller the reliability. Reliability in this study was tested by pre-testing the questionnaire with a selected sample which were not included in the main study. An internal consistency technique was applied by use of Cronbach’s Alpha. Internal consistency reliability is a measure of reliability used to evaluate the degree to which different test items that probe the same construct produce similar results. Higher values of alpha are more desirable. Kothari (2014) indicated that as a rule of the thumb, a Cronbach's Alpha value of 0.70 or higher was considered reliable.

### 3.10.2 Validity Test

According to Orodho, (2015) validity is the degree to which results obtained from analysis of the data actually represents the phenomenon under investigation. There are four types of validity; Construct validity evaluates whether the questionnaires really represented the thing which researcher is interested in measuring. It's central to establishing the overall validity of a method. To achieve construct validity, the researcher ensured that the objectives indicators and measurements are carefully developed based on relevant existing knowledge. The questionnaire only included relevant questions that measure known indicators of study objectives.

Content validity assesses whether a test is representative of all aspects of the construct.

To produce valid results, the content of a test, survey or measurement method must cover all relevant parts of the subject it aims to measure. If some aspects are missing from the measurement (or if irrelevant aspects are included), the validity is threatened. The content validity of this study was tested by seeking opinions of experts in the field of study especially the supervisors.

Face validity considers how suitable the content of a test seems to be on the surface. It's similar to content validity, but face validity is a more informal and subjective assessment. As face validity is a subjective measure, it's often considered the weakest form of validity. However, it can be useful in the initial stages of developing a method.

Criterion validity evaluates how well a test can predict a concrete outcome, or how well the results of your test approximate the results of another test. To evaluate criterion validity, the researcher calculated the correlation between the results of the measurement and the results of the criterion measurement. If there is a high correlation, this gives a good indication that the test is measuring what it intends to measure.

**3.11 Data Analysis and Presentation**

Data analysis is the process of bringing order, structure and meaning to the mass information collected (Cooper & Schindler, 2013). Data analysis involves reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. Data collected in this study was quantitative in nature. Quantitative data was analysed by use of Statistical Package for Social Sciences (SPSS) version 24. Descriptive and inferential statistics was used in this study.

Descriptive statistics involved the use of percentages, frequencies, measures of central tendencies (mean) and measures of dispersion (standard deviation). Inferential statistic involved the use of correlation and regression analysis. Correlation analysis was used to determine the nature of the relationship between variables at a generally accepted conventional significant level of $P < 0.05$ (Gall and Borg, 2013). A correlation is defined as a number between -1 and +1 that measures the degree of association between two variables. A positive value for the correlation implies a positive association. A negative value for the correlation implies a negative or inverse association. A coefficient of zero means there is no relationship between the two items and that a change in the independent item had no effect in the dependent item.

Multiple regression analysis was employed to analyze the relationship between a single dependent variable and several independent variables (Johnson & Christensen, 2012).

The beta (β) coefficients for each independent variable generated from the model was used to test each of the hypotheses under study.

The multivariate regression model is;

$$\mathbf{Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon}$$

Where:

Y represents organizational performance of textile firms in Kenya.

$\boldsymbol{\beta_0}$ represents constant Term;

$\boldsymbol{\beta_1}$, $\boldsymbol{\beta_2}$, $\boldsymbol{\beta_3}$ and $\boldsymbol{\beta_4}$ represent Beta coefficients;

$\mathbf{X_1}$ represent Environmental Conservation

$\mathbf{X_2}$ represent Reverse Logistics

$\mathbf{X_3}$ represent outsourcing

$\boldsymbol{\varepsilon}$ represent error term

### 3.11.1 Model of Moderation

A moderator is a variable that influences the relationship between the dependent and independent variables (Baron & Kenny, 1986). To look for moderating effects, the researcher utilized hierarchical multiple linear regression. First, the model's independent variables were regressed against organizational performance of textile firms to see if there were any direct effects. Second, organizational performance of textile firms were regressed against independent variables and adding the moderator to the equation. As a result, the interaction term between predictor and moderating variables were calculated by multiplying the two variables that caused an interaction impact at various levels for each individual interaction, as shown in the hierarchical regression models below.

$$Y = \beta_0 + \beta 1X1 + \beta 2\,X2 + \beta 3\,X3 + \varepsilon \ldots\ldots\ldots\ldots.\ldots\ldots.\ldots..\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(2)$$

$$Y = \beta_0 + \beta 1X1 + \beta 2\,X2 + \beta 3\,X3 + M + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..\ldots\ldots..\ldots.(3)$$

$$Y = \beta_0 + \beta 1X1 + \beta 2\,X2 + \beta 3\,X3 + M + \beta 4\,X1 * M + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots(4)$$

$$Y = \beta_0 + \beta 1X1 + \beta 2\,X2 + \beta 3X3 + M + \beta 4X1 * M + \beta 5X2 * M + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(5)$$

$$Y = \beta_0 + \beta 1X1 + \beta 2\,X2 + \beta 3X3 + M + \beta 4X1 * M + \beta 5X2 * M + \beta 6\,X3 * M + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..\ldots..(6)$$

**Where:**

Y represents organizational performance of textile firms in Kenya.

**$\beta_0$** represents constant Term;

**$\beta_1$, $\beta_2$, $\beta_3$** represent Beta coefficients;

**$X_1$** represent Environmental Conservation

**$X_2$** represent Reverse Logistics

**$X_3$** represent outsourcing

**ε** represent error term

M represent Moderator

### 3.11.2 Assumptions of Regression Model

The primary assumptions of multivariate analysis to be tested in this study was; linearity, independence of errors, homoscedasticity, collinearity, and normality. When assumptions are violated accuracy and inferences from the analysis are affected (Antonakis & Dietz, 2011). Statistical software packages allowed researchers to test for each assumption. Consideration of the issues surrounding the assumptions in multiple regressions improved the insights for researchers as they build theories (Jaccard et al., 2010). One of the assumptions of linear regression analysis is that the residuals are normally distributed. This assumption assures that the p-values for the t-tests were valid.

Normality assumption can be tested using Shapiro-Wilk test for normality. The p-value assumes that the distribution is normal. One of the main assumptions for the ordinary least square's regression is the homogeneity of variance of the residuals. If the model is well-fitted, there should be no pattern to the residuals plotted against the fitted values. When there is a perfect linear relationship among the predictors, the estimates for a regression model cannot be uniquely computed. The term collinearity describes two variables are near perfect linear combinations of one another. When more than two variables are involved, it is often called multicollinearity, although the two terms are often used interchangeably.

The primary concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unstable and the standard errors for the coefficients can get wildly inflated. The study can use the variance inflation factor (VIF) option to check for multicollinearity. VIF stands for variance inflation factor. As a rule of thumb, a variable whose VIF values are greater than 10 may merit further investigation. Tolerance, defined as 1/VIF, is used by many researchers to check on the degree of collinearity. A tolerance value lower than 0.1 is comparable to a VIF of 10, this means that the variable could be considered as a linear combination of other independent variables.

This is the assumption of linearity. If this assumption is violated, the linear regression tried to fit a straight line to data that does not follow a straight line. Checking the linear assumption in the case of simple regression is straightforward, since we only have one predictor. All have to do is a scatter plot between the response variable and the predictor to see if nonlinearity is present, such as a curved band or a big wave-shaped curve. A model specification error can occur when one or more relevant variables are omitted from the model or one or more irrelevant variables are included in the model. If relevant variables are omitted from the model, the common variance they share with included variables may be wrongly attributed to those variables, and the error term is inflated.

On the other hand, if irrelevant variables are included in the model, the common variance they share with included variables may be wrongly attributed to them. Model specification errors can substantially affect the estimate of regression coefficients. The statement of this assumption is that the errors associated with one observation are not correlated with the errors of any other observation cover several different situations. Another way in which the assumption of independence can be broken is when data are collected on the same variables over time. This is known as autocorrelation. When you have data that can be considered to be time-series, you should use the option that performs a Durbin-Watson test for correlated residuals. The Durbin-Watson statistic has a range from 0 to 4 with a midpoint of 2.

## 3.12 Ethical Considerations

According to Hunter et al., (2018), ethical issues are present in any research. Ethics pertains to doing well and avoiding harm. Harm can be prevented or reduced through the application of appropriate ethical principles. Although no harm or ethical threats to participants are anticipated, multiple measures were taken to maximize the protection and rights of the participants.

Data collection process started by getting a formal letter from Moi University Graduate School. This allowed the researcher to apply for a research permit from the National Council of Science Technology and innovation (NACOSTI) before going to the field.

The letter together with the consent statement were then presented to the respective textile companies as a means of seeking authority to collect data from the institution.

The study involved the principle of voluntary participation, which required that participants are not coerced into participating in the research. Confidentiality of the information and anonymity of the respondents were assured since participants' names and institutions were not assigned, but codes were used. The information obtained from participants was used only for academic purposes and not any other application. The dignity, privacy, and interest of the participants were respected and protected.

# CHAPTER FOUR

# DATA ANALYSIS, PRESENTATION AND INTERPRETATION

## 4.1 Introduction

This chapter presents the results, findings and discussions. This chapter was organized based on the objectives. It first examines the simple random sampling (stratified sampling), snow samplings and purposive sampling return rates and the characteristics of the respondents and then assesses the moderating effect of competitive advantage on the relationship between supply chain management practices and organizational performance of Textile Firms in Kenya.

## 4.2 Response Rate

The researcher administered 193 respondents' students using simple random sampling (stratified sampling technique). This data collection method was employed to prevent any bias from students' respondents, ensuring that every individual in the population had an equal opportunity to be chosen as a sample, representing the entire population. Out of 216 respondent samples only 193 samples were returned. Table 4.1 indicates the response rate for students was (89.35%). Out of the total number of questionnaires distributed, 23 were not returned back from the respondent, accounting for approximately 10.65% of the total.

**Table 4.1 Response Rate**

| Responses | Frequency | Percentages |
|---|---|---|
| Responded | 193 | 89.35 |
| Not responded | 23 | 10.65 |
| **Total** | **216** | **100.00** |

## 4.3 Pilot Study Results

The research included a preliminary investigation to assess the trustworthiness and effectiveness of the research tool. The findings from this initial study regarding the instrument's internal consistency reliability can be found in Table 4.2.

**Table 4.2 Reliability Test Results**

| Variables | Cronbach's Alpha | N of Items |
|---|---|---|
| Green procurement | .820 | 5 |
| Reverse logistics | .795 | 5 |
| Outsourcing | .711 | 5 |
| Organizational performance | .757 | 4 |
| Competitive advantage | .785 | 5 |

**Source: Field Data (2023)**

As shown in Table 4.2, the Cronbach's Alpha coefficient for green procurement was 0.820. Cronbach's Alpha coefficient for reverse logistics was 0.795. Cronbach's Alpha coefficient for outsourcing was 0.711. Cronbach's Alpha coefficient for organizational performance was 0.757. Cronbach's Alpha coefficient for competitive advantage was 0.785. This implied that Cronbach's Alpha coefficients for all the variables were above 0.7 hence the instruments were reliable. Therefore, all items were included in the research instrument.

## 4.4 Demographic Information

The study evaluated aspects of the respondents included their gender, age category, level of education, and years of professional experience.

### 4.4.1 Gender of the Respondents

The study sought to establish the gender of the respondents. Table 4.3 showed the gender of the respondents.

**Table 4.3 Gender of the Respondents**

| Gender | Frequency | Percent |
|---|---|---|
| Males | 101 | 52.3 |
| Females | 92 | 47.7 |
| **Total** | **193** | **100** |

**Source: Field Data (2023)**

Drawing from the data provided in Table 4.3, it is apparent that the largest portion of participants, precisely 101 (52.3%) individuals, were male, while 92 (47.7%) were female. These results suggest that both genders were equally represented in the study, implying a well-balanced distribution of gender among the participants.

### 4.4.2 Age Bracket of the Respondents

The researcher also sought to determine the age bracket of the respondents. Table 4.4 presents the study results.

**Table 4.4 Age of the Respondents**

| Age Bracket | Frequency | Percentage |
|---|---|---|
| Below 25 | 35 | 18.1 |
| 21 - 30 years | 83 | 43.0 |
| 31 - 40 years | 57 | 29.5 |
| 40 years and above | 18 | 9.3 |
| **Total** | **193** | **100** |

**Source: Field Data (2023)**

The respondents' age bracket in years as summarized in Table 4.4, 35(18.1%) of the research participants were age below 25 years, 83(43.0%) were between the age of 31 – 30 years. Moreover, 57(29.5%) of the respondents were aged between age 31 - 40 years while 18(9.3%) of research participants were over 40 years of age. From Table 4.3, there is a clear indication that majority of the respondent were between age 21-30 years because they understand the characteristics and perspectives of the largest segment of the population under study.

### 4.4.3 Education Level of the Respondents

The researcher also sought to determine the education level of the respondents. Table 4.5 presents the study results.

**Table 4.5 Education Level of the Respondents**

| Education level | Frequency | Percent |
|---|---|---|
| PHD | 14 | 7.3 |
| Masters | 27 | 14.0 |
| Degree | 32 | 16.6 |
| Others | 17 | 8.8 |
| **Total** | **193** | **100** |

**Source: Field Data (2023)**

Table 4.5 showed that 14(7.3%) indicated that they had a PHD level of education, 27 (14.0%) indicated that they had masters level of education, 32(16.6%) had a degree level of education, 103(53.4%) had a diploma level of education and 17(8.8%) had others level of education. This showed that with 53.4% of the participants having a diploma level of education, it suggests that this is the most common educational attainment within the group. This information is essential for understanding the educational distribution of the sample and provides valuable insights for decision-making or further research related to the respondents' educational backgrounds.

### 4.4.4 Year of Operation with the Company

The outcome of the research on experience of research participants was summarized in Table 4.6.

**Table 4.6 Year of Operation with the Company**

| Years of operations | Frequency | Percentage |
|---|---|---|
| Below 5 years | 75 | 38.9 |
| 5 to 10 years | 62 | 32.1 |
| 10 to 15 years | 34 | 17.6 |
| Over 16 years | 22 | 11.4 |
| **Total** | **193** | **100** |

**Source: Field Data (2023)**

Table 4.6 showed that majority 75(38.9%) of the subjects indicated that they had worked in the school for a period of less than 5 years, 62(32.1%) indicated that they had worked for 5 to 10 years, 34(17.6%) had worked for 10 to 15 years and finally 22(11.4%) indicate that they had worked in the school for more than 16 years. Majority of the respondents provides a comprehensive snapshot of the workforce's tenure distribution within the company. Notably, 40.5% of the subjects having less than 5 years of experience suggests a substantial influx of relatively new employees. Concurrently, the data showcases a spectrum of experience levels, ranging from 6 to 15 years (30.4%), 15 to 20 years (17.7%), and more than 20 years (11.4%). This nuanced understanding of the workforce's composition enables informed decision-making regarding staff development, retention strategies, and organizational planning, catering to the diverse needs and expertise levels of these employee groups, ultimately contributing to the company’s overall effectiveness and sustainability.

### 4.5 Descriptive Analysis

In this study, an analysis of descriptive statistics for both the independent variables and the dependent variable were conducted. This analysis encompassed the computation of metrics such as the mean, frequencies, percentages, and standard deviation, as showcased in the ensuing findings.

### 4.5.1 Descriptive Statistics Findings for Green Procurement

The study sought to determine the effect of green procurement practices on organizational performance of textile firms in Nairobi, Kenya. Participants provided their responses using a 5-point Likert scale ranging from 1 to 5, where 1 corresponded to "strongly disagree," 2 to "disagree," 3 to "neutral," 4 to "agree," and 5 to "strongly agree." To analyze the response mean scores, we treated the scale as a continuous spectrum, with scores below 1.5 indicating "strongly disagree," scores between 1.5 and 2.4 indicating "disagree," scores from 2.5 to 3.4 signifying "neutral," scores between 3.5 and 4.5 representing "agree," and scores exceeding 4.5 indicating "strongly agree." We employed a total of five statements to determine the impact of green procurement practices on the organizational performance of textile companies in Nairobi, Kenya. The responses to these statements were collected using the aforementioned 5-point Likert scale, as detailed in Table 4.7.

**Table 4.7 Descriptive Statistics Findings for Green Procurement**

| Statement | | SA | A | N | D | SD | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| 1. The organization work closely with suppliers and other stakeholders to identify sources of pollution and waste. | F | 52 | 75 | 13 | 36 | 17 | 3.56 | 1.30 |
| | % | 26.9 | 38.9 | 6.7 | 18.7 | 8.8 | | |
| 2. The organization implement measures to prevent pollution and waste. | F | 61 | 75 | 9 | 30 | 18 | 3.68 | 1.32 |
| | % | 31.6 | 38.9 | 4.7 | 15.5 | 9.3 | | |
| 3. Organization promotes green procurement related activities. | F | 64 | 82 | 4 | 25 | 18 | 3.77 | 1.29 |
| | % | 33.2 | 42.5 | 2.1 | 13.0 | 9.3 | | |
| 4. The organization adhere to green procurement policy. | F | 60 | 82 | 10 | 27 | 14 | 3.76 | 1.24 |
| | % | 21.1 | 42.5 | 5.2 | 14.0 | 7.3 | | |
| 5. The organization has continuously embarked on recent more environmentally friendly technology | F | 61 | 74 | 12 | 30 | 16 | 3.69 | 1.29 |
| | % | 31.6 | 38.3 | 6.2 | 15.5 | 8.3 | | |

**Source: Field Data (2023)**

According to Table 4.7 findings indicates that 128(65.8%) of the respondents agreed and 53(27.5%) of the respondents disagreed that the organization work closely with suppliers and other stakeholders to identify sources of pollution and waste. Moreover, the study's findings revealed that the respondents agreed in terms of mean and standard deviations the respondents agreed that the organization work closely with suppliers and other stakeholders to identify sources of pollution and waste (mean=3.56 standard deviation=1.30). According to the study done by Skirtun, Sandra, Strietman, van den Burg, De Raedemaecker and Devriese, (2022) reveals that stakeholder consultations and beach litter assessments. Pathways for aquaculture-related litter identified include rough weather, farmer behavior, inadequate access to recycling facilities, low price of consumable plastics and high cost of recycling.

Furthermore 136(70.5%) agreed that the organization implement measures to prevent pollution and waste while 48(24.8%) disagreed that the organization implement measures to prevent pollution and waste. In terms of mean and standard deviations the respondents agreed that the organization implement measures to prevent pollution and waste (mean=3.68, standard deviation=1.32). The study by Simon, Raubenheimer, Urho, Unger, Azoulay, Farrelly and Weiand, (2021) plastics are increasingly found in all environmental media, including terrestrial ecosystems and the atmosphere, as well as human matrices, including lungs and placenta.

Further, 146(75.7%) of the respondents agreed and those who disagreed 43(22.3%) that the organization promotes green procurement related activities. Furthermore, the study's findings revealed that participants agreed (mean=3.77, standard deviation=1.29) that the organization promotes green procurement related activities. These findings are consistent with the study done by Khan, Yu and Farooq, (2023) indicate a positive correlation between green capabilities and purchasing habits; however, green innovation capabilities did not establish a statistically meaningful correlation.

The study further revealed that 142(73.6%) of the respondents agreed that the organization adhere to green procurement policy. However, 41(21.3%) of the respondents disagreed that the organization adhere to green procurement policy. Additionally, the study results on mean and standard deviation revealed that the respondents agreed that the organization adhere to green procurement policy (Mean=3.76, standard deviation=1.24). However, a study by Nguyen, Lobo and Nguyen, (2018) revealed that most factors (i.e. knowledge, attitudes, personal norms, self-identity and perceived barriers) significantly affected consumer purchase of energy efficient appliances, except for subjective social norms and warm glow.

Finally, 135(69.9%) of the responders agreed and 46(23.7%) disagreed that the organization has continuously embarked on recent more environmentally friendly technology. The study results showed in terms of mean and standard deviations that the respondent agreed that the organization has continuously embarked on recent more environmentally friendly technology (mean=3.69, standard deviation=1.29). These findings agreed with Zafar, Qin and Zaidi, (2020) verify that foreign direct investment, educational levels, and the process of urbanization have an impact on environmental quality.

### 4.5.2 Descriptive Statistics Findings for Reverse Logistics

The study sought to determine the effect of reverse logistics on organizational performance of textile firms in Nairobi, Kenya. Participants provided their responses using a 5-point Likert scale ranging from 1 to 5, where 1 corresponded to "strongly disagree," 2 to "disagree," 3 to "neutral," 4 to "agree," and 5 to "strongly agree." To analyze the response mean scores, we treated the scale as a continuous spectrum, with scores below 1.5 indicating "strongly disagree," scores between 1.5 and 2.4 indicating "disagree," scores from 2.5 to 3.4 signifying "neutral," scores between 3.5 and 4.5 representing "agree," and scores exceeding 4.5 indicating "strongly agree." We employed a total of five statements to determine the effects of reverse logistics on the organizational performance of textile companies in Nairobi, Kenya. The responses to these statements were collected using the aforementioned 5-point Likert scale, as detailed in Table 4.8.

**Table 4.8 Descriptive Statistics Findings for Reverse Logistics**

| Statement | | SA | A | N | D | SD | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| 1. The organization has a warranty for its products. | F | 63 | 79 | 13 | 24 | 14 | 3.79 | 1.23 |
| | % | 32.6 | 40.9 | 6.7 | 12.4 | 7.3 | | |
| 2. The organization accepts return of used products and packaging to suppliers for re-use. | F | 62 | 83 | 8 | 30 | 10 | 3.81 | 1.19 |
| | % | 32.1 | 43.0 | 4.1 | 15.5 | 5.2 | | |
| 3. The organization design product for re-use | F | 67 | 90 | 3 | 22 | 11 | 3.93 | 1.15 |
| | % | 34.7 | 46.6 | 1.6 | 11.4 | 5.7 | | |
| 4. The organization return used products and packaging to suppliers for recycling. | F | 51 | 89 | 8 | 24 | 21 | 3.65 | 1.29 |
| | % | 26.4 | 46.1 | 4.1 | 12.4 | 10.9 | | |
| 5. The company creates awareness to the public about recyclable products. | F | 59 | 82 | 13 | 22 | 17 | 3.75 | 1.25 |
| | % | 30.6 | 42.5 | 6.7 | 11.4 | 8.8 | | |

**Source: Field Data (2023)**

Table 4.8 shows that 142(73.5%) of the respondents agreed that the organization has a warranty for its products. However, 38(19.7%) of the respondents disagreed that the organization has a warranty for its products. As per the survey results, the participants agreed in terms of mean and standard deviation that the organization has a warranty for its products (Mean, =3.79, Std. dev=1.23). According to the study done by Idrees, Hynek, Xu, Akbar and Jabeen, (2022) suggest that the sharing and practical use of knowledge have noteworthy and favorable impacts on the creation of novel products. Furthermore, organizational adaptability notably acts as an intermediary factor in the connection between Knowledge Management Capability (KMC) and New Product Development (NPD). The outcomes reveal that the innovation of the business model plays a significant role in adjusting the connection between KMC and organizational adaptability.

Also, 145(75.1%) of the respondents agreed that the organization accept return of used products and packaging to suppliers for re-use. However, 40(20.7%) of the respondents disagreed that the organization accept return of used products and packaging to suppliers for re-use. Analysis on mean and standard deviation revealed the respondents agreed that the organization accept return of used products and packaging to suppliers for re-use (Mean, =3.81, Std. dev=1.19). According to Islam and Huda, (2018) reveals that due to growing environmental regulations, potential recovery of valuable material resources for the secondary market, and sustainable business practices, over the last twenty years, the concept of reverse logistics (RL) has been accepted and widely practiced in manufacturing industries all over the world.

However, 157(81.3%) of the participants agreed that the organization design product for re-use. On contrary, 33(16.1%) of the participants disagreed that the organization design product for re-use. Further, the study results also showed, in terms of mean and standard deviation that the respondents agreed that the organization design product for re-use (Mean=3.93, standard deviation=1.15). The study by McMahon, Johnson and Fitzpatrick, (2019) a number of barriers to preparation for re-use have been previously identified, including those relating to legislation, low access to quality equipment, resistance from producers, and lack of enforceable requirements such as targets.

Similarly, it was noted that 140(72.5%) of the participants agreed that the organization return used products and packaging to suppliers for recycling. Conversely to that, it was noted that 45(23.3%) of the respondents disagreed that the organization return used products and packaging to suppliers for recycling. Further, in terms of mean and standard deviation the respondents agreed that the organization return used products and packaging to suppliers for recycling (Mean=3.65, standard deviation=1.29). According to Guarnieri, Cerqueira-Streit and Batista, (2020) show that the concept of circular economy, although not formally expressed in the Brazilian law and sectoral agreement, guides the actions developed by the signatories of the agreement.

Lastly, 141(73.1%) of the response agreed that the company creates awareness to the public about recyclable products while 39(20.2%) disagree that the company creates awareness to the public about recyclable products. Similarly, the standard deviation and mean rating reveals that the respondents agreed that the company creates awareness to the public about recyclable products (mean=3.75, standard deviation=1.25). These findings agreed with Burgess, Holmes, Sharmina and Shaver, (2021) explicitly confirm that to realize a circular economy of plastic, standardization is crucial across the whole recycling sphere

### 4.5.3 Descriptive Statistics Findings for Outsourcing

The study sought to determine the effect of outsourcing on organizational performance of textile firms in Nairobi, Kenya. Participants provided their responses using a 5-point Likert scale ranging from 1 to 5, where 1 corresponded to "strongly disagree," 2 to "disagree," 3 to "neutral," 4 to "agree," and 5 to "strongly agree." To analyze the response mean scores, we treated the scale as a continuous spectrum, with scores below 1.5 indicating "strongly disagree," scores between 1.5 and 2.4 indicating "disagree," scores from 2.5 to 3.4 signifying "neutral," scores between 3.5 and 4.5 representing "agree," and scores exceeding 4.5 indicating "strongly agree." We employed a total of five statements to determine the effects of outsourcing on the organizational performance of textile companies in Nairobi, Kenya. The responses to these statements were collected using the aforementioned 5-point Likert scale, as detailed in Table 4.9.

**Table 4.9 Descriptive Statistics Findings for Outsourcing**

| Statement | | SA | A | N | D | SD | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| 1. There is improvement on service delivery | F | 61 | 73 | 11 | 29 | 19 | 3.66 | 1.33 |
| | % | 31.6 | 37.8 | 5.7 | 15.0 | 9.8 | | |
| 2. There is improvement in decision making | F | 54 | 92 | 9 | 19 | 19 | 3.74 | 1.24 |
| | % | 28.0 | 47.7 | 4.7 | 9.8 | 9.8 | | |
| 3. There is cost cutting due to outsourced services | F | 60 | 92 | 12 | 15 | 14 | 3.88 | 1.15 |
| | % | 31.1 | 47.7 | 6.3 | 7.8 | 7.3 | | |
| 4. Outsourced services are excellently performed | F | 63 | 87 | 11 | 22 | 10 | 3.89 | 1.14 |
| | % | 32.6 | 45.1 | 5.7 | 11.4 | 5.2 | | |
| 5. The supplier and customer meets regularly to discuss issues that relate to outsources services | F | 71 | 78 | 13 | 17 | 14 | 3.91 | 1.20 |
| | % | 36.8 | 40.4 | 6.7 | 8.8 | 7.3 | | |

**Source: Field Data (2023)**

The study results in Table 4.9 showed that, 134(69.4%) of the respondents, agreed that there is improvement on service delivery. On the contrary, 48(24.8%) of the respondents disagreed that there is improvement on service delivery. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed with the statement that there is improvement on service delivery (Mean=3.66, standard deviation=1.33). The study findings agreed with Fida, Ahmed, Al-Balushi and Singh, (2020) revealed that the respondents showed on average an “Agree” response in the five areas, namely, tangibles, responsiveness, reliability, assurance, and empathy.

The correlation results depicted a significant relationship between the three variables: service quality, customer satisfaction, and customer loyalty.

However, 146(75.7%) of the respondents agreed that there is improvement in decision making. While 38(19.6%) of the respondents disagreed with the statement that there is improvement in decision making. The standard deviation and mean rating, the respondents agreed that there is improvement in decision making (mean=3.74, standard deviation=1.24). The study by Belur, Tompson, Thornton and Simon, (2021) indicated that coding behavior changes both between and within individuals over time, emphasizing the importance of conducting regular and systematic IRR and intrarater reliability tests, especially when multiple coders are involved, to ensure consistency and clarity at the screening and coding stages.

Furthermore, 152(78.8%) of the respondents agreed that there is cost cutting due to outsourced services. While 29(15.1%) of the respondent disagreed that there is cost cutting due to outsourced services. There standard deviations and mean the respondents agreed that there is cost cutting due to outsourced services (mean=3.88, standard deviation =1.15). These findings are consistent with the study done by Happonen and Siljander, (2020) reports the importance of trust in tangible numbers to improve gain sharing models, and the elements that need trust to function, in the context of logistics outsourcing.

On top of the findings, other findings indicated 150(77.7%) of the participants agreed that outsourced services are excellently performed. However, 32(16.6%) of the respondents disagreed that outsourced services are excellently performed. Further, the study findings also indicated, in terms of mean and standard deviation the respondents agreed that outsourced services are excellently performed (Mean=3.89, standard deviation=1.14). According to Shenbagaraj, Thomas-Gibson, Stebbing, Broughton, Dron, Johnston and Green, (2019) reveals that number of services reported difficulty in meeting national waiting time targets with a national average of only 55% of units meeting urgent cancer wait targets. Many services were insourcing or outsourcing patients to external providers to improve waiting times. Services are striving hard to increase capacity by backfilling lists and working weekends.

Finally, 149(77.2%) of the participants agreed that the supplier and customer meets regularly to discuss issues that relate to outsources services. On the contrary, 31(15.1%) of the respondents disagreed that the supplier and customer meets regularly to discuss issues that relate to outsources services. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that the supplier and customer meets regularly to discuss issues that relate to outsources services. (Mean=3.91, standard deviation=1.20). The study findings concurred with Broekhuis and Scholten, (2018) behavioral standards established in a social contract are important prerequisites for the establishment and subsequent management of a formal contract. This means that the parties involved in a business relationship need to agree on the expected behaviors before they sign a formal contract. This will help to ensure that everyone is on the same page and that the contract is more likely to be successful.

### 4.5.4 Descriptive Statistics Findings for Competitive Advantage

The study seeks to determine the effect of competitive advantage on organizational performance of textile firms in Nairobi, Kenya. Participants provided their responses using a 5-point Likert scale ranging from 1 to 5, where 1 corresponded to "strongly disagree," 2 to "disagree," 3 to "neutral," 4 to "agree," and 5 to "strongly agree." To analyze the response mean scores, we treated the scale as a continuous spectrum, with scores below 1.5 indicating "strongly disagree," scores between 1.5 and 2.4 indicating "disagree," scores from 2.5 to 3.4 signifying "neutral," scores between 3.5 and 4.5 representing "agree," and scores exceeding 4.5 indicating "strongly agree." We employed a total of five statements to determine the effects of competitive advantage on the Organization Performanceof textile companies in Nairobi, Kenya. The responses to these statements were collected using the aforementioned 5-point Likert scale, as detailed in Table 4.10.

**Table 4.10 Descriptive Statistics Findings for Competitive Advantage**

| Statement | | SA | A | N | D | SD | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| 1. Company is able to develop and implement new ideas, products, or processes to gain an advantage over competitors | F | 49 | 78 | 15 | 29 | 22 | 3.53 | 1.32 |
| | % | 25.4 | 40.4 | 7.8 | 15.0 | 11.4 | | |
| 2. The company is excellence in the products offered | F | 60 | 79 | 15 | 28 | 11 | 3.77 | 1.20 |
| | % | 31.1 | 40.9 | 7.8 | 14.5 | 5.7 | | |
| 3. There is affordability of a company's products | F | 64 | 89 | 10 | 18 | 12 | 3.91 | 1.15 |
| | % | 33.2 | 46.1 | 5.2 | 9.3 | 6.2 | | |
| 4. The company is reliable in delivering its products | F | 63 | 74 | 12 | 31 | 13 | 3.74 | 1.26 |
| | % | 32.6 | 38.3 | 6.2 | 16.1 | 6.7 | | |
| 5. The speed at which a company take the products to market is high | F | 56 | 99 | 8 | 16 | 14 | 3.86 | 1.14 |
| | % | 29.0 | 51.3 | 4.1 | 8.3 | 7.3 | | |

**Source: Field Data (2023)**

According to the study in Table 4.10, the study findings indicated that 127(65.8%) of the respondents agreed and 51(26.4%) disagreed that the company is able to develop and implement new ideas, products, or processes to gain an advantage over competitors.

Further, the study results also showed, in terms of mean and standard deviation, the respondents agreed that the company is able to develop and implement new ideas, products, or processes to gain an advantage over competitors (Mean=3.53, standard deviation=1.32). The study findings concurred with Kuncoro and Suriani, (2018) show that the effect of Product innovation (PI) on sustainable competitive advantage (SCA) is positive significant, the effect of Product innovation (PI) on Market Driving (MD) is positive significant. The effect of Market driving (MD) on sustainable competitive advantage (SCA) is positive significant.

The study further revealed that 139(72.0%) of the participants agreed that the company is excellence in the products offered. On the contrary, 39(20.2%) of the respondents disagreed that the company is excellence in the products offered. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that the company is excellence in the products offered (Mean=3.77, standard deviation=1.20). According to Wirtz and Zeithaml, (2018) demonstrating the attainment of Customer Experience and Service Excellence (CESE) can be realized through three fundamental methodologies. Initially, adopting a dual culture strategy facilitates the provision of a comprehensive array of top-tier services at a reduced cost. This is primarily steered by the dexterity of leadership and adaptability within the prevailing context. Subsequently, employing an operations management approach serves to diminish process variability, consequently enabling an enhanced utilization of systems and technology to accomplish CESE. Lastly, implementing a focused service factory strategy proves instrumental in achieving CESE by means of operating as a highly specialized entity, typically delivering a singular type of service to a tightly targeted customer segment. The utilization of these three strategies spans a spectrum from a "pure" approach, such as predominantly pursuing a dual culture strategy, to combinations of the latter two strategies coupled with the dual culture strategy. For instance, a focused service factory strategy may be amalgamated with the dual culture strategy to enhance effectiveness

However, the study showed that 153(79.3%) participants agreed that there is affordability of a company's products. Contrary to those findings, 30(15.5%) respondents disagreed that the there is an affordability of a company's products. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that there is an affordability of a company's products (Mean=3.91, standard deviation=1.15). According to Amann, Kihlander and Magnusson, (2023) reveals that some characteristic differences in market factors between those sectors and companies having problems with intergenerational escalating costs and customer affordability, as compared to other sectors and companies. It is suggested that dependent on market characteristics, it might be necessary to actively manage affordability when CoPS are developed.

Additionally, 137(70.9%) participants agreed that the company is reliable in delivering its products. Contrary to those findings, 44(22.8%) respondents disagreed that the company is reliable in delivering its products. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that the company is reliable in delivering its products (Mean=3.74, standard deviation=1.26). Bressanelli, Adrodegari, Perona and Saccani, (2018) companies may improve marketing activities by elaborating the information gathered from the installed base (through IoT) regarding how customers are using products.

Finally, 155(80.3%) of the participants agreed that the speed at which a company take the products to market is high. On the contrary, 30(15.6%) of the respondents disagreed that the speed at which a company take the products to market is high. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that the speed at which a company take the products to market is high (Mean=3.86, standard deviation=1.14). The study findings concurred with Shan, Song and Ju, (2016) finds that faster innovation speed leads to superior performance, the empirical evidence challenge traditional views. Innovativeness increases, not decreases, innovation speed. Risk-taking reduces, not increases, innovation speed. Finally, proactiveness has inverted U-shaped effects on innovation speed.

### 4.5.5 Descriptive Statistics Findings for Organizational Performance

The study sought to determine the organizational performance of textile firms in Nairobi, Kenya. Participants provided their responses using a 5-point Likert scale ranging from 1 to 5, where 1 corresponded to "strongly disagree," 2 to "disagree," 3 to "neutral," 4 to "agree," and 5 to "strongly agree." To analyze the response mean scores, we treated the scale as a continuous spectrum, with scores below 1.5 indicating "strongly disagree," scores between 1.5 and 2.4 indicating "disagree," scores from 2.5 to 3.4 signifying "neutral," scores between 3.5 and 4.5 representing "agree," and scores exceeding 4.5 indicating "strongly agree." We employed a total of five statements to determine the organizational performance of textile companies in Nairobi, Kenya. The responses to these statements were collected using the aforementioned 5-point Likert scale, as detailed in Table 4.11.

**Table 4.11 Descriptive Statistics Findings for Organizational Performance**

| Statement | | SA | A | N | D | SD | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| 1. There is market growth in the organization | F | 60 | 86 | 8 | 22 | 17 | 3.78 | 1.25 |
| | % | 31.1 | 44.6 | 4.1 | 11.4 | 8.8 | | |
| 2. The market share has grown for the organization | F | 47 | 86 | 10 | 28 | 22 | 3.56 | 1.31 |
| | % | 24.4 | 44.6 | 5.2 | 14.5 | 11.4 | | |
| 3. There is customer satisfaction | F | 52 | 92 | 9 | 24 | 16 | 3.73 | 1.22 |
| | % | 26.9 | 47.7 | 4.7 | 12.4 | 8.3 | | |
| 4. There is a good customer relationship in the organization | F | 51 | 85 | 12 | 26 | 19 | 3.64 | 1.28 |
| | % | 26.4 | 44.0 | 6.2 | 13.5 | 9.8 | | |
| 5. There is efficiency of operations in the organization | F | 48 | 91 | 7 | 30 | 17 | 3.64 | 1.26 |
| | % | 24.9 | 47.2 | 3.6 | 15.5 | 8.8 | | |

**Source: Field Data (2023)**

According to the study in Table 4.11, the study findings indicated that 146(75.7%) of the respondents agreed and 39(20.2%) disagreed that there is market growth in the organization. Further, the study results also showed, in terms of mean and standard deviation, the respondents agreed that there is market growth in the organization (Mean=3.78, standard deviation=1.25). The study findings concurred with Baldwin, (2016) reveals that during the last 15 years, most World Trade Organization (WTO) members have massively lowered barriers to trade, investment, and services bilaterally, regionally, and unilaterally indeed, everywhere except through the WTO.

The study further revealed that 133(69.0%) of the participants agreed that the market share has grown for the organization. On the contrary, 51(25.9%) of the respondents disagreed that the market share has grown for the organization. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that the market share has grown for the organization. (Mean=3.56, standard deviation=1.31). The study findings concurred with Agwu,(2018) reveals that competitive advantage and business strategies were found to contribute significantly to increase in their number of customers and market.

However, the study showed that 144(74.6%) participants agreed that there is customer satisfaction. Contrary to those findings, 40(20.7%) respondents disagreed that there is customer satisfaction. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that there is customer satisfaction. (Mean=3.73, standard deviation=1.22). According to Badshah, Ghani, Shamshirband and Aceto and Pescapè, (2020) results confirm that the proposed framework is adequate in revenue generation and customers' satisfaction. Customers and providers monitor the business with respect to agreed terms and conditions.

On top of the findings, other findings indicated 136(60.4%) of the participants agreed that there is a good customer relationship in the organization. However, 45(23.3%) of the respondents disagreed that there is a good customer relationship in the organization. Further, the study findings also indicated, in terms of mean and standard deviation the respondents agreed that there is a good customer relationship in the organization (Mean=3.64, standard deviation=1.28). According to Kamalaldin, Linde, Sjödin, Parida, (2020) results provide evidence for four relational components – complementary digitalization capabilities, relation-specific digital assets, digitally enabled knowledge-sharing routines, and partnership governance – that enable providers and customers to profit from digital servitisation. A key contribution is the development of a relational transformation framework for digital servitisation that provides an overview of how the four relational components evolve as the relationship progresses.

Finally, 139(72.1%) participants agreed that there is efficiency of operations in the organization. Contrary to those findings, 47(24.3%) respondents disagreed that there is efficiency of operations in the organization. Further, the study results also showed, in terms of mean and standard deviation, that the respondents agreed that there is efficiency of operations in the organization (Mean=3.64, standard deviation=1.25). These findings concur with Anwar and Abdullah, (2021) reveals that decentralization is positively associated with organizational performance.

### 4.6 Multiple Regression Assumptions Test

Multiple regression assumptions were run prior to conducting a regression model. The assumptions of regression run were; normality and linearity, multicollinearity and homoscedasticity.

#### 4.6.1 Normality Assumptions Test

The study used Kolmogorov-Smirnov test (K-S) one sample test while testing the assumption of the normality of the population distribution. If Kolmogorov-Smirnov values is greater than 0.05, the data is normally distribution (Tabachnic, 2001). Normality assumptions test are presented in in Table 4.12.

**Table 4.12 Normality Assumptions Test**

| **Variable** | **Kolmogorov- Smirnov** | **Sig** |
|---|---|---|
| Green procurement | .259 | .082 |
| Reverse logistics | .360 | .327 |
| Outsourcing | .152 | .173 |
| Competitive advantage | .177 | .149 |

**Source: Field Data (2023)**

Normality assumption test results in Table 4.12 established that the data was normally distributed since the significance values for Kolmogorov-Smirnov were greater than 0.05. The study findings indicated that green procurement had Kolmogorov-Smirnov significance value of $p=.360>0.05$. Reverse logistics had Kolmogorov-Smirnov significance value of $p=.360>0.05$. Outsourcing had Kolmogorov-Smirnov significance value of $p=.152>0.05$. Competitive advantage had Kolmogorov-Smirnov significance value of $p=.177>0.05$. Since the p-values were greater than the significance level (0.05), this implies that the data were normally distributed.

### 4.6.2 Test of Linearity

Correlation analysis was used in testing of linearity of the data. If there is a significant correlation between independent variables and dependent variable it implies that there is a linear relationship between the variables. If the correlation coefficient is significantly not different from zero it implies that there is no significant linear relationship between independent variables and dependent variable. The test for linearity results is presented in Table 4.13.

**Table 4.13 Linearity Test**

| Variables | Performance | Sig |
|---|---|---|
| Green procurement | .649** | .000 |
| Reverse logistics | .642** | .000 |
| Outsourcing | .681** | .000 |
| Competitive advantage | .610** | .000 |

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

**Source: Field Data (2023)**

Results presented in Table 4.13 revealed that green procurement had a correlation coefficient of 0.649 and significance value of $p=.000<0.01$. Reverse logistics had a correlation coefficient of 0.642 and significance value of $p=.000<0.01$. Outsourcing had a correlation coefficient of 0.681 and significance value of p=.000<0.01. Competitive advantage had a correlation coefficient of 0.610 and significance value of p=.000<0.01. These implied that the correlation coefficient values for the four study variables were different from zero indicating that the linearity assumption was made. This gave an implication that the data used were linear.

### 4.6.3 Multicollinearity Test

In order to diagnose multicollinearity assumptions, the study used variance inflation factors and tolerance. Multicollinearity Test results are presented in Table 4.14.

**Table 4.14 Multicollinearity Diagnostics**

| Variables | **Tolerance** | **VIF** |
|---|---|---|
| Green procurement | .507 | 1.973 |
| Reverse logistics | .570 | 1.753 |
| Outsourcing | .591 | 1.764 |
| Competitive advantage | .562 | 1.779 |

**Source: Field Data (2023)**

As shown in Table 4.14 the study revealed that green procurement had tolerance value of 0.507 and variance inflation factor value of 1.973. Reverse logistics had tolerance value of 0.570 and variance inflation factor value of 1.753. Outsourcing had tolerance value of 0.591 and variance inflation factor value of 1.764. Competitive advantage had tolerance value of 0.562 and variance inflation factor value of 1.779. This implied that all the VIF values were below the threshold value of 10 and tolerance value were above threshold value of 0.1 indicating that multicollinearity was not an issue in the present study.

### 4.6.4 Homoscedasticity Assumption

Levene's test of equality of error variances was used to homoscedasticity assumption. The assumption test results are presented in Table 4.15.

**Table 4.15 Homoscedasticity Assumption Test**

| Variables | F | df1 | df2 | Sig. |
|---|---|---|---|---|
| Green procurements | 2.482 | 26 | 166 | .282 |
| Reverse logistics | 5.086 | 28 | 164 | .103 |
| Outsourcing | 1.778 | 28 | 164 | .144 |
| Competitive advantage | 1.024 | 20 | 172 | .437 |

**Source: Field Data (2023)**

The study results in Table 4.15 indicated that the p-value in Levene's test for green procurement was .282, for reverse logistic was .103, outsourcing was .144 and competitive advantage was .437 which was above 0.05. Thus, the homoscedasticity assumption was made showing that data used had no heteroscedasticity.

## 4.7 Inferential Analysis

Inferential analysis used in this section was correlation and multiple regression models. Correlation and multiple regression analysis showed the relationship between independent variables and the dependent variable.

### 4.7.1 Correlation Analysis

Correlation analysis was done to achieve the direction and strength of the correlation between the study variables. The findings are presented in Table 4.16.

**Table 4.16 Correlation Analysis**

| | Organization performance | Green procurements | Reverse logistics | Outsourcing | Competitive advantage |
|---|---|---|---|---|---|
| Organizational performance | 1 | | | | |
| Green procurements | .649** | 1 | | | |
| Reverse logistics | .642** | .534** | 1 | | |
| Outsourcing | .681** | .633** | .596** | 1 | |
| Competitive advantage | .610** | .588** | .536** | .561** | 1 |

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

The Table 4.16 showed that green procurements was strongly positively and statistically significant correlated to organizational performance ($r=0.649$, $p<0.01$). Furthermore, the study findings revealed that reverse logistics was positive and strongly correlated with organizational performance ($r=0.642$, $p<0.01$). Outsourcing was positive and strongly correlated with organizational performance ($r=0.681$, $p<0.01$). Competitive advantage was positive and strongly correlated with organizational performance ($r=0.610$, $p<0.01$).

This implied that all the study variables were positively correlated to organizational performance. Green procurements contribute 64.9 % to increase in organizational performance. Reverse logistics contributes 64.2% to increase in organizational performance. Outsourcing contributes 68.1% to increase in organizational performance. Competitive advantage contributes 61.0% to increase in organizational performance. 0 and 1.00 are both valid values for the correlation coefficient. A number of -1.00 indicates a perfect negative correlation, whereas a value of +1.00 indicates a perfect positive correlation. Therefore, if the value is 0.00, there is no association between the two variables (Orodho, 2003).

### 4.7.2 Regression Analysis Results

Multiple regression analysis was utilized to look at how each variable in the study related to the others. Tables summarizing the findings are provided below.

### 4.7.3 Model Summary

The correlation coefficient (R) and the coefficient of determination ($R^2$) illustrated the extent to which the independent variable explained the variance in the dependent variable, while the coefficient of determination ($R^2$) demonstrated the strength of the relationship between the dependent and independent variables. Table 4.17 presented regression model summary findings.

**Table 4.17 Regression Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .772[a] | .596 | .590 | .60063 |

Table 4.17 showed that the R value is 0.772, the R square is 0.596, and the adjusted R square is 0.590. In addition, the results demonstrated that green procurement, reverse logistics, outsourcing and competitive advantage account for 59.0 percent of the variation in organizational performance.

### 4.7.4 Model Fitness

Table 4.18 displays the findings of an analysis of variance performed to assess the model fitness.

**Table 4.18 Results of Model Fitness**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 100.603 | 3 | 33.534 | 92.956 | .000[b] |
| Residual | 68.183 | 189 | .361 | | |
| **Total** | **168.786** | **192** | | | |

**Source: Field Data (2023)**

The study findings revealed that there was a statistical significance between the independent variables and the dependent variable ($F=92.956$; $p = 0.000< 0.05$), as shown in Table 4.18. Since the multiple regression models fit the data well, this means that it was chosen. Green procurement, reverse logistics, outsourcing and competitive advantage all play a role in organizational performance.

### 4.7.5 Regression Coefficients

The study primary objective was to determine the study variables respective coefficients. The study findings are presented in Table 4.19.

**Table 4.19 Regression Analysis Coefficient**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | .488 | .199 | | 2.447 | .015 |
| Green procurement | .282 | .061 | .286 | 4.627 | .000 |
| Reverse logistics | .287 | .058 | .296 | 4.979 | .000 |
| Outsourcing | .331 | .066 | .324 | 4.986 | .000 |

**Source: Field Data (2023)**

The resultant equation becomes:

$$\mathbf{Y=0.488+0.282X_1+0.287X_2+0.331X_3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots Equation\ 4.1}$$

Where;

**Y** represents organization performance which is the independent variable,

**$X_1$** Green procurement

**$X_2$** Reverse logistics

**$X_3$** Outsourcing

Table 4.19 presents the regression coefficient results, which revealed a positive and statistically significant relationship between green procurement and organizational performance ($\beta_1$=.282, p=.001). The study findings revealed there was a statistically significant effect of reverse logistics on organization performance ($\beta_2$=.287, p=.000). The study findings further revealed that outsourcing has a positive significant effect on organizational performance ($\beta_3$=.331, p=.000). Thus, the total regression results indicate a positive and significant influence of green procurement, reverse logistics and outsourcing on organization performance.

### 4.8 Hierarchical Moderated Regression Analysis

Hierarchical moderated regression analysis was conducted for each independent variable to identify the unique moderating influence of financial capital access on organizational performance.

#### 4.8.1 Model Summary

Model summary showed the variations in $R^2$ from model 1 to model 5 as presented in Table 4.20.

**Table 4.20 Multiple Regression Model Summary Results**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .772[a] | .596 | .590 | .60063 | .596 | 92.956 | 3 | 189 | .000 |
| 2 | .784[b] | .614 | .606 | .58834 | .018 | 8.982 | 1 | 188 | .003 |
| 3 | .800[c] | .639 | .630 | .57048 | .025 | 12.952 | 1 | 187 | .000 |
| 4 | .812[d] | .659 | .648 | .55638 | .019 | 10.599 | 1 | 186 | .001 |
| 5 | .819[e] | .671 | .659 | .54750 | .013 | 7.081 | 1 | 185 | .008 |

The values of $R^2$ were used to show the proportion of variation in the dependent variable explained by the model in Table 4.20. The $R^2$ value was statistically significant at $p<0.001$ and indicating that the explanatory power of the independent variables was 0.596. This suggests that 59.6% of the variation in organizational performance was explained by the three independent variables (green procurement, reverse logistic and outsourcing). Further, Table 4.20 gave the findings of the $R^2$ change. The $R^2$ change from model 1 to model 2 was 0.018 which changed from 0.596 to 0.614 and statistically significant ($p<0.05$). The results showed that by including competitive advantage in the model, the number of observable variables could be increased by 1.8%, hence enhancing the model's predictive power in predicting organizational performance.

The $R^2$ change from model 2 to model 3 was 0. 025 which changed from 0.614 to 0.639 and statistically significant ($p<0.05$). As a result, statistically financial capital access moderated effect of green procurement practices on organizational performance. The $R^2$ change from model 3 to model 4 was 0. 019 which changed from 0.639 to 0.659 and statistically significant ($p<0.05$). This implied that competitive advantage moderated the effect of green procurement and reverse logistic on organizational performance by 1.9%.

The $R^2$ change from model 4 to model 5 was 0. 013 which changed from 0.659 to 0.671 and statistically significant ($p<0.001$). As a result, competitive advantage moderates the effect of green procurement, reverse logistic and outsourcing on organizational performances by 1.3%.

### 4.8.2 Multiple Regression Model Fitness

The regression model's ability to predict the independent variable was tested using an ANOVA for statistical significance as shown in Table 4.21.

**Table 4.21 Test Results for Goodness of Fit**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 100.603 | 3 | 33.534 | 92.956 | .000[b] |
| | Residual | 68.183 | 189 | .361 | | |
| | Total | 168.786 | 192 | | | |
| 2 | Regression | 103.712 | 4 | 25.928 | 74.907 | .000[c] |
| | Residual | 65.074 | 188 | .346 | | |
| | Total | 168.786 | 192 | | | |
| 3 | Regression | 107.927 | 5 | 21.585 | 66.325 | .000[d] |
| | Residual | 60.859 | 187 | .325 | | |
| | Total | 168.786 | 192 | | | |
| 4 | Regression | 111.208 | 6 | 18.535 | 59.875 | .000[e] |
| | Residual | 57.578 | 186 | .310 | | |
| | Total | 168.786 | 192 | | | |
| 5 | Regression | 113.331 | 7 | 16.190 | 54.011 | .000[f] |
| | Residual | 55.455 | 185 | .300 | | |
| | Total | 168.786 | 192 | | | |

Table 4.21 provided the F test revealing the significance of the fitted regression model. An F statistic in model 1 produced the value of 92.956 implying that the independent variables were predicators of the depend variables able ($F=92.956$; $p< 0.001$). As a result of the good fit, green procurement, reverse logistics, outsourcing and competitive advantage had an effect on organizational performance when the regression was fitted.

F-value of model 2 was 74.907. Model 2 F-test got an F-value of 74.907, which corresponds to an $R^2$ of 0.614 and an $R^2$ change of 0.018. This meant that even after moderation, there was still a good fit of the model (F=74.907; p< 0.05). As a result, statistically competitive advantage moderates the effect of green procurement practices on organizational performance F-test for model 3 has an F-value of 66.325 which is associated with an $R^2$ of. 0.639 and $R^2$ change of 0.025. This meant that after moderation by competitive advantage it showed a good predictor of organizational performance and the total model was statistically significant (P-value 0.05) and good predictors of organizational performance.

Model 4 F-test got an F-value of 59.875, which corresponds to an $R^2$ of 0.659 and an $R^2$ change of 0.019. This meant that when competitive advantage was moderated on green procurement and reverse logistic separately revealed good predictors of organizational performance and that the overall model was significant as it was less than p- value 0.05 (P< 0.05). F-test for model 5 had an F-value of 54.011 which is associated with an $R^2$ of 0.671 and $R^2$ change of 0.013. This meant that moderation of green procurement, reverse logistics and outsourcing by competitive advantage showed a good predictor of organizational performance and the total model was statistically significant (P-value 0.05) and good predictors of organizational performance were found.

### 4.8.3 Multiple Regression Coefficients

The regression of coefficients results is presented in Table 4.22.

**Table 4.22 Test Results for Regression Analysis Coefficients with Moderation**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | **(Constant)** | .488 | .199 | | 2.447 | .015 |
| | Green procurement | .282 | .061 | .286 | 4.627 | .000 |
| | Reverse logistics | .287 | .058 | .296 | 4.979 | .000 |
| | Outsourcing | .331 | .066 | .324 | 4.986 | .000 |
| 2 | **(Constant)** | -.060 | .267 | | -.223 | .824 |
| | Green procurement | .223 | .063 | .226 | 3.555 | .000 |
| | Reverse logistics | .246 | .058 | .254 | 4.238 | .000 |
| | Outsourcing | .291 | .066 | .285 | 4.391 | .000 |
| | Competitive advantage | .284 | .095 | .181 | 2.997 | .003 |
| 3 | **(Constant)** | -1.323 | .437 | | -3.031 | .003 |
| | Green procurement | .593 | .119 | .600 | 4.966 | .000 |
| | Reverse logistics | .238 | .056 | .246 | 4.227 | .000 |
| | Outsourcing | .321 | .065 | .314 | 4.951 | .000 |
| | Competitive advantage | .668 | .141 | .426 | 4.744 | .000 |
| | Z Green procurement | -.115 | .032 | -.591 | -3.599 | .000 |
| 4 | **(Constant)** | -3.051 | .680 | | -4.484 | .000 |
| | Green procurement | .498 | .120 | .504 | 4.150 | .000 |
| | Reverse logistics | .889 | .207 | .919 | 4.287 | .000 |
| | Outsourcing | .285 | .064 | .279 | 4.440 | .000 |
| | Competitive advantage | 1.197 | .213 | .763 | 5.627 | .000 |
| | Z Green procurement | -.084 | .033 | -.430 | -2.563 | .011 |
| | Z Reverse logistics | -.185 | .057 | -.948 | -3.256 | .001 |
| 5 | **(Constant)** | -3.691 | .711 | | -5.188 | .000 |
| | Green procurement | .452 | .119 | .457 | 3.784 | .000 |
| | Reverse logistics | .722 | .214 | .746 | 3.380 | .001 |
| | Outsourcing | .700 | .168 | .685 | 4.161 | .000 |
| | Competitive advantage | 1.396 | .222 | .889 | 6.279 | .000 |
| | Z Green procurement | -.069 | .033 | -.355 | -2.121 | .035 |
| | Z Reverse logistics | -.137 | .059 | -.701 | -2.327 | .021 |
| | Z Outsourcing | -.122 | .046 | -.606 | -2.661 | .008 |

a. Dependent Variable: Y

**Source: Field Data (2023)**

Table 4.22 showed that green procurement had a positive and significant effect on organizational performance ($\beta_1$=0.282, $p<0.05$). Reverse logistics had a positive and significant effect on organizational performance ($\beta_2$=0.287, $p<0.05$). Outsourcing had a positive and significant effect on organizational performance ($\beta_3$=0.331, $p<0.05$).

A regression analysis was used in model two to test if competitive advantage has a moderating effect on the relationship between green procurement, reverse logistics, outsourcing and organizational performance. The p-value which was less than 0.05, indicated that the coefficient of competitive advantage was significant. Competitive advantage had a moderating effect on the relationship between green procurement, reverse logistic, outsourcing and organizational performance, because the coefficient was significant.

In model three a regression analysis revealed that competitive advantage had a negative moderating effect on the relationship between green procurement and organizational performance ($p=-0.115<0.05$). In model four a regression analysis revealed that financial capital access had a positive and significant moderating effect on the relationship between green procurement and organizational performance ($p<0.05$).

Regression analysis in model four showed that competitive advantage had a positive and significant moderating effect on the relationship between green procurement and organizational performance ($\beta=-0.084$; $p<0.05$). Competitive advantage has a negative and significant moderating effect on the relationship between reverse logistic and organizational performance ($\beta=-0.185$; $p<0.05$).

In model five a regression analysis revealed that competitive advantage had a negative and significant moderating effect on the relationship between green procurement and organizational performance ($\beta=-0.069$; $p<0.05$). The competitive advantage had a negative and significant moderating effect on the relationship between reverse logistics and organizational performance ($\beta=-0.137$; $p<0.05$). Competitive advantage had a negative and significant moderating effect on the relationship between outsourcing and organizational performance ($\beta=-0.122$; $p<0.05$).

The optimal model was;

$$Y= -3.691+0.452X_1-0.722X_2 + 0.700X_3 +1.396Z–0.069Z*X_1-0. 137Z*X_2-0. 122Z*X_3.$$

### 4.9 Hypotheses Test Results

The research hypotheses were assessed using the significance level of the coefficients from the regression model derived in Table 4.23. The goal of the study was to see if the hypothesis could be tested without rejecting or rejecting the relationship between the independent and dependent variables. The following research hypotheses were tested in the study:

#### 4.9.1 Hypothesis Testing of the Effect of green procurement practices on the Organizational Performance

Hypothesis $H_{01}$ stated that green procurement has no significant effect on organizational performance of textile firms in Kenya. Results revealed that green procurement has a positive and significant effect on organizational performance of textile firms in Kenya ($\beta_1$=0.282, $p<0.05$) hence rejecting the null hypothesis $H_{01}$ and conclude that green procurement had a significant effect on organizational performance.

#### 4.9.2 Hypothesis Testing of the Effect of Reverse logistic on The Organizational Performance

Hypothesis $H_{02}$ stated that Reverse logistics has no significant effect on organizational performance of textile firms in Kenya. Findings revealed that reverse logistics has a positive and significant effect on the organizational performance of textile firms in Kenya ($\beta_2$=0.287, $p<0.05$). The null hypothesis $H_{02}$ was rejected, indicating that reverse logistic had a significant effect on organizational performance.

### 4.9.3 Hypothesis Testing of the Effect of outsourcing on the Organizational Performance

Hypothesis $H_{03}$ stated that outsourcing has significant effect on organizational performance of textile firms in Kenya. The findings revealed that outsourcing has a positive and significant effect on organizational performance of textile firms in Kenya ($\beta_3$=0.331, $p<0.05$). The results showed that outsourcing had a significant effect on organizational performance, rejecting the null hypothesis $H_{03}$.

### 4.9.4 Hypothesis Testing of Competitive advantage on the Relationship Between green procurement and Organizational Performance

Hypothesis $H_{04a}$ stated that competitive advantage has no significant moderating effect on the relationship between green procurement and organizational performance of textile firms in Kenya. Results revealed that competitive advantage has a positive and significant moderating effect on the relationship between green procurement and organizational performance of textile firms in Kenya ($\beta_{6a}$=-0.069; $p<0.05$). The null hypothesis $H_{04a}$ was rejected based on the findings, implying that competitive advantage moderates the relationship between green procurement and organizational performance of textile firms in Kenya.

### 4.9.5 Hypothesis Testing of Competitive advantage on the Relationship between Reverse logistics and Organizational Performance

Hypothesis $H_{04b}$ stated that competitive advantage has no significant moderating effect on the relationship between reverse logistics and organizational performance of textile firms in Kenya. Results showed that competitive advantage has a positive and significant moderating effect on the relationship between reverse logistics and organizational performance of textile firms in Kenya. ($\beta_{4b}$ =-0.137; $p<0.05$). The results showed that competitive advantage had a moderating influence on the relationship between reverse logistics and organizational performance of textile firms in Kenya, the null hypothesis $H_{04b}$.was rejected based on the findings, implying that competitive advantage the relationship between reverse logistics and organizational performance of textile firms in Kenya.

### 4.9.6 Hypothesis Testing of competitive advantage on the Relationship Between Outsourcing and Organizational Performance

Hypothesis $H_{04c}$ stated that competitive advantage has no significant moderating effect on the relationship between outsourcing and organizational performance of textile firms in Kenya. Results showed that competitive advantage has a positive and significant moderating effect on the relationship between outsourcing and organizational performance of textile firms in Kenya. ($\beta_{4c}$ =-0.122; $p<0.05$). The results showed that competitive advantage had a moderating influence on the relationship between outsourcing and organizational performance of textile firms in Kenya, hence rejecting the null hypothesis $H_{04c}$.

**Table 4.23 Summary of Hypotheses Test Results**

| Hypothesis | β-value | p-value | Decision rule |
|---|---|---|---|
| $H_{01}$. Green Procurement has no significant effect on organizational performance of textile firms in Kenya. | $\beta_1$=0.282 | p=0.000<0.05 | Rejected the null hypothesis |
| $H_{02}$. Reverse logistics has no significant effect on organizational performance of textile firms in Kenya. | $\beta_2$=0.287 | p=0.000<0.05 | Rejected the null hypothesis |
| $H_{03}$. Outsourcing has no significant effect on organizational performance of textile firms in Kenya. | $\beta_3$=0.331 | p=0.000<0.05 | Rejected the null hypothesis |
| $H_{04a}$. Competitive advantage has no significant moderating effect on the relationship between green procurement and organizational performance of textile firms in Kenya. | $\beta_{4a}$=-0.069 | p=0.035<0.05 | Rejected the null hypothesis |
| $H_{04b}$. Competitive advantage has no significant moderating effect on the relationship between reverse logistics and organizational performance of textile firms in Kenya. | $B_{4b}$=-0.137 | p=0.021<0.05 | Rejected the null hypothesis |
| $H_{04c}$. Competitive advantage has no significant moderating effect on the relationship between outsourcing and organizational performance of textile firms in Kenya. | $B_{4c}$=-0.122 | p=0.008<0.05 | Rejected the null hypothesis |

# CHAPTER FIVE

# SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

## 5.0 Introduction

This segment provides a summary of the study's discoveries, draws conclusions, and offers recommendations. Moreover, it proposes potential avenues for future research within the subsequent subsections.

## 5.1 Summary of the Study Findings

This section provides a synopsis of the study's results, in accordance with the research goals.

### 5.1.1 Effect of green procurement practices on organizational performance

The respondents were asked about the green procurement and they asked to give their view on that the organization work closely with suppliers and other stakeholders to identify sources of pollution and waste, the organization implement measures to prevent pollution and waste, organization promotes green procurement related activities, the organization adhere to green procurement policy and finally the organization has continuously embarked on recent more environmentally friendly technology,

The respondents however agreed with the statement that the organization work closely with suppliers and other stakeholders to identify sources of pollution and waste. However, they also agreed that the organization implement measures to prevent pollution and waste and also agreed that organization promotes green procurement related activities. The respondent also agreed that the organization adhere to green procurement policy and finally they agreed on the statement that the organization has continuously embarked on recent more environmentally friendly technology.

The significance of the provided statement lies in its reflection of the respondents' positive views regarding the organization's commitment to environmental sustainability and responsible procurement practices.

Firstly, the respondents' agreement that the organization works closely with suppliers and other stakeholders to identify sources of pollution and waste indicates that the organization is actively engaging in collaborative efforts to address environmental concerns. This demonstrates a proactive approach to sustainability.

Secondly, the respondents' agreement that the organization implements measures to prevent pollution and waste highlights the organization's commitment to reducing its environmental footprint. This suggests that the organization is not only aware of environmental issues but also taking concrete steps to mitigate them.

Furthermore, the agreement of the respondents that the organization promotes green procurement-related activities indicates that the organization is fostering a culture of sustainability within its procurement processes, which can have a positive ripple effect throughout its supply chain. The respondents' agreement that the organization adheres to a green procurement policy signifies that there is a formal commitment in place, likely with clear guidelines and principles, which helps ensure that sustainability practices are consistently followed.

Additionally, the respondents' agreement that the organization has continuously embarked on adopting more environmentally friendly technology reflects a commitment to staying up-to-date with eco-friendly innovations and technologies. This showed a dedication to staying current with best practices in environmental sustainability.

Finally, the statement underscores the organization's commitment to environmental responsibility, collaboration with stakeholders, green procurement practices, policy adherence, and the pursuit of eco-friendly technologies, all of which are significant indicators of its dedication to sustainability and environmental stewardship.

### 5.1.2 Effect of reverse logistics on organizational performance

The respondent was asked about the effects of reverse logistics and they were asked to give their view on the statement that the organization has a warranty for its products, the organization accept return of used products and packaging to suppliers for re-use, the organization design product for re-use, the organization return used products and packaging to suppliers for recycling and the company creates awareness to the public about recyclable products.

The respondent agreed that the organization has a warranty for its products and also they agreed that the organization accept return of used products and packaging to suppliers for re-use. However, they also agreed that the organization design product for re-use and also agreed that the organization return used products and packaging to suppliers for recycling and they agreed that the company creates awareness to the public about recyclable products. The significance of the provided statement lies in the positive responses of the respondents, indicating that the organization is actively engaged in sustainable product management practices and environmental stewardship.

Firstly, the respondents' agreement that the organization offers warranties for its products suggests a commitment to product quality and customer satisfaction. This warranty not only ensures that customers receive value for their purchases but also potentially reduces the environmental impact by extending the lifespan of products.

Secondly, their agreement that the organization accepts the return of used products and packaging for re-use demonstrates a dedication to circular economy principles. By facilitating the return and re-use of products and packaging materials, the organization is actively reducing waste and conserving resources. Furthermore, the respondents' agreement that the organization designs products for re-use reflects a proactive approach to sustainable product development. This design strategy can lead to products with longer lifespans and a reduced need for constant manufacturing, contributing to resource conservation and waste reduction.

Additionally, the agreement that the organization returns used products and packaging to suppliers for recycling highlights a commitment to responsible materials management. Recycling used products and packaging can help minimize the environmental impact associated with disposal and encourage the recycling industry.

Moreover, the respondents' agreement that the company creates awareness among the public about recyclable products is significant for promoting environmental consciousness and responsible consumer behavior. Such efforts can contribute to reducing waste generation and increasing the adoption of sustainable product choices among consumers.

Finally, the statement emphasizes the organization's commitment to various aspects of sustainable product management, including warranties, re-use, product design, recycling, and public awareness. These practices collectively demonstrate the organization's dedication to environmental responsibility and its efforts to minimize its environmental footprint throughout the product lifecycle.

### 5.1.3 Effect of outsourcing on organizational performance

The respondent was asked about the effects of outsourcing and they were asked to give their view on the statement that there is improvement on service delivery, there is improvement in decision making, there is cost cutting due to outsourced services, outsourced services are excellently performed and the supplier and customer meets regularly to discuss issues that relate to outsources services.

The respondents agreed that there is improvement on service delivery and also they agreed that there is improvement in decision making. However, they also agreed that there is cost cutting due to outsourced services and also agreed that outsourced services are excellently performed and finally they agreed that the supplier and customer meets regularly to discuss issues that relate to outsources services.

The significance of the provided statement lies in the respondents' agreement regarding several key aspects of the organization's operations, reflecting positive developments in service delivery, decision-making, cost-efficiency, outsourced services, and supplier-customer collaboration. Firstly, the respondents' agreement that there is an improvement in service delivery signifies that the organization has made strides in providing better and more efficient services to its customers or stakeholders. This improvement could enhance customer satisfaction and potentially lead to increased loyalty and positive word-of-mouth.

Secondly, their agreement on improvement in decision-making suggests that the organization has taken steps to enhance its strategic and operational processes. Effective decision-making can lead to better resource allocation, improved outcomes, and overall organizational success. Furthermore, the respondents' agreement that there is cost-cutting due to outsourced services reflects a strategy aimed at achieving cost-efficiency. Outsourcing can be a cost-effective way to access specialized skills or resources while maintaining focus on core activities. Cost reduction is often a key driver behind outsourcing decisions.

Additionally, their agreement that outsourced services are excellently performed indicates that the organization has successfully chosen and managed its outsourcing partners. High-quality outsourced services can positively impact overall organizational performance and reputation.

However, the respondents' agreement that the supplier and customer meet regularly to discuss outsourced services demonstrates a commitment to effective supplier relationship management. Such regular communication and collaboration can lead to better alignment of expectations, issue resolution, and continuous improvement in outsourced services.

Finally, this statement highlights positive developments in service delivery, decision-making, cost-efficiency through outsourcing, and effective collaboration with suppliers. These aspects collectively suggest that the organization is making efforts to enhance its operations, reduce costs, and maintain high standards of service quality, which are all significant factors in achieving organizational success and sustainability.

### 5.1.4 Effect of procurement on organizational performance

The respondent was asked give their view on the statement that the organization is able to supply all of its customer, there is timely delivery of organization products, the organization gets value for money on products procured and finally the procurement process is transparent which ensures accountability of all the procurement transaction. The respondent agreed that the organization is able to supply all of its customer and also agreed that there is timely delivery of organization products.

However, the respondent also agreed that the organization gets value for money on products procured and finally they agreed that the procurement process is transparent which ensures accountability of all the procurement transaction.

The significance of the provided statement lies in the respondents' agreement on various critical aspects of the organization's performance, specifically in terms of customer satisfaction, supply chain efficiency, cost-effectiveness in procurement, and transparency in procurement processes. Firstly, the respondents' agreement that the organization is able to supply all of its customers indicates a high level of fulfillment in meeting customer demands. This is crucial for maintaining customer satisfaction, loyalty, and trust. Satisfying all customers' needs suggests a well-managed and efficient supply chain.

Secondly, their agreement regarding timely delivery of organization products emphasizes punctuality and reliability in the organization's operations. Timely delivery is not only essential for customer satisfaction but also for maintaining a competitive edge in the market. Furthermore, the agreement that the organization gets value for money on products procured suggests effective cost management in procurement. Getting value for money typically means the organization is not overspending on its purchases and is obtaining products or services at a reasonable cost, which can positively impact profitability.

Furthermore, their agreement that the procurement process is transparent and ensures accountability in all procurement transactions is significant for ethical and legal reasons. Transparency is a cornerstone of good governance and can help prevent corruption, fraud, and unethical practices in procurement. It also demonstrates a commitment to accountability, which is crucial for building trust with stakeholders, including customers, partners, and regulators.

Finally, this statement underscores the organization's positive performance in terms of customer supply, timely delivery, cost-effective procurement practices, and transparent procurement processes. These aspects collectively contribute to the organization's reputation, customer satisfaction, financial health, and ethical standing in the marketplace, all of which are crucial for long-term success and sustainability.

## 5.2 Conclusions of the Study

In conclusion, the findings of this study shed light on the significant positive impact of various organizational practices on overall performance. The responses from the survey participants have provided valuable insights into the organization's commitment to sustainability, responsible procurement, and efficient operations.

Firstly, it is evident that the organization's dedication to green procurement practices, as reflected in its collaboration with suppliers and stakeholders, pollution prevention measures, promotion of green activities, policy adherence, and adoption of eco-friendly technology, has resonated positively with respondents. These aspects highlight a proactive approach to environmental sustainability, positioning the organization as a responsible corporate citizen.

Secondly, the endorsement of reverse logistics practices, including product warranties, the acceptance of used products for re-use, product design for re-use, return for recycling, and public awareness initiatives, showcases the organization's commitment to circular economy principles, waste reduction, and sustainable product management. These practices not only benefit the environment but also contribute to customer satisfaction and resource conservation.

Furthermore, the positive responses regarding the effects of outsourcing on service delivery, decision-making, cost-cutting, outsourced service quality, and supplier-customer collaboration affirm the organization's strategic approach to improving operational efficiency and effectiveness. Effective outsourcing strategies can lead to enhanced organizational performance and competitiveness.

Lastly, the agreement on the organization's ability to supply all customers, timely delivery, value for money in procurement, and transparent procurement processes underscores the organization's commitment to meeting customer needs, operational excellence, cost management, and ethical procurement practices.

In summary, this study highlights the organization's multifaceted efforts toward sustainability, efficiency, and responsible business practices. These positive indicators bode well for its long-term success, as they align with contemporary business imperatives and the expectations of environmentally conscious and socially responsible stakeholders. To maintain and build upon these strengths, the organization should continue to prioritize sustainability, transparency, and efficiency in its operations and procurement practices.

## 5.3 Recommendations of the Study

The study recommended that;

1) **Embrace Sustainable Procurement:** Given the positive impact of green procurement practices on organizational performance, we recommend that textile firms in Nairobi, Kenya, place an even greater emphasis on sustainability in their procurement processes. Collaborate closely with suppliers and stakeholders, implement pollution prevention measures, promote green

activities, adhere to environmental policies, and adopt eco-friendly technology wherever possible.

2) **Prioritize Circular Economy Principles:** Textile firms should continue to endorse and expand their reverse logistics practices, including product warranties, accepting used products for re-use, designing products for re-use, and recycling initiatives. Embracing circular economy principles not only benefits the environment but also enhances customer satisfaction and resource conservation.
3) **Optimize Outsourcing Strategies:** Based on the study's findings regarding the positive effects of outsourcing, textile firms should strategically assess their outsourcing practices. Focus on improving service delivery, cost-cutting, maintaining high-quality outsourced services, and fostering strong supplier-customer collaboration. An effective outsourcing strategy can significantly contribute to operational efficiency and overall competitiveness.
4) **Enhance Customer-Centric Operations:** The study underscores the importance of meeting customer needs, timely delivery, providing value for money, and transparent procurement processes. Textile firms should continue to prioritize customer-centric operations, ensuring that they deliver quality products and services while maintaining cost-efficiency and ethical procurement practices.

## 5.4 Suggestions for Further Study

The main aim of this study was to assess the moderating effect of competitive advantage on the relationship between supply chain management practices and organizational performance of Textile Firms in Kenya. The study however suggests that;

a) **Exploring the Long-Term Impact**: Conduct a longitudinal study to assess the sustainability of the positive impact observed in this research over an extended period. This would provide insights into the long-term benefits and challenges associated with these practices.

b) **Comparative Analysis**: Extend the research to include a comparative analysis with textile firms in other regions or countries to determine if the observed practices and their impact on performance are unique to Nairobi, Kenya, or if they can be generalized to a broader context.

c) **In-Depth Supplier Analysis**: Investigate the relationships between textile firms and their suppliers in more detail. Explore how supplier selection, collaboration, and engagement strategies influence supply chain efficiency and competitive advantage.

d) **Customer-Centric Focus**: Conduct research on how textile firms in Nairobi, Kenya, can further enhance their customer-centric practices. Explore customer satisfaction, loyalty, and the impact of supply chain management on meeting customer needs.

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# APPENDICES

## Appendix I: Letter of Introduction

Dear respondent,

**RE: REQUEST FOR INFORMATION**

I am a Masters student at Moi University, currently undertaking a research study titled: "**Effect of supply chain management practices on organizational performance of textile firms in Kenya**." I kindly request you to provide the required information to the best of your knowledge. The information provided was treated with utmost confidentiality and only used for academic purpose.

Thank you

Yours faithfully,

____________________ ____________________

**Student** **Supervisor**

## Appendix II: Research Questionnaire

This questionnaire is an integral part of a study titled: **"effect of supply chain management practices on organizational performance of textile firms in Kenya**." You are kindly requested to give precise and honest information. Please fill in the required information in the spaces provides by placing a tick (✓) where appropriate.

### SECTION A. RESPONDENTS DETAILS

1. Gender (Tick as applicable)

   a) Male [ ]     b) Female [ ]

2. What is your age bracket ( Tick as applicable)

   a) Below 21years [ ]     b) Between 21-30 years [ ]

   c) Between 31-40 years [ ]     d) Over 40 years [ ]

3. What is your level of education?

   a) PHD [ ]

   b) Masters [ ]

   c) Degree [ ]

   d) Diploma [ ]

   e) Others [ ]

4. For how long have you worked with company?

   a) Below 5 Years [ ]

   b) Between 5-10 Years [ ]

   c) Between 10-15 Years [ ]

   d) Above 16 Years [ ]

**SECTION B: GREEN PROCUREMENT**

5. In a scale of 1-5, indicate the level of agreement regarding the following statement on the effect of green procurement practices on performance of manufacturing companies. Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

| | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| 1. The organization work closely with suppliers and other stakeholders to identify sources of pollution and waste | | | | | |
| 2. The organization implement measures to prevent pollution and waste | | | | | |
| 3. Organization promotes green procurement related activities | | | | | |
| 4. The organization adhere to green procurement policy | | | | | |
| 5. The organization has continuously embarked on recent more environmentally friendly technology | | | | | |

**SECTION B: REVERSE LOGISTICS**

6. In a scale of 1-5, indicate the level of agreement regarding the following statement on the effect of reverse logistics on performance of manufacturing companies. Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

| | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| 1. The organization has a warranty for its products | | | | | |
| 2. The organization accept return of used products and packaging to suppliers for re-use | | | | | |
| 3. The organization design product for re-use | | | | | |
| 4. The organization return used products and packaging to suppliers for recycling | | | | | |
| 5. The company creates awareness to the public about recyclable products | | | | | |

**SECTION C: OUTSOURCING**

7. In a scale of 1-5, indicate the level of agreement regarding the following statement on the effect of Outsourcing on performance of manufacturing companies. Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

| | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| 1. There is improvement on service delivery | | | | | |
| 2. There is improvement in decision making | | | | | |
| 3. There is cost cutting due to outsourced services | | | | | |
| 4. Outsourced services are excellently performed | | | | | |
| 5. The supplier and customer meets regularly to discuss issues that relate to outsources services | | | | | |

**SECTION F: COMPETITIVE ADVANTAGE**

9. In a scale of 1-5, indicate the level of agreement regarding the following statement on competitive advantage. Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

| | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| 1. Company is able to develop and implement new ideas, products, or processes to gain an advantage over competitors | | | | | |
| 2. The company is excellence in the products offered | | | | | |
| 3. There is affordability of a company's products | | | | | |
| 4. The company is reliable in delivering its products | | | | | |
| 5. The speed at which a company take the products to market is high | | | | | |

**SECTION F: ORGANIZATIONAL PERFORMANCE**

9. In a scale of 1-5, indicate the level of agreement regarding the following statement on the following statement on Organization Performance of manufacturing companies. Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

| | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
| 1. There is market growth in the organization | | | | | |
| 2. The market share has grown for the organization | | | | | |
| 3. There is customer satisfaction | | | | | |
| 4. There is a good customer relationship in the organization | | | | | |
| 5. There is efficiency of operations in the organization | | | | | |

## Appendix III: Companies

**1. Spin Knit Limited**
It is a leading textile manufacturing company with 100% facilities of acrylic hand knitting yarn, machine knitting yarn, knitwear, Maasai shuka, baby shawls, and blankets.
Location: Eldoret
Contacts: +254 722 825 348

**2. Rivatex East Africa Limited**
It is an integrated textile manufacturer that converts cotton lint through various processes to finished fabrics.
Location: Eldoret
Contacts: +254 5320 30901-3

**3. Thika Cloth Mills**
It is a renowned textile company known for manufacturing textile and fabrics such as corporate uniforms, school uniforms, household furnishings and promotional textiles.
Location: Thika
Contacts: +254 0723 410 200/ 0733 410 200

**4. Sunflag Textile & Knitwear Mills**
The company's operations range from yarns, fabrics, garment and household textile which are all made using the latest technology and modern equipment.
Location: Nairobi

**5. Spinners & Spinners Ltd**
Location: Kamiti
Contacts: +254 0722 206 959/ 0733 900 015

**6. Fine Spinners Ltd**
Location: Off Lunga Lunga Road, Industrial Area, Nairobi
Contacts: +254 20 545 439

**7. Alliance Garment Industries Ltd**
Location: Nairobi
Contacts: +254 728 607 632

**8. KEMA East Africa Ltd**
It is a leading manufacturer and distributor of various types of garments such as protective clothing, high visibility garments, disposable clothing and workwear.
Location: Off Shimo la Tewa Road, Industrial Area, Nairobi
Contacts: +254 0720 821 970/ 0734 600 867
Email: kema@kema.co.ke

**9. Supra Textiles Ltd**
Location: Nairobi
Contacts: +254 020 650 496

**10. Specialised Towel Manufacturers Ltd**
Location: Nairobi
The company manufactures cotton bath towels, cellular blankets, bed covers, bed sheets, bath mats, counterpanes and hospital linen.
Contacts: +254 0713 439 373/ 0720 696 376

**11. United Footwear Ltd**
It manufactures boots using the vulcanising process, men's and children's shoes on special orders, sandals and sports shoes.
Contacts: +254 66 32868

**12. African Leather Industries Ltd**
It was established in 2011 as a subsidiary of Leather Industries of Kenya. It manufactures all types of men, kids and safety shoes.
Contacts: +254 20 328 0000

**13. C&P Industries Limited**
The company manufactures a variety of products such as sports shoes, leather shoes, PVC moulded shoes, rain boots, PVC coated fabrics, zip fasteners, shoelaces and unit soles.
Location: Along Mombasa Road, Nairobi
Contacts: +254 722 809 865

**14. Bantu Shoes**
It is a footwear manufacturing firm that specializes in the production of leather formal footwear for men and school shoes.
Location: Nairobi
Contacts: 0718 842 108

**15. Peponi Footwear Industries**
Location: Mikamba Road, Mombasa
Contacts: +254 041 222 6526

**16. Macquin Shoes Ltd**
Location: Refinery Road, Mombasa
Contacts: +254 413 434 514/ +254 41 343 2990

**17. Crown Industries Ltd**
The company makes PVC shoes/footwear for ladies, gents and children.
Location: Enterprise Road, Nairobi
Contacts: +254 020 650 720

**18. Adix Ltd**
It specifically manufactures PVC gumboots, shoes and slippers.
Location: Nairobi
Contacts: 0722 423 600/ 0736 650 000

19. United Aryan EPZ ltd , Location: Nairobi
20. Brother Knitwear factory Ltd , Location: Nairobi
21. Kenyamasken Garments Ltd , Location: Nairobi

22. Specialised Towel Manufacturers Limited , Location: Nairobi
23. Ken Knit (Kenya) Ltd , Location: Eldoret
24. Kenya Association of Manufacturers , Location: Nairobi
25. Exporting Processing zone Authorities , Location: Nairobi
26. Ashton Apparel EPZ Mombasa
27. Cotton Development Authority Nairobi
28. Association of Fashion designers Nairobi
29. Kenya Private Sector Alliance Nairobi
30. Kenya Revenue Authority – Nairobi

18 Kiboko Leisure wear Ltd Nairobi

31. KIKOROMEO (Kiro Ltd) Nairobi
32. Kimili Africa Nairobi
33. Kitui Ginneries Ltd Kitui
34. LOULOU CREATIONS Nairobi
35. Makueni Ginnery Makueni
36. MEFA Creations Nairobi
37. Micro & Small Enterprises Authority/Federation Nairobi
38. Midco Textiles (EA) Ltd Nairobi
39. New wide Garments Kenya EPZ Ltd Athi River
40. Rupa Mills (EPZ)td Athi River
41. Sandstorm Nairobi
42. Technology Development Center Athi River
43. Tosheka Textiles Makueni
44. TSS spinning & weaving mills Nairobi
45. Ultra Kenya Ltd Nairobi
46. Africa of Women Entrepreneur Program Athi River
47. Alltex EPZ Ltd Ruiru
48. Alpha Knits Limited Nairobi
49. Equator Apparels Nairobi
50. Export Promotion Council Athi River
51. Fair Trade Africa
52. Global Apparels

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CERM-ESA Project Leader Date: 27/06/2024