KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF HUMANITIES AND SOCIAL SCIENCE

SCHOOL OF BUSINESS

ASSESSING THE MEDIATING ROLE OF COMPETITIVE ADVANTAGE ON THE RELATIONSHIP BETWEEN SUSTAINABLE SUPPLY CHAIN PRACTICES AND OPERATIONAL PERFORMANCE IN THE SERVICE SECTOR

AFIA ACHIAA BAAFE

(DATA LINK INSTITUTE OF BUSINESS AND TECHNOLOGY)

A THESIS SUBMITTED TO THE DEPARTMENT OF SUPPLY CHAIN AND INFORMATION SYSTEMS, INSTITUTE OF DISTANCE LEARNING IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF

MASTER OF SCIENCE (LOGISTICS AND SUPPLY CHAIN MANAGEMENT)

AUGUST 2023

DECLARATION

I hereby declare that this thesis is the result of my original work towards the MSc. in Logistics and Supply Chain Management, and that to the best of my knowledge, it neither contains material published by another person nor materials which have been accepted for the award of any other degree of the University, except where due acknowledgments have been made in the text.

Afia Achiaa Baafe …… ……

(PG9258721) Signature Date

Certified by:

Dr. Seth Nkrumah …… ……

(Supervisor) Signature Date

Certified by:

Prof. David Asamoah …… ……

(HOD) Signature Date

DEDICATION

I dedicate this thesis to God, Dr. Boison and Nana Kwame Baffoe IV.

ACKNOWLEDGEMENT

In the depth of my heart, I offer my sincerest gratitude to Almighty God for his unconditional love and unfaltering support. Without him, I would never been able to come this far. He has been by my side through every challenge, every obstacle and success. I thank him for his Grace and Mercy in my journey of writing this thesis. Much gratitude goes to my supervisor Dr. Seth Nkrumah whose time he never denied me with his guidance and corrections. Gratitude also goes to our head of department Prof David Asamoah HOD, SCIS and Appiah Karikari Michael a good friend. I am grateful for your dedication and passion throughout my course of work at IDL KNUST Accra. My next gratitude goes to Dr. King David Boison, A senior lecturer and head of department procurement logistics and supply chain management at Ghana Communication Technology University. He has been an incredible source of encouragement and guidance throughout my academic journey. His works of advice have helped me to stay focused on my goals and have always inspired me to work harder. I thank you for your never-ending motivation, guidance and patience. I would like to thank Nana Kwame Baffoe IV, Omanhene of Nkoranza traditional area for his generous support. He has always been there to help me out career-wise, no matter the circumstance. His support has been invaluable and enables me to purse my career ambitions. I'm grateful to him for his kind and generous heart. I owe a great deal of gratitude to all of those who have been a part of my journey and I thank them from the bottom of my heart.

ABSTRACT

The available research evidence suggests that there are several studies measuring the relationship between Sustainable supply chain management practices and firm performance. However, only few studies have considered the moderating role of competitive advantage in their prior studies. The main objective of the study is to assess the effect of sustainable supply chain practices, on operational performance and mediating role of competitive advantage in the service sector of Ghana. This study adopted quantitative research approach and survey-based design. The analyses were performed with the aid of the statistical software namely, statistical package for the social sciences (SPSS) version 26. The following analyses were performed, frequency and percentages, descriptive statistics, reliability and validity test, correlation matrix as well as regression analysis. The study found that, sustainable supply chain management practices had significant effect on operational performance. Moving on the study found that, competitive advantage had significant effect on operational performance. Again, the study found that, competitive advantage significantly mediates the relationship between sustainable supply chain management practices on operational performance. The study concludes that sustainable supply chain management practices and competitive advantage are predictors of operational performance in the service sector of Ghana. Inferring from the above, the study recommends that managers and leaders on the various departments should frequently interact with their customers in order to set reliability, responsiveness and other standards for their companies over their competitors. Again, the leaders and the management should know the importance of setting quality standards over their competitors. Moreover, the managers should see to it that the company frequently facilitates their customers' ability to seek assistance from them.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

LIST OF ABBREVIATIONS

CA	Competitive Advantage
CIPS	Chartered Institute of Procurement and Supply
COMP	Competitiveness
CRM	Customer Relationship Management
EMP	Environmental Management Practices
EPE	Environmental Performance
GSCM	Green Supply Chain Management
HND	Higher National Diploma
ISO	International Organization for Standardization
IT	Information Technology
JBG	Joint Business Group
NC	Networking Capability
OP	Organisational Performance
PLS	Partial Least Squares
ROA	Return on Asset
ROE	Return on Equity
SCM	Supply Chain Management
SDGs	Sustainable Development Goals
SEM	Structural Equation Modelling
SEP	Sustainable Economic Performance
SMEs	Small Medium Enterprises
SP	Sustainable Performance
SPSS	Statistical Package for Social Science
SSCF	Sustainable Supply Chain Foundation
SSCM	Sustainable Supply Chain Management
UNGC	United Nations Global Compact

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The influx of Sustainable Development Goals has increased the drive of corporations, policy think -tanks and academics to upscale and renew their commitment towards sustainable development. Particularly, the SDG 12 clearly suggest the need to ensure responsible consumption and production. This is where Sustainable Supply Chain Management comes in (Bishwajit et al., 2022; Das and Hassan, 2022; Adegoken et al., 2021). As per the Sustainable Supply Chain Foundation (SSCF), Sustainable Supply Chain Management encompasses the integration of environmentally and economically feasible strategies, such as recycling, refurbishing, waste management, and more, across the entire lifecycle of the supply chain. This integration spans from product design and development to material sourcing (including raw material extraction or agricultural production), manufacturing, packaging, transportation, warehousing, distribution, consumption, return, and eventual disposal (Wang and Dai, 2018; Tipu and Fantazy, 2018; Christian, 2020).

Seuring and Muller (2008) combine the explanations of Supply Chain Management (SCM) and Sustainable Supply Chain Management (SSCM) into a comprehensive definition: "It involves overseeing the flows of materials, information, and capital, as well as fostering collaboration among companies along the supply chain. This approach integrates objectives from all three dimensions of sustainable development – economic, environmental, and social – while aligning with the expectations of customers and stakeholders." All supply chains can be optimized using sustainable practices (Masudin et al., 2018; Wang and Dai, 2018; Tipu and Fantazy, 2018).

Sustainability in the context of the supply chain includes a number of goals, such as environmental protection, resource conservation, lowering carbon footprints, cost reduction, viability, and social responsibility. According to CIPS (2014), sustainable development ensures the preservation of people's ability to fulfill their needs in the times ahead. Sustainability entails the fusion of social, environmental, and economic systems. Within the realm of social aspects, this involves upholding relevant laws and international agreements through participatory processes that are transparent and inclusive of relevant stakeholders. It establishes rights and responsibilities, and implements a comprehensive long-term sustainability plan with regular monitoring. Additionally, it encompasses maintaining fair wages and suitable working conditions for workers safety, and workers' rights to organize and engage in collective bargaining (Mukanga, 2011). Environmental sustainability is achieved when organizational facilities, products, and operations adopt processes and systems that minimize their environmental footprint. Economic sustainability, on the other hand, refers to strategies that maximize the efficient use of socio-economic resources for optimal benefit (Bishwajit et al., 2022; Das and Hassan, 2022).

A fair distribution of resources and efficient use of them are suggested by a sustainable economic model. The intention is to promote wise and efficient use of these resources in a way that produces long-term gains and ensures profitability. (UNGC-Accenture) 2013 Supply chain sustainability, according to Kovacs (2014), is a complete view of supply chain technology and procedures that goes beyond the focus on delivery, inventory, and traditional cost considerations. According to Ioannou's 2011 study on the impact of corporate sustainability on organisational success, there is evidence that companies that prioritise sustainability issues outperform their rivals over the long term in both the stock market and accounting performance. Hasan (2012) offers some SSCM approaches that can be used by enterprises to improve performance. These SSCM practice dimensions and items were created using a variety of SSCM-related subjects from older publications. According to study (Muraguri, 2013; Winter and Knemeyer, 2013), environmental management practices within a company are crucial for improving overall performance. The GSCM practices and performance constructs are described in general in this section.

1.2 Problem Statement

The available research evidence (Muraguri, 2013; Winter and Knemeyer, 2013; Tipu and Fantazy, 2018) suggests that there are several studies measuring the relationship between Sustainable supply chain management practices and firm performance. However, only few studies have considered the moderating role of competitive advantage in their prior studies. This gap requires urgent attention in order to add up to existing knowledge. Sustainable supply chain activities in organizations are very significant since they contribute significantly to firm success and growth.

Sustainable supply chain entities have significant role in the protection of the general environment since procurement activities can have either negative or positive effect on the general environment (Ortas et al., 2014; Masudin et al., 2018; Wang and Dai, 2018). Due to this, it is important that, SSCM officials pay critical attention to procurement activities so that all procurement functions can be done to help enhance sustainable procurement. Normally, organizations that practice environmental sustainability are able to achieve social recognition due to their loyal and responsibility towards the society (Masudin et al., 2018; Wang and Dai, 2018). However, the empirical literature has not given enough emphasis to the mediating function of competitive advantage in the relationship between a sustainable supply chain and operational success. This study attempts to assess the influence of sustainable supply chain practices, competitive advantage, and operational performance in Ghana's service sector based on the aforementioned claims.

1.3 Objectives of the Study

The study's primary goal is to evaluate the impact of sustainable supply chain practices on operational effectiveness and the mediating role of competitive advantage in Ghana's service industry. The following goals will serve as the study's direction.

1. To determine the effect of SSCM practices on operational performance
2. To ascertain the effect of competitive advantage on operational performance
3. To determine the mediating effect of competitive advantage on the relationship between SSCM practices and operational performance

1.4 Research Questions

1. What is the effect of SSCM practices on operational performance?
2. What is the effect of competitive advantage on operational performance?
3. What is the mediating effect of competitive advantage on the relationship between SSCM practices and operational performance?

1.5 Significance of the Study

This study would contribute to the body of information on sustainable supply chain techniques. This would enable the industrial procurement sector to make well-informed choices regarding procurement activities and how industrial procurements would not compromise environmental sustainability. Also, this study would aid policy makers formulate and enforce sustainable procurement laws among organizations and other private individuals to help maintain the quality of the environment while achieve sustainable procurements. Furthermore, managers in institutions would know some of the barriers to SP practices and define some ways and strategies to help mitigate those challenges to achieve environmental, social and economic sustainability. Last, this study would help future researchers carry out their related studies.

1.6 Scope of the Study

The study's scope is divided into three categories: contextual, geographic, and temporal frame. The study's context focuses on how competitive advantage and sustainable supply chain practices affect operational performance in Ghana's service sector. The geographically, the study will focus on Accra metropolis of Ghana. Finally, timelines the study will adopt a cross sectional descriptive survey design.

1.7 Brief Methodology

In this study, a quantitative research technique was utilised to evaluate the mediating impact of competitive advantage in the relationship between sustainable supply chain practices and operational performance in Ghana's service industry. All service providers in the Accra metropolis who use sustainable supply chains are included in the study's target audience. The effect of competitive advantage and sustainable supply chain practises on operational performance in Ghana's service sector is investigated using an explanatory research methodology. A systematic questionnaire would be provided. We will only collect data from primary sources. The respondents for the survey would be chosen using a random sample technique. The management and employees of the chosen manufacturing firms in the metropolis of Accra made up the target population. 150 people would be included in the sample. The study's constructs will all be evaluated using a 5-point Likert scale. The statistical evaluations would be carried out using SPSS version 23. Correlation regression, mean analysis, and standard deviation analysis would be done specifically.

1.8 Limitations of the Study

There are most likely number of limitations to be faced by the researcher such as scope of the study, timelines and unwillingness of the participants to volunteer information. Some of the respondents would not be willing to partake in the in order to prevent being victimized by their superiors. The timeline of the study is cross sectional which only focuses on the current situation meaning that the outcome of the study will be limited to only the present situation. Finally, the scope of the study is limited to only Accra metropolis – suggesting that the study cannot go

beyond that bottom line. This study used first generational analysis tool known as statistical package for social sciences (SPSS), it is suggested that future studies should use second generational analysis tools such as AMOS, SmartPLS.

1.9 Organization of the Study

Five chapters would make up the study. The overall introduction to the topic was the focus of Chapter 1. The literature review of the numerous concepts, including the theoretical review, was presented in Chapter 2. The researcher's methodology for conducting the study was described in Chapter 3 of the book. Data analysis and presentation were also covered in chapters four and five, which concluded with a summary of the findings, conclusions, and suggestions.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents review of related works on sustainable supply chain management, competitive advantage and operation performance. Specifically, the chapter has been categorized under conceptual review, theoretical framework, empirical review as well as the hypothesis development.

2.1 Conceptual Review

2.1.1 Sustainable Supply Chain Management

Sustainable supply chain management is a practise that integrates sustainability. The capabilities of present methods are limited (Haake and Seuring, 2009). The three dimensions of sustainability goals—economic, environmental, and social—as defined by customer and stakeholder requirements are taken into account in the management of the flow of materials, information, and capital, as well as in the cooperation between businesses in the supply chain (Seuring and Muller, 2008). Additionally, sustainable supply chain management refers to specialist practises to manage supply chain flexibility in order to build a truly sustainable supply chain (Pagell and Wu, 2009). Sustainable supply chains include all upstream processes, such as sourcing, production and distribution of raw materials, as well as downstream processes, such as collection and disposal of returned, used or unused products and components to achieve socially, economically and environmentally sustainable recovery (Huang, Yan and Qiu, 2009).

Sustainable supply chain management integrates and coordinates these practises to enhance the economic, environmental, and social performance of the supply chain's enterprises (Kaynak and Montiel, 2009). According to Walker and Jones (2012), it is also known as the accomplishment of the SDGs and the inclusion of social, economic, and environmental considerations in the supply chain and procurement procedures. According to Jennings and Zandbergen (2005), a sustainable supply chain excels on both the traditional and triple bottom lines. Hence, sustainable supply chain management involves the deliberate and open fusion and accomplishment of an organization's social, environmental, and economic objectives. It also entails the methodical synchronization of the organization's essential business procedures to enhance the enduring economic outcomes of both individual companies and their interconnected supply chains (Carter and Rogers, 2008); "The management of business interactions and flows of materials, information, and capital in a supply chain with three dimensions of sustainability," according to sustainable supply chain management Customer-focused sustainable supply chain management incorporates environmentally and financially sustainable practices across the entire supply chain lifecycle, from product design and development to raw material sourcing (such as bauxite, mining and agricultural production), manufacturing, packaging, transportation, storage, distribution, consumption, return, and disposal (Christopher, 2005).

Strategic Supplier Relationship: A strategic alliance is "an agreement between firms in which each commits resources to achieve a common goal," according to Bain et al. (2006). Strategic partnerships between businesses and rivals, suppliers, and clients are possible. Supriyadi and Ekawati (2014) describe a strategic partnership as a formal agreement between two firms, usually formalised by one or more commercial agreements, but not yet legally established. Occasionally, the term 'strategic alliance' is also used, which is defined as 'the combination of

specific resources and competencies of the cooperating firms to achieve common goals and the specific objectives of each partner' (Supriyadi and Ekawati, 2014). According to Tuimal and Lucca (2002), a strategic alliance can be described as a process in which members voluntarily adopt key business practices to reduce duplication and waste while increasing operational efficiency. In a strategic alliance, two companies engage in marketing, supply chain, integration, technology, finance or a combination of these elements.

Kuder (2014) defines a strategic partnership as a formal alliance between two or more organisations and companies. Strategic supplier relationships can be defined as an important aspect that helps organisations to create strategic competitive advantage (Sillanpää et al., 2015). Long-term ties between an organisation and its suppliers are known as strategic supplier partnerships. Strategic partnerships with suppliers are a way for an organisation to establish tight, long-lasting connections with its suppliers (Lao et al., 2010). Target companies can connect with suppliers, identify needs, and anticipate, react to, and adapt to technical and product developments thanks to strategic partnerships with suppliers (Whitten et al., 2012). A long-term partnership between a business and a supplier is referred to as a strategic supplier partnership. It recognizes shared planning and problem-solving and emphasizes a direct and long-lasting relationship (Agus and Hassan, 2008; Gadde et al, 2010; Tunisini and Sebastiani, 2015).

A strategic partnership is a long-term relationship between two or more organizations that facilitates the achievement of their strategic objectives (Mentzer et al., 2000). Kuder and Matthias, 2014) A strategic partnership is a formal agreement between two or more institutions of higher education. It is created through a planned process in which the stakeholders pool their resources and employ their various talents to achieve common objectives. Strategic collaboration

is one method for businesses to cope with this more difficult and complex environment. Companies can collaborate in numerous ways, ranging from informal partnerships to formal joint initiatives (Harrigan, 1988). Strategic partnerships seek to go beyond bilateralism by agreeing on how to address global issues at various levels, including multilaterally. In their opinion, this format is still conducive to the aim of efficient multilateralism.

A strategic partnership is a formal alliance between two companies. It is typically formalized through one or more business contracts, but it is distinct from a law partnership, an agency relationship, or a company member relationship. Strategic partnerships (which we will refer to as "alliances" from now on) between start-ups and large corporations have a great deal of development potential that, if properly utilized, can be beneficial for both parties (Rothaermel, 2001). Strategy is "a set of dynamic, interconnected decisions that a business must make in order to position itself within a complex environment" (Sahay and Mohan, 2003). A strategic alliance is an agreement between stakeholders to collaborate in a relatively consistent manner. It comprises communications that are supported by the organization's resources or legal framework. The objective is to achieve the individual objectives shared by each company's mission.

According to (Frankel, Whipple, and Frayer, 1996), a strategic partnership is a process in which members voluntarily alter their fundamental business practices to reduce redundancy and waste and enhance performance. Strategic alliance, which is sometimes referred to as "partnership," is a method for businesses to collaborate for mutual gain and a sustainable competitive advantage (Yi Wei, 2007). Strategic relationships maintain and enhance (global) competitiveness, allowing

linked companies to remain in business and develop more rapidly in a challenging business environment. According to Hoang and Rothaermel (2016), a strategic partnership is an agreement between two or more businesses that wish to capitalize on one another's competitive advantages while maintaining their own legal identities. Strategic partnerships (SPs) are a novel aspect of the transformation of international relations and a novel means of organizing international life. A strategic partnership was formed between the customer and the delivery team after the contract was signed. Setting up the collaboration and getting the numerous organizations involved to function as a single joint partnership requires significant effort. (Harbison et al., 1998), a strategic partnership is any relationship between two distinct businesses in which they share responsibilities, ownership, and control, but is not a joint venture, merger, or acquisition. The written agreement between two or more colleges or universities constitutes a strategic partnership. It is created through a planned process in which the stakeholders share resources and utilize their unique talents to achieve mutually agreed upon objectives.

Customer Relationship: Catalán-Matamoros (2012) defines customer relationship as 'a combination of people, processes and methods aimed at understanding a company's customers'. CRM is the management of detailed information about individual customers and the careful nurturing of customer relationships to maximise customer loyalty. More narrowly, however, it can be defined as a holistic process that aims to build and maintain profitable relationships with customers and deliver greater customer value and satisfaction (Kotler and Armstrong, 2010). According to Wilson (2018), CRM can be defined as the practices and methods that businesses and organisations use to maintain and improve customer relationships. CRM is a business

strategy that combines an organisation's human resources, internal processes and information technology to optimize customer relationships (Goldenberg, 2008).

Customer Relationship Management (CRM) is the process of building lasting relationships with customers. It is the processes and methods by which an organisation establishes, develops and maintains relationships with its customers (Sinkovics and Ghauri, 2009). According to Kapologwe (2013), customer relationship management (CRM) is a process that includes internal processes, activities and services. It is a core management strategy that involves external networks in creating and delivering value to target customers. According to Faed (2013), CRM can be defined in several ways. It can be defined as the ability to acquire customers and maintain long-term relationships with them. Furthermore, CRM combines people, processes, and technology to assist businesses in comprehending and acquiring clients. According to Teng and Chen (2010), Wang and Feng (2010), Mohammaed and Rashid (2012), CRM is a customer-centric company approach that strives to both attract and keep consumers. Customer relationship management is a management approach that creates a customer-centric culture by developing ways to manage and retain customers and includes the use of information technology to benefit customers and the organisation (Rabah et al. 2011; Sujatha, 2014; Francis Buttle, 2015; Carrilho, 2016; Harryani, 2017).

CRM is a approach aimed at fostering enduring, mutually advantageous connections with customers or brands through the application of cutting-edge information processing technology, as described by Deszczyski and Deszczyski (2011), with the goal of cultivating customer loyalty to the enterprise. Customer relationship management, according to Baltacioglu et al. (2007), is

the process of building and maintaining long-term connections with customers by continually acquiring fresh data and comprehending their needs. Dr. Robert Shaw from Shaw Consulting, the author of "Measuring and Valuing Customer Relationships," characterizes Customer Relationship Management as an interactive procedure focused on attaining the best possible equilibrium between an organization's investments and the contentment of its clients, all with the aim of maximizing profits" (www.czasniebiznes.pl). In order to manage and analyze customer interactions and data across the course of a customer's lifecycle, businesses employ customer relationship management (CRM). The goal is to strengthen client connections, keep customers, and boost sales. Customer relationship management is a technique for satisfying customers that focuses on creating and preserving long-term connections with customers. 2011 by Ardiyhanto). Customer Relationship Management is described by Kalakota and Robinson (2010) as a combined function that incorporates the sales strategy and providing customers with value through products or services. The objective is to increase revenue by ensuring customer satisfaction.

Customer relationship management, according to Kotler and Armstrong (2004) and Peel (2002), is a strategy used by businesses to add value to customers and manage their interactions with them in order to guarantee both customer satisfaction with the goods or services they receive and a profit for the company. Customer relationship management is described by Swift (2001) as " It's an organizational strategy aimed at comprehending and influencing customer behavior through impactful communication, with the goal of enhancing customer acquisition, retention, loyalty, and overall profitability. Customer Relationship Management involves the integration of various firm competencies, amplified by information technology, to center on the "voice" of the

customer. This process seeks to provide sustained exceptional customer value while generating profits over the long term. Starkey (2002) further defines it as a method for accurately identifying both current and potential customer segments." The concept of "customer relationship management" (CRM) is elucidated as the harmonization of business strategy, organizational arrangement, culture, as well as customer information and technology. This alignment is aimed at ensuring that all interactions with customers are conducted to enhance the organization's performance and overall benefit, as outlined by Osmana and Ghiran (2019). CRM is one of the most recent developments in customer service, claims (Newell, 2000). "Customer Relationship Management is the use of technologies and business processes to meet the needs of a customer at any given time." CRM is the process of acquiring, analyzing, and utilizing information about consumers in order to increase sales and improve efficiency (Bose, 2002).

Customer relationship management (CRM) is a method for gaining a deeper understanding of consumers' desires and behaviours in order to forge stronger connections with them. Customer connection (CR) involves maintaining contact with individuals over time. (Sinkovics and Ghauri, 2009) It is a method and strategy that businesses use to discover, develop, and maintain relationships with their consumers. 2011; Peppers and Rogers It is essential for businesses to establish and maintain positive customer relationships in order to develop consumer trust through customer satisfaction. This can be accomplished by creating products that satisfy their consumers' evolving requirements. According to Stone and Findlay (2001), Customer Relationship Management is when a company accumulates and stores a large amount of information about a customer from various sources so that it can be used to divide territories, analyze data, and reuse the data.

Sustainable Purchasing: Sustainable purchasing, according to Kennard (2006), ISO 20400 (2017), and Bugri et al. (2019), refers to a business that maximizes the socioeconomic benefits of profitability while addressing consumer requirements and limiting negative effects on the environment and human health. It speaks to the procedure for purchasing goods and services. Similarly, according to Rais et al. (2018), sustainable procurement is "the purchase of products, services and labour that minimise the negative impacts of human activities and comply with environmental standards and guidelines to protect the environment and natural resources". Sustainable procurement is a green procurement practice that takes into account environmental, social and economic factors and sets environmental standards for transactions (Touboulic and Walker, 2015; Chomchaiya and Esicyaikul, 2016). Kipkoril and Wanyoike (2015) note that sustainable purchasing is a process of acquiring goods and services that considers the social, economic and environmental impacts of procurement on people and communities. Sustainable procurement refers to socially and ethically responsible purchasing, reducing environmental damage, implementing sustainable procurement and maintaining good purchasing business practices (Chartered Institute of Purchasing and Supply, 2011; Amemba et al., 2013).

In the realm of sustainability, sustainable living constitutes a component. It involves making choices that maintain a harmonious equilibrium between the environment, society, and economy, with the aim of securing enduring business prosperity, as articulated in HSBC Holdings' citation in 2013. Sustainable purchasing is one such aspect of sustainability. There is no universally accepted definition of "sustainable procurement," therefore different studies, organisation, and countries have differing opinions on what it entails (Walker et al., 202l). In its simplest form,

sustainable purchasing refers to the capacity to acquire goods and machinery, typically on a big scale, without depleting resources needed by future generations. For instance, as defined by the Sustainable Procurement Task Force (DEFRA 2006), sustainable procurement involves a systematic approach through which organizations fulfill their requirements for goods, services, works, and utilities. This approach ensures value for money over the entire lifespan, aiming to create advantages not only for the organization but also for society and the economy. Additionally, it seeks to curtail environmental harm." For this investigation, we used DEFRA's (Cite2006) most prevalent definition of sustainable purchasing from the literature.

Organizations in different nations and sectors may buy environmentally friendly items in a variety of methods, according to Zhu et al. (2005). Reducing packaging and waste is one aspect of sustainable buying habits. Another is rating vendors based on their performance in terms of the environment, safety, labour rights, and capacity to make ecologically friendly items. For instance, normal buying with an environmental management component is related to environmental purchasing (Zsdisin and Siferd, 2001). Sustainable transportation is that which satisfies people's requirements for movement while safeguarding and promoting social justice, economic growth, and the health of people and the environment (Deakin, 2001). Sustainable packaging is packaging that protects commodities across the whole supply chain and benefits society as a whole. Reverse logistics, according to DeBrito (2003), ensures that materials are used and recycled in an effective and efficient manner. Additionally required are purchases from regional and local businesses and MWBEs (Carter and Jennings, 2002; Walker and Brammer, 2009). Through study, seven groups of ecological buying behaviours have been classified. Carter and Rogers (2008) claim that socially conscious buying has an impact on every link in the supply

chain, including vendors, workers, and customers. Sustainable buying methods, according to Carter and Rogers (2008), must include the environment, diversity, working conditions and human rights, safety, as well as community service and giving back. Walker and Brammer (2009) expanded on this list by include buying locally and from small vendors. These elements of sustainable procurement practice have now been reinforced by several sustainable supply chain and procurement studies (Brammer and Walker, 2011; Zailani et al., 2012; Islam et al., 2014).

Product Quality: Product quality is the ability of a product to perform a specific function and may include durability, reliability, accuracy of manufacture, ease of use, ease of maintenance and other general attributes of product value (Amanah, 2010). Sitanggang et al. (2019) define product quality as "the ability to meet or exceed customer expectations by striving to meet them"; According to Kotler et al. (2011), a product's or service's quality determines how well it can meet explicit or implicit demands. According to Wanyoike (2016), product quality is the degree to which a product or service satisfies the demands and expectations of customers. ehsani (2015) argues that "product quality is related to the intended use of the product or service and the customer's perception of the overall quality of the product or its superiority over alternatives".

Product quality, according to (Aaker and Jacobson, 2018; ehsani and ehsani, 2015); Hervian and Anik, is the customer's assessment of the overall strength or superiority of a product or service. According to Kotler and Keller (2018), a product's quality is the collection of traits and qualities that depend on how well it satisfies stated or inferred demands. According to Sunyoto (2012), product quality is all that is provided to customers in the marketplace to consider, utilise, and consume in order to satiate their requirements and wants. Hermawan (2011) further argues that

product quality is a set of features and functions that satisfy explicit and implicit needs, including durability, reliability, accuracy, ease of use, ease of maintenance and other product attributes Akrani (2013) defines product quality as "a set of features and functions that satisfy consumer needs" Dakar and Konstantinovic (2020) define product quality as "a way of ensuring consumer satisfaction by adding features that satisfy consumer needs and/or wants and improving products and/or goods so that they are free from defects and/or deficiencies", which can be defined as product attributes for which consumers are willing to receive monetary compensation. It is defined as an evaluation of the service after it has been provided. The customer actually receives the organization's product.

Product quality refers to a product or service's ability to meet the explicit or implicit needs of the consumer. According to Bei and Chiao (2001), "Consider product quality and price as the foundation upon which to build customer satisfaction," however according to Khan and Ahmed (2012), "Product quality is a critical determinant of customer satisfaction." According to Aaker in 1994, "product quality is the customer's perception of the overall quality or superiority of the product or service in comparison to alternatives for its intended use." According to Kotler and Amstrong (2012), "product quality is the characteristic of a good or service that affects its capacity to satisfy customers' stated or implied needs." Product quality is viewed as a competitive strategy and a key to long-term success, particularly in light of the rapid evolution of technology. If a company enhances its quality and tailors it to the requirements and desires of its customers, it is an effective method for changing a consumer's behaviour and persuading him to choose its products over those of its competitors, particularly if its marketing strategy reflects the quality of its products. The character of a product can be described by either its exterior cues,

which are its external qualities, or its intrinsic cues, which are its internal qualities, according to Zeithaml (1988).

According to McCarthy (2008), a product is how a business satisfies a need. It is essential to view a product as something that could make a consumer pleased or provide them with advantages. Many business administrators become preoccupied with the technical aspects of producing a product. According to Lupiyoadi and Hamdani (2013), the quality of a good or service is determined by how well it satisfies its standards. According to Kotler (2002), a product's quality consists of all aspects that influence how well it satisfies stated or suggested requirements. Focusing primarily on product quality is a crucial strategy for making products more competitive and ensuring consumer satisfaction (Raharjo, 2013). There is a close relationship between product quality and a product's ability to perform its function, including the product's overall quality, reliability, accuracy, simplicity of use and repair, and other features with varying values (Kotler and Amstrong, 2012).

Product quality reflects all aspects that determine whether a product is excellent or poor. According to Kotler and Keller (2016), a product's quality is its capacity to perform as intended. This includes its overall durability, dependability, and precision. According to Kotler and Armstrong (2015), product quality is a product's functionality. This includes dependability, durability, accuracy, usability, product growth, and other essential characteristics. Everything that is offered on the market to gratify a need or want is included in the definition of product quality. This encompasses tangible items, services, events, people, places, nations, businesses,

organizations, data, and ideas. Weenas (2013) claims that if a product is consistent and undamaged, the quality of the product can affect a customer's pleasure.

2.1.2 Competitive Advantage

According to Smith and Flanagan (2006), competitive advantage is defined as a competitive advantage that enables a firm to differentiate, compete and grow. Ferrell (2012) defines competitive advantage as "the advantage a firm has over its competitors that enable it to meet the needs of its customers and maintain mutually satisfying relationships with key stakeholders". Nan and Tanriverdi (2017) argue that competitive advantage is an organisation's ability to satisfy the same customer needs. Their unique knowledge, technologies and resources enable them to offer services, products and benefits that differentiate them from their competitors in the industry.

Elijah and Millicent (2018) argue that competitive advantage has traditionally consisted of a firm choosing the market in which it competes and defending its market segment within well-defined segments through price and product quality. According to Wang (2014), a company gains a competitive edge when it creates, buys, or controls a collection of competencies that enable it to outperform its rivals. According to Al-Duwaila (2015), competitive advantage refers to an organisation's capabilities and knowledge that distinguish it from other organisations in the same industry in which it operates, such as the ability to deliver high quality products, the ability to use resources efficiently and the ability to perform the most efficient functions, which are defined as being dependent on availability, and the ability to employ the most efficient creative practices.

Price: According to Fekad (2018), prices include discounts, fixed prices, credits, repayment terms, etc. Langat (2016) considers that price is integrated into the products and services sold and determines the level of profit. Price is the only factor that does not include the cost of delivering the product to the customer. 'Price is the only part of the marketing mix that generates revenue, the others are costs' (Kotler and Keller, 2013); Fuyane (2011) defines price as 'the monetary dimension of a product's value that a customer has to pay'; Hervian and Anik (2018) explain that price refers to the amount of money or value that consumers exchange to receive the benefit of owning or paying for a product or service. Price is the price to the buyer, the price to the milk and the price to the seller; Ismail and others (2016) say that price is the amount of money and value charged for a product or service that the buyer exchanges for the benefit received from owning or using the product or service; Kotler and others (2016) say that price is the amount of money and value that the buyer exchanges for the benefit received from owning or using the product or service. Armstrong (2012) states that "Price is the amount of money and value charged for a product or service that a buyer exchanges for the benefit received from having or using the product or service". Kustia (2012) defines price as 'measurable', i.e. 'fair price', 'value for money', 'competitive price' and 'price rationality', which consists of a set of indicators. Bob Foster (2016) defines price as 'the value of goods and services expressed in monetary terms', where price also reflects the amount of money consumers have to pay to obtain goods. Christ (2017) Price is the value of a good or service that can be purchased in a specific quantity, mass or other form. Price is a marketing communication tool used to communicate product information to customers and influence their decisions. In broader terms, price is the total amount a buyer pays to obtain a product or service (Erdil, 2015); Ollila (2011) defines price

as "the amount a buyer must pay to obtain a product in a transaction with a seller". According to Pallister and Law (2006), price is defined as "the amount or value that buyers exchange for the benefits they derive from owning or using a product or service".

Quality: A product or service's quality is the collection of features and qualities that influence how well it meets explicit or implicit needs. (Larosa et al. (2017) define quality as the value that many products have compared to other products from the consumer's perspective; Kotler et al. (2017) argue that quality refers to goods and services, especially those that meet requirements, and quality is a state of excellence when it is satisfactory. According to Garvey (2022), quality is a visual indicator of how an activity has been performed. Goetsch and Davis (2016) argue that quality is a utility to the customer. Akpulonu (2017) argues that quality is the satisfaction of customer, product and service requirements. Goestsch and Davis (2014) argue that quality is the conformance of a product or service to predetermined requirements; ISO (2017) defines quality as "the extent to which a set of intrinsic characteristics satisfies requirements". Ho et al. (2011) define quality as "conformance to requirements or specifications" and suggest that quality should be measurable so that it can be adequately controlled. It is the management of quality principles in all areas of the company, including customers and suppliers (Adeiran and Adediran, 2009; Maloba, 2014). Quality is the conformity of products and services to the expectations of customers and society (Singhal, 2012). Quality can be defined as 'customer satisfaction', 'absence of defects', 'correct implementation at the first attempt' and 'convenience' (Nanda, 2016). It is a perception based on personal values. It is strongly influenced by the expectations, culture and life experiences of each individual (Mi. Halis et al., 2017). Aldaweesh (2018) also refers to quality as an area or dimension that reflects the value of a product or service. Nechi (2012) defines quality

as "the extent to which a product satisfies a consumer"; Ibijola (2014) defines quality as "the set of characteristics or attributes of a product or service that affect its ability to satisfy a particular need". The British standard BS7850 defines quality as "linked to customer satisfaction" (Sivankalai and Yadav, 2012); Dainel, Gutierrez and Montes (2012) describe quality management as a holistic management philosophy.

Delivery Dependability: According to Laitinen (2021), delivery dependability is defined as the punctuality of delivery from the company's warehouse to the customer, excluding delays caused by transport from the supplier's warehouse to the customer. Delivery reliability is basically a service provided by an online retailer without interruption (delivery reliability) (Thai, 2013). Since delivery is a service provided by an e-shop, delivery reliability can be considered as the service reliability of the e-shop (Liu, 2013). Garvey (2022) defines reliability as "the extent to which customers can trust an organisation to deliver goods or services as promised". Delivery reliability is the extent to which a supplier delivers a product according to a schedule promised at the time of sale; Nair (2005) defines delivery reliability as "the ability to consistently meet expected or planned delivery dates and quantities". Delivery reliability is defined as "the ability of an organisation to deliver the type and quantity of products requested by customers on time" (Li et al., 2006) (Adolfsson and Lundin (2014)); reliability is the ability to repeatedly achieve the same results when analysing the same data. Reliability, according to Lukinsky et al. (2014), is the ability to maintain all the characteristics of the supply chain and its links (elements) within a certain range of values (fail-safe, durable, repairable, maintainable), with the supply chain able to perform all its functions under certain conditions according to the parties' contract. Tessema

(2017) defines reliability as 'the probability that a facility will perform the desired function under certain conditions and at certain times'.

2.1.3 Operational Performance

Operational performance is described by Chavez et al. (2015) as a strategic view of rivals and incorporates performance level metrics like flexibility and lead time. Efficiency is the quantifiable performance of a process within an organisation, including reliability, lead time, and inventory turnover (Voss et al., 1997). Market share and customer satisfaction are two examples of company performance metrics that are influenced by operational performance (Andriiuk, 2021). Operational performance is defined as the synergy between different parts of a business and their ability to achieve better overall performance. In other words, it is the degree to which all parts of the company work together to achieve a given business objective (Saunila, 2014). Performance is defined as the achievement of results, such as quality and productivity, while financial performance refers to the results achieved, such as profitability. Cassio (2014) defines performance as the degree to which work tasks are completed in terms of service quality, perceived value, efficiency and customer contact. Cassio (2014) defines performance as the degree to which work tasks are completed in terms of service quality, perceived value, efficiency and customer contact. Cassio (2014) defines performance as the degree of task completion in terms of service quality, perceived value, efficiency and customer contact. On the other hand, O "Brien (2009) defines efficiency as the level of organisational performance based on specific criteria such as waste reduction, productivity, cycle time, environmental responsibility and compliance; Nyenga (2018) defines efficiency as the level of productivity, cycle time, environmental responsibility and compliance.

According to Maestri et al (2017), operational performance is "a set of measures used to quantify the effectiveness and efficiency of supply chain processes and relationships that span multiple organisational functions and firms and coordinate the supply chain". They cite Azim et al. (2015) who define operational efficiency as the quantifiable elements of an organization's process performance, such as reliability, production cycle time, and inventory turnover; Bezabh (2017) contends that operational efficiency is an organization's capacity to deliver a designed good or service at a reasonable cost. It focuses on what St Schroeder et al. (2011) define as the degree to which an organisation accomplishes its stated competitive aims; Kangethe (2015) defines operational efficiency as connected to organisational effectiveness.

Market Performance: Marketing performance is defined as the efforts made to measure performance levels such as sales, customer volume and profit (Gnizy and Shoham, 2014). Onyango (2013) defined market performance in terms of price, transaction volume and marketing costs, the ultimate markets for market participants are. Market efficiency is the final outcome of a market, which includes different types of market activities. Market efficiency refers to the extent to which available information is adequately, quickly and accurately reflected in prices (Griffin et al., 2010). According to Mamun (2015), the term efficiency refers to a market in which new information is immediately reflected in the market price of a financial asset. The term marketing refers to the strategies developed by a firm to deliver a product to customers, which require a good understanding of their needs (Todor, 2016). Santikari (2018) defined marketing effectiveness is a measure of the efficiency of the marketing function. The effectiveness of marketing can be considered.

The performance of a market demonstrates how its structure and behaviour impact the cost, quantity, and quality of the goods traded (1982, Cramer and Jensen). Agriculture depends just as much on marketing as it does on actual farming. Marketing's continuing existence as a unique organizational talent is threatened by its inability to quantify its value to the company (Rust, Ambler, Carpenter, Kumar, and Srivastava, 2004). The development of a strategy for a company to react to changes in its external environment in order to accomplish its objectives, as per Bockre and Good (1991), is referred to as marketing performance. The degree to which a corporation fulfills its marketing goals and wins and maintains the favour of customers and other partners determines its marketing success, according to (Qura Daghi, 2004). (2014) Gnizy and Shoham both Variables including sales volume, customer count, and profits are used to evaluate the efficacy of marketing campaigns. The effectiveness of marketing has been assessed using accounting indicators like margin, profit, and sales, but this approach has drawbacks.

For instance, it is often criticized for being strict and ignoring long-term marketing principles (Hallback and Gabrielsson, 2013). Marketing controls, marketing success measurements, and marketing success assessment. Marketing performance, as described by Klarmann (2007), is "the effectiveness and efficiency of an organization's marketing activities in relation to its market-related goals, such as revenue growth and market share." According to Clark et al. (2006), "Marketing performance measurement is a business process that informs an organization how well its marketing efforts are working." The success and efficiency of an organization's marketing initiatives in terms of market-related goals like sales, growth, and market share is referred to as marketing performance by Morgan et al. (2002). Market performance, in accordance with Bain (1959), is related to the financial outcomes of a market's structure and

administration, notably the relationship between distribution margins and the costs related to offering marketing services. Marketing success may be highlighted in marketing strategies, despite the fact that business practices are usually covered more often. Increasing the capacity for innovation and having a thorough understanding of how the market functions are two factors that go into producing value, and marketing performance is a means for gauging that success. If the business is properly market-oriented, it will be able to develop unique items that meet customer demands and preferences, enhancing its marketing effectiveness. Marketing teams evaluate data and results to assess the effectiveness of their marketing initiatives in achieving the goals of their marketing strategies.

Financial Performance: According to Zachar (2019), evaluating the financial worth of a company's operations and performance is known as financial performance. It can be assessed by many ratios, such as return on assets (ROA), return on equity (ROE), and return on earnings (ROE), and it demonstrates how a business uses its resources to generate wealth and value for its stakeholders. According to Kang and Kinyua (2016), financial success serves as an indicator of how well a company accomplishes the goals set forth in its financial plan. According to Kang and Kinyua (2016), financial success serves as an indicator of how well a company accomplishes the goals set forth in its financial plan. Financial performance is an indicator used to measure the extent to which a company achieves its financial strategy objectives (Kang and Kinyua, 2016). Yahaya and Lamidi (2015) argue that financial performance, especially for profitable firms, is a key determinant of their competitiveness and financial viability, which they argue affects their competitiveness, which in turn affects their ability to meet their financial obligations. The efficient and effective use of a company's resources to generate revenue is referred to as financial

performance. It is the process of calculating the financial worth of a company's operations and output (Mwangi, 2016). Financial performance is the actual performance of an organisation as assessed against the initial goals, according to Tomal and Jones (2015). Financial performance is the result of an organisation's goals, plans and activities expressed in monetary units. It refers to financial performance and can be compared with companies in similar sectors (Agola, 2014). Altmeppen et al (2017) define financial performance as management's ability and willingness to strengthen the company's finances now and in the future. This includes return on equity, return on total capital, ratios and indicators such as net premium. Evaluating an entity's policies and performance from a financial standpoint is known as financial performance. It is employed to evaluate a company's overall financial health over a specific time period and to contrast businesses in the same industry with those in various sectors and business domains (Nakajima, 2016).

The financial success of a corporation over a certain time period is known as its financial performance. Adequate capital, liquidity, solvency, efficiency, debt, and income all play a role in this. The state of a company's finances during a certain time period is considered its financial performance. This covers both how much money is made and how it is spent. A multitude of variables, such as the capital adequacy ratio, liquidity, debt, solvency, and earnings, affect this. IAI (2016) asserts that a company's financial performance reflects how well its resources are managed and controlled. Financial success is defined by Egbunike and Okerekeoti (2018), Suhadak et al. 2019 and Suhadak et al. 2019 as the effective use of a company's resources and the accomplishment of its objectives. According to Solomon and Pringle (1981), comparability criteria are required to assess the financial sustainability of an organization. As stated by Borba in 2005, "financial performance can be thought of as maximizing the wealth of the owners." The

degree to which financial objectives are being fulfilled or have been attained is known as financial performance. It is a crucial component in managing financial risk. The practice of assigning a monetary value to the outcomes of a company's policies and activities (Verma, 2023) is known as valuation. The administration and control of a company's resources are crucial to its financial performance, according to IAI (2007). Analysis of financial records and establishing the financial health of a company may both benefit from financial data. The yearly financial data of a bank were used in this research to quantify financial performance. This covers the profit margin, net interest margin, return on equity, and return on assets.

Financial success shows a company's ability to successfully use its resources. In other words, it allows you to assess a company's chances of surviving, the amount of revenue it brings in, and the value it adds to shareholders (Welc, 2022). Financial success (Naz, and Naqvi, 2016) is a metric for how well a business accomplishes its short- and long-term objectives via its operations within a certain time frame. The phrase "financial performance" refers to a technique for assessing an organization's financial health that involves looking at the revenue it makes from its regular business activities as well as the outcomes of its policies and practices. A corporation may be judged by the general public, including potential investors, based on its financial performance. Investors are more willing to put money into a firm that is doing well financially. Money is an indicator of a business's profitability since it is utilized to make decisions. A company's financial performance during a certain time period may be used to evaluate its financial health. Davis and Albright (2004) assert that a branch's performance on nine essential financial performance criteria determines its financial success. Thi Kim and others in 2021 Based on its financial performance, estimate a company's growth rate and projected growth rate.

Accounting models such as accounting earnings or earnings per share models are used to assess financial performance. In order to pinpoint problematic areas and regions, measuring financial performance has been highlighted as a key goal in all economic decision-making for both public and commercial enterprises. Chashmi and Fadaee (2016) claim that a number of variables, including as CEO remuneration, stock prices, stock risk, and investment decisions, affect how financial success is measured.

2.2 Theoretical Framework

2.2.1 Resource Based View Theory

Birger Wernerfelt first stated the theory in 1984. The roots of this theory may be traced back to Coase (1937), Penrose (1959), Stigler (1961), and Chandler (1962, 1977), who all emphasized the importance of resources and their integration into an organisation (Ngoto, 2015). The fundamental tenet of resource theory is that an organization's ability to obtain essential resources from the outside environment determines whether it will survive. Therefore, the chosen business strategy should enable the company to make the best use of its core competencies and take into account the opportunities presented by the external environment. The resource approach underlines that a company's resources play a significant role in determining its performance and competitive advantage. Two presumptions form the foundation of competitive resource analysis (Barney, 1991; Peteraf and Barney, 2003). First, the model presupposes that enterprises in the same industry can have diverse resource management practices. Second, it makes the assumption that resource heterogeneity will endure over time since some resources, such as those used to support a firm's strategy, cannot be fully transferred from one firm to another and some cannot be sold on factor markets, meaning they are difficult to store or replicate. Barney (1991)

contends that a firm gains long-term competitive advantage because unique resources are rare, valuable, exclusive, irreplaceable, and indispensable, which is also the firm's goal. Penrose (1959) contends that a resource's uniqueness is a condition of its competitive advantage. This theory was used in the study because sustainable supply chain management suggests how competitive advantage can be gained by focusing on sustainability based operations in supply chain. Thus, RBV logic can explain the capability of the resources in building and economically be part of the business.

2.2.2 Transaction Cost Theory

The basic assumption of transaction cost theory is that markets can allocate factors, services and goods inefficiently due to externalities such as natural or administrative factors (Kogut, 1988). Thus, the cost of organising trade through a market is higher than the cost of organising trade internally. These costs are often referred to as natural externalities, capital externalities and technological externalities. Strategic alliances transform these transaction costs into a cooperative structure that allows partners to reduce costs and avoid opportunism on the part of exchange partners (Beamish and Bank 1987). Transaction cost economics suggests that firms may have to negotiate when negotiation and implementation costs are prohibitive because the number of participants is small, ownership or tenancy issues are specific, uncertainty is high, or partners have strong incentives to behave opportunistically, while internalising the production process is inefficient due to lack of capabilities. Partnerships are intentional (Williamson, 1975); Hennart (1988) argues that strategic partnerships are not a matter of choice.

2.3 Empirical Review

2.3.1 Sustainable Supply Chain Practices and Operational Performance

Inferring from the resource based view theory and the transaction cost, sustainable supply chain management suggests how competitive advantage can be gained with the focus on sustainability-based operations in supply chain. As well as an economic theory provides an analytical framework in investigating the governance structure of contractual relations within a supply chain. Baah and Jin's 2019 study sought to ascertain the effects of sustainable supply chain management (SSCM) on business performance in the logistics industry. The examination of the data shows that SSCM has a positive and significant impact on organisational performance and competitive advantage. It has been demonstrated that competitive advantage significantly affects organisational performance. Competitive advantage influences SSCM and organisational performance indirectly. The results offer managers and researchers crucial insights into how supply chain management is integrated with sustainability and how this integration impacts corporate performance in the current industrial and business environment.

By modelling sustainable supply chain management practices and sustainability performance, Raza et al. (2021) intended to analyze it from the perspective of dynamic capacity. The findings demonstrate that SSM practices have a favorable impact on SCM, networking capability (NC), and SP practices; SCM and SP practices are related to SCM and NC practices. The findings demonstrate that firm size affects expected commitment differently in large and small firms. A thorough analysis of the vital success elements that affect SCM procedures is provided by Prasad et al. (2020). The study demonstrated that the intra-firm environment has a substantial positive link with SCM practices in the Indian steel industry using structural equation modelling (SEM).

The effects of SCM practices such green supply chain management, environmental management, and performance management on company performance in Ghana were examined by Adegoken et al. in 2021. Using structural equation modelling, they found a relationship between SCM practices and firm performance: 1) environmental management practices (EMP) improve environmental performance (EPE) and sustainable economic performance (SEP); 2) firm performance is strongly related to EMP and competitiveness (COMP); 3) SEP is strongly related to competitiveness and sustainability. The following indicators are relevant for environmental performance and sustainable economic performance: A positive correlation between environmental and safety management practices and business performance indicates that sustainable management principles are finally being implemented.

Wang and Dai (2017) made a significant addition to the empirical study on the effects of sustainable supply chain management practices on Chinese firm performance. The results demonstrate that SCM practices help organisation perform better on social and environmental fronts. Moreover, social and environmental performance is positively correlated with economic performance. Asamoah and Nadarajah (2020) extend and refine the concept of innovation theory based on the concepts of sustainable supply chain management (SSCM) and institutional theory. The performance of businesses is positively correlated with sustainable supply chain management, according to empirical findings. The direct explanation, in contrast, reveals a weak association. The implication is that by including innovation in the SSCM performance model, the concept's predictability with regard to performance objectives may be increased. The study makes the following assumptions in light of the presentation above:

H1: Sustainable Supply chain management will positively and significantly affect operational performance

2.3.2 Competitive Advantage and Operational Performance

Inferring from the resource based view theory and the transaction cost, sustainable supply chain management suggests how competitive advantage can be gained with the focus on sustainability-based operations in supply chain. As well as an economic theory provides an analytical framework in investigating the governance structure of contractual relations within a supply chain. Christian (2020) investigated firm performance and competitive advantage in Delta State. For instance, the researcher discovers that the resources' accessibility benefits the strategic performance of particular organisations. Bringing together the expertise and resources of many groups can boost product performance. The primary constructs connecting firms' operational and financial performance to the competitive environment of the European brewing sector are presented by Zanotti et al. (2018). The study shows that the competitive structure of the industry is significantly related to firm financial performance, but not necessarily to operational performance. Furthermore, corporate governance structure is not always significantly related to firm financial performance. The relationship between core skills, competitive advantage, and company performance is examined by Agha et al. in 2012. According to the findings, competitive advantage had a considerable impact on organisational performance in addition to having a strong beneficial impact on core competencies and competitive advantage. In SMEs in the creative sector, Muafi and Rustica (2014) investigated the relationship between IT use and elements relevant to competitive advantage and organisational success. They looked at how managerial commitment and direct and indirect government backing, among other factors,

greatly impacted IT adoption. IT use did not significantly affect business performance directly. The findings imply that competitive advantage is what drives the influence of IT use on business performance. There is a need to develop and enhance collaboration between senior management and the board since IT usage necessitates senior management involvement and board support.

Potjanajaruwit (2018) specifically investigated the causal relationship between technological capability and inter-organisational collaboration that influences the competitive advantage of Thai start-ups. The findings demonstrated that technological capability and inter-organizational collaboration have a direct causal link that positively affects startups' competitive advantage. Ramlawati (2018) discovered that survey analysis directly improves Thai start-ups' ability to compete and overall firm performance. Timely production has a considerable impact on competitive advantage and company performance, according to data analysis using partial least squares (PLS). A review of the literature was undertaken by Bishwajit et al. in 2022 to chart the theoretical and historical development of the notion of "competitive advantage." The findings demonstrate that competitive advantage has evolved over time in a variety of ways, but recent study has concentrated on enhancing economic performance in conjunction with social advantages. The study makes the following assumptions in light of the presentation above:

H2: Competitive advantage will positively and significantly affect operational performance

2.3.3 Competitive Advantage as a mediator on SSCM and Operational Performance

The effects of customer relationship management (CRM), competitive advantage (CA), and sustainable supply chain management (SSCM) on organisational performance (OP) were evaluated by Das and Hassan in 2022. The findings supported the theories. Inferring from the

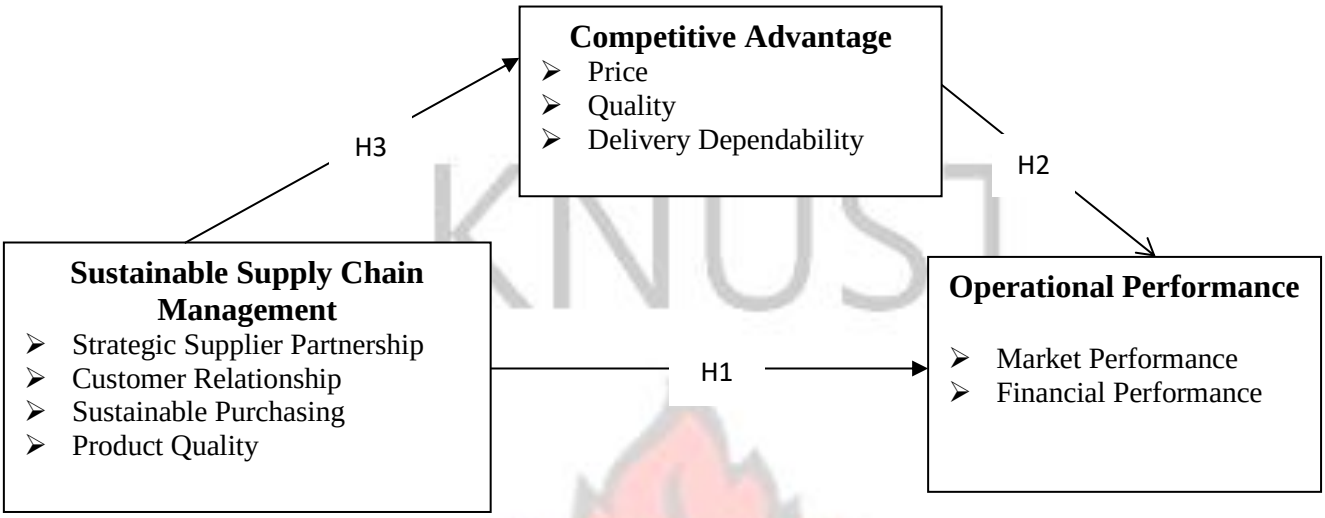
resource based view theory and the transaction cost, sustainable supply chain management suggests how competitive advantage can be gained with the focus on sustainability-based operations in supply chain. As well as an economic theory provides an analytical framework in investigating the governance structure of contractual relations within a supply chain. The results of the research revealed that SSCM and CRM were strongly associated to OP, whereas CA and OP had a favourable but non-significant association. SCM and CA are being used by an increasing number of businesses in emerging nations to attain OP. But we discovered a favourable correlation between CRM and OP. Stakeholder research was undertaken by Mukhsin and Suryanto (2022) in a joint business group (JBG) at Banten, Indonesia, to learn more about how sustainable supply chain management affects a company's ability to gain a competitive edge. The findings supported the notion that sustainable supply chain management impacts competitive advantage, competitive advantage influences company performance as well as sustainable supply chain management, and sustainable supply chain management effects business performance directly. In their study from 2021, Stroumpoulis et al. focused on the relationship between information systems and sustainable supply chain management as well as the circumstances in which information systems can enhance internal performance or a firm's competitive advantage. The results imply that SSCM practices can be supported by the use of information technologies in conjunction with solid inter-organizational ties and collaboration. Although it doesn't always result in a competitive edge, this can be very advantageous to firms by, for instance, boosting efficiency and customer loyalty. According to the study's findings, SSCM is a viable topic for further investigation.

A study by Tukamuhabwa et al. (2021) looked into the relationship between supply chain management strategies, logistics effectiveness, logistics integration, and competitive advantage in SMEs in developing nations. The results showed that supply chain management strategies and logistical integration and competitive advantage are significantly and favourably related. Additionally, there was a positive and substantial correlation between supply chain management strategies and logistical performance and logistics integration. In view of the given presentation, the study assumes the following:

H3: Competitive advantage will significantly mediate the relationship between sustainable supply chain and operational performance

2.4 Conceptual Framework

The study's premise is shown in Figure 2.1. There are three primary assumptions in the study, as shown in the picture. Inferring from the resource based view theory and the transaction cost, sustainable supply chain management suggests how competitive advantage can be gained with the focus on sustainability-based operations in supply chain. As well as an economic theory provides an analytical framework in investigating the governance structure of contractual relations within a supply chain. Examining the connection between operational success and sustainable supply chain management is the first presumption. Examining the connection between competitive advantage and operational success is the second supposition. The third supposition looks at the moderating impact of competitive advantage on the link between operational success and sustainable supply chain management.



Source: Mukhsin and Suryanto (2022)

Figure 2.1: Research Framework

CHAPTER THREE

RESEARCH METHODOLOGY AND PROFILE OF ORGANIZATION

3.0 Introduction

The approach for analyzing how sustainable supply chain management affects operational performance is laid out in this chapter, with competitive advantage in Ghana's service sector acting as a moderator. The study population, sampling strategy, sample size, data sources, data collecting and analysis techniques, validity and reliability checks, ethical considerations, and research design have all been discussed.

3.1 Research Design

The research used a positivist ontology and a quantitative research design. The research design is descriptive and explanatory. A research design is a plan or structure for finding answers to research questions. Creswell (2003) defines quantitative research as a formal, objective and systematic procedure for describing and testing relationships and exploring causal relationships between variables. An interpretive research methodology is used to determine the impact of sustainable supply chain management on operational performance and competitive advantage in Ghana's service sector. Survey involves the collection of data from the people sampled by the means of self-reporting, thus, the people will respond to the questions that the researcher will ask them (Polit and Hungler, 1993; Mouton, 1996). These methods are used because the researcher is trying to measure numerical effects.

3.2 Population of the study

According to Creswell (2003), a population is a group of entities (people, things, and events) that satisfy the requirements for inclusion in a research. The study's target audience is Ghanaian

service providers. The target population comprises of particular Ghanaian public service organizations. Particularly, the Greater Accra Metropolis in Ghana's Ghana Port and Harbor Authority, Ghana Health Service, Ghana Statistical Service, and Ghana Education Service. The justification for this location and population is due to data availability, accessibility and convenience. The following target groups were selected from each of the aforementioned public agencies, Supply chain officers, inventory managers, logistics officers, accountants, finance officers and heads of unit.

Table 3.1: sample size estimation

Selected Public Agencies	Supply Chain officers	Top Management	Internal auditors	Middle managers	**Total**
Ghana Port and Harbor Authority	8	8	4	10	**30**
Ghana Education Service	8	8	4	10	**30**
Ghana Statistical Service	8	8	4	10	**30**
Ghana Health Services	8	8	4	10	**30**
Customs Services	8	8	4	10	**30**
Total	**40**	**40**	**20**	**50**	**150**

Author's Creation (2021)

The researcher adopted both purposive to select the public agencies. Each public agency was given a quota of 30 respondents who were selected from top and middle managers, procurement officers, and internal auditors. Convenient sampling technique was used to collect data from respondents. These sampling techniques were selected to complete data collection on evaluating the impact of sustainable supply chain practices on operational effectiveness and the mediating role of competitive advantage in Ghana's service industry.

3.3 Sampling techniques and Sample Size

Sampling is defined as the selection of representative from the target population. Due to limited resources, sampling is very important in any study. Most studies aim to obtain population information. This study used a sample of one hundred and fifty (150) participants, according to Pallant (2007), a sample size of more than 30 people does not affect statistical measurements and is not a major problem, even if the responses do not have a normal distribution. The study will used convenience sampling. The sample is formed by selecting a representative number of units from different service sectors, taking into account their readiness and accessibility.

3.4 Data Collection

Oswal (1991) asserts that the source of data is crucial to every study because it greatly affects the outcomes. There is a strong likelihood that reliable results won't be obtained if the data gathered is inaccurate and used in the analysis of the study. The primary and secondary sources of data are the two basic sources of information. First-hand information obtained on the ground is referred to as primary data. Data from secondary sources are those that have already been collected and processed. Due to the nature of the research design, primary data will be used as the primary sources of information in this study.

Questionnaires are a technique used by researchers to gather the data required for the study. A Likert scale, which ranges from 1 (strongly disagree) to 5 (strongly agree), is employed in several investigations. Surveys are made to be completed at the respondent's convenience. A large sample of the population can be used with questionnaires at a low cost, they are simple to use, most respondents are familiar with their format and can complete them quickly, they are

standard and data are collected in a standard way, they can be used to address sensitive issues that users do not want to discuss with interviewers, and they give respondents time to reflect. The survey's questions are based on the findings of earlier research, but they have been modified to reflect the goals of this investigation and guarantee that respondents' answers are pertinent to those goals. The measurement instruments were adopted and modified from literature. The measurement instruments for sustainable supply chain management was measured using four practices namely, strategic supplier partnership, customer relationship, sustainable purchasing and product quality which were adopted from Cart et al. (2000), Li et al. (2006), Lotfi et al. (2013), Hamdy et al. (2018). Also, competitive advantage was measured using three dimensions namely; price, quality and delivery dependability which were adopted from Li et al. (2006). Further, operational performance was measured using two dimensions namely; market performance and financial performance which were adopted from Fu et al. (2022).

3.5 Data Analysis

Quantitative data analysis, according to Sullivan (2001), entails the use of statistical techniques to gather, classify, analyze, summarize, and comprehend data. Using a questionnaire, the researcher conducts a field study in the chosen service industry to gather primary data. Processing and analysis of data come after data collection. The gathered information is transformed into a format that can be processed and analyzed. The information gathered through the questionnaire is analyzed to guarantee its quality, consistency, and completeness. Microsoft Excel and SPSS (Statistical Package for Social Sciences) version 23 will be used to evaluate the obtained data. As methods for data analysis, frequency, correlation, regression, and descriptive tables will be employed.

3.6 Validity and Reliability

The extent to which a measurement tool measures what it is designed to assess determines its validity (Polit and Hungler, 1993). The degree to which a measurement tool accurately represents what is being measured is known as content validity. The survey asks various questions about sustainable supply chain management, productivity, and competitive advantage to assess content validity. The data gathered from the document analysis was used to create questions that are representative of the respondents. Consistency in the questionnaire is another factor that guarantees content validity. The researcher gave out all of the questionnaires to the responders immediately. Simple language should be used when posing questions to ensure that they are understood. Clear instructions should be given to respondents, and if they are unable to read, the researcher should complete the surveys on their behalf. In the presence of the researcher, each respondent filled out the questionnaire (Creswell, 2003).

According to Polit and Hangler (1993), dependability is the consistency with which a measure evaluates a particular attribute. Reducing causes of measurement error, such as the bias of the data collector, can also increase reliability. Standardized settings would lessen bias in data collecting, such as the researcher himself completing the questionnaire and all respondents sharing comparable personal traits, including friendliness and support. To maintain confidentiality, privacy, and general physical welfare, the physical and psychological setting used for data collecting should be welcoming. Do not provide your name on the questionnaire to maintain privacy.

3.7 Ethical Considerations of the Study

It is important to make sure that the survey does not violate ethical standards. Survey questions should therefore be designed in such a way that they do not cause discomfort or confusion for the participants. Participants are assured that the information provided will be kept completely confidential. The information received will be treated as confidential. Participation is voluntary and not coercive. Informed consent will be obtained from the respondent prior to participation in the study. The researcher will be very careful and objective during the study.

3.8 Profile of Organization

The role of public servants in public administration is considered to be very important. The civil service is one of the closest institutions to an elected government and can be described as the secretariat of government administration. The civil service is essential for governments all over the world to achieve their policy objectives in terms of the material, social and moral development of their citizens. Government effectiveness therefore depends on the efficiency of the civil service and its ability to respond effectively to policy decisions. The role of the civil service is to assist the government in formulating and implementing policies, decisions, programmes and plans for the management and development of the country and the welfare of its citizens. In fact, the civil service is often referred to as the guardian of the government's reputation. When civil servants fail to implement policies in a sound and effective manner, they not only fail the government, but can also damage its reputation and stability.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.0 Introduction

This chapter presents analyses and comments of the study's findings. Finding out whether competitive advantage acted as a mediator in the relationship between operational performance and sustainable supply chain management practices was the main objective of the study. The study specifically examines the relationship between operational performance and sustainable supply chain management practices, competitive advantage, and competitive advantage as a mediating factor. The analysis was performed using SPSS version 26 statistical tool for the social sciences (SPSS). Regression analysis, descriptive statistics, reliability and validity checks, correlation matrices, and frequency and percentage calculations were all carried out.

4.1 Demographic Information

Table 4.1: Demographic Characteristics

Demographics	Frequency	Percentage
Gender		
Male	94	72.3
Female	36	27.7
Age		
21-25 years	27	20.8
26-30 years	58	44.6
31-35 years	30	23.1
36-40 years	15	11.5
Level of Education		
Diploma/HND	15	11.5
Bachelor degree	72	55.4
Masters' degree	43	33.1
Job Designation		
Administrative manager	15	11.5
Supply chain manager	28	21.5
Accountant	15	11.5
Supply chain officer	29	22.3
Others	43	33.1

Years of working with the institution		
0-3 years	42	32.3
4-7 years	58	44.6
10 years and above	30	23.1

Source: Field Data, 2022

The demographics of the respondents are shown in Table 4.1. According to the poll, men made up the bulk of respondents (72.3%), with women making up the remaining 27.7%. In addition, the majority, 44.6%, were between the ages of 26 and 30; 23.1%, between 31 and 35; 20.8%, between 21 and 25; and the final 11.5%, between 36 and 40. Also, slightly above half of the respondents (55.4%) were bachelor degree holder, 33.1% were masters' degree and the remaining 11.5% were diploma/HND degree holders. With job designation, 33.1% indicated other designation, 22.3% indicated supply chain officers, 21.5% were supply chain managers, 11.5% were accountant and administrative manager each. With years of working with the institution, 44.6% had worked with the institution for 4-7 years, 32.3% had worked for 0-3 years and the remaining 23.1% had worked for 10 years and above.

4.2 Sustainable Supply Chain Management Practices

Table 4.2: Descriptive Statistics on Sustainable Supply Chain Management Practices

Statements	Min	Max	Mean	Std. D
Strategic Supplier Partnership				
Our company considers quality as our number one criterion in selecting suppliers	1.00	5.00	2.7462	.99854
Our company regularly solves problems jointly with our suppliers	1.00	5.00	3.5077	1.57128
Our company includes our key suppliers in our planning and goals-setting activities	1.00	5.00	3.3231	1.60046
Our company actively involves our key suppliers in new product development processes	1.00	5.00	4.0462	1.19340
Customer Relationship				
Our company frequently interacts with customers to set reliability, responsiveness and other standards for us	1.00	5.00	4.2077	1.18581
Our company frequently measures and evaluates customer satisfaction	1.00	5.00	4.0462	1.32864

Our company frequently facilitates customers' ability to seek assistance from us	1.00	5.00	3.9385	1.38516
Our company periodically evaluates the importance of our relationship with our customers	1.00	5.00	4.1692	1.32442
Sustainable Purchasing				
Our company purchases recycled packaging	1.00	5.00	3.6692	1.39428
Our company purchases packaging that is of lighter weight	1.00	5.00	4.0000	1.26980
Our company uses a life-cycle analysis to evaluates the environmental friendliness of products and packaging	1.00	5.00	3.8154	1.56901
Our company asks suppliers to commit to waste reduction goals	1.00	5.00	3.6077	1.23575
Product Quality				
Our company meets the criteria for ease of production or assembly	1.00	5.00	4.3000	1.17895
Our company matches the requirements of the customer's production process	1.00	5.00	4.0923	1.43298
Our company has internal scrap and rework costs as a percent of product cost	1.00	5.00	4.4615	1.03545
Our company has internal yield on new product introduction	1.00	5.00	4.2923	1.25412

Source: Field Data, 2022

Descriptive statistics on sustainable supply chain management are shown in Table 4.2 utilising the practises of strategic supplier partnerships, customer relationships, sustainable purchasing, and product quality. According to the study, with a mean of 4.04 and a standard deviation of 1.19, the majority of respondents believed that their company actively incorporates its important suppliers in the creation of new products. With a mean of 3.50 and a standard deviation of 1.57, the majority, or 55 percent, were unsure whether their organisation consistently resolves issues with its suppliers. This chapter presents analyses and comments of the study's findings. Finding out whether competitive advantage acted as a mediator in the relationship between operational performance and sustainable supply chain management practises was the main objective of the study. The study specifically examines the relationship between operational performance and sustainable supply chain management practises, competitive advantage, and competitive advantage as a mediating factor. The analysis was performed using SPSS version 26 statistical

tool for the social sciences (SPSS). Regression analysis, descriptive statistics, reliability and validity checks, correlation matrices, and frequency and percentage calculations were all carried out.

With a mean of 4.20 and a standard deviation of 1.18, the majority of respondents felt that their organisation routinely communicates with consumers to set standards for dependability, responsiveness, and other factors. The majority of respondents, with a mean of 4.04 and a standard deviation of 1.32, concurred that their organisation regularly measures and reviews customer satisfaction. The responder also concurred that, with a mean of 4.16 and a standard deviation of 1.32, their organisation often assesses the value of its relationships with its consumers. With a mean of 3.93 and a standard deviation of 1.38, the respondents did not agree that their business frequently makes it easier for clients to contact us for assistance.

With a mean of 4.00 and a standard deviation of 1.26, most respondents agreed that their organisation purchases packaging that is less in weight. The majority also expressed uncertainty about whether their company purchased recycled packaging, with a mean of 3.66 and a standard deviation of 1.39; whether it evaluated the environmental friendliness of products and packaging using a life-cycle analysis, with a mean of 3.81 and a standard deviation of 1.56; and whether it asked suppliers to commit to waste reduction goals, with a mean of 3.60 and a standard deviation of 1.23.

The majority of respondents, with a mean of 4.30 and a standard deviation of 1.17, agreed that their organisation met the requirements for ease of manufacturing or assembly with regard to product quality. Additionally, their business met the production process criteria of the customer with a mean of 4.09 and a standard deviation of 1.43. Again, we are unsure given that their company's internal yield on the introduction of new products has a mean of 4.29 and a standard

deviation of 1.25 and that their company's internal scrap and rework expenses as a percentage of product cost have a mean of 4.46 and a standard deviation of 1.03, respectively.

The results suggest that the majority of respondents stated that their company actively incorporates its main suppliers in the development of new products through the use of sustainable supply chain management practises. Their business also routinely engages with clients to establish standards for us in terms of dependability, attentiveness, and other areas. Once more, their business regularly assesses and monitors consumer happiness. Additionally, their business regularly assesses the significance of our relationship with our clients. Additionally, their business buys lighter-weight packaging. Furthermore, their business satisfies the requirements for simple assembly or production. Additionally, their business complies with the demands of the client's production process. Additionally, their business charges internal fees for scrap and rework as a percentage of product costs. Lastly, their company have internal yield on new product introduction.

4.3 Competitive Advantage

Table 4.3: Descriptive Statistics on Competitive Advantage

Statements	Min	Max	Mean	Std. D
Price				
Our company has the capability to compete against major competitors based on low price	1.00	5.00	4.3154	1.16828
Our company offer competitive prices	1.00	5.00	4.1385	1.35116
Our company is able to offer prices as low or lower than our competitors	1.00	5.00	4.5538	.92394
Quality				
Our company offer high quality products to our customer	1.00	5.00	4.6077	.90216
Our company offer products that are highly reliable	1.00	5.00	3.3000	1.58799
Our company offer products that are very durable	1.00	5.00	4.3000	1.20496
Delivery Dependability				
Our company delivers the kind of products needed	1.00	5.00	4.3385	1.13816
Our company delivers customer order on time	1.00	5.00	3.3923	1.59211

Our company provides dependable delivery	1.00	5.00	2.5692	1.48866

Source: Field Data, 2022

The results of the descriptive statistics on competitive advantage are shown in Table 4.3. With a mean of 4.31 and a standard deviation of 1.16, the study found that the majority of respondents believed their organisation had the ability to compete against significant rivals on the basis of low price. They also concurred that their business offers pricing that are competitive, with a mean of 4.12 and a standard deviation of 1.35. With a mean of 4.55 and a standard deviation of 0.92, the respondents once again concurred that their business can offer prices that are as cheap as or lower than those of our competitors. With a mean of 4.60 and a standard deviation of 0.90, the respondents also concurred that their business provides high-quality items to its clients. Furthermore, with a mean of 4.30 and a standard deviation of 1.20, they concurred that their business provides products that are very durable. Once more, they concurred that their business provides the required products, with a mean of 4.33 and a standard deviation of 1.13. Nevertheless, with a mean of 3.30 and a standard deviation of 1.58, the majority were unsure whether their organisation offered products that were extremely reliable. Additionally, with a mean of 3.39 and a standard deviation of 1.59, the respondents were unsure that their business delivered customer orders on time. However, with a mean of 2.56 and a standard deviation of 1.48, the majority of respondents disputed that their organisation offers reliable delivery.

The results suggest that, with the use of competitive advantage strategies, the majority of respondents believed that their organisation had the ability to compete against significant rivals on the basis of low prices. Additionally, their business has affordable prices. Once more, their business may give pricing that are on par with or lower than those of our rivals. Additionally, their business sells clients high-quality products. They also concurred that the things their

business sells are quite durable. They concurred once more that their business provides the required products.

4.4 Operational Performance

Table 4.4: Descriptive Statistics on Operational Performance

Statements	Min	Max	Mean	Std. D
Market Performance				
Our company corporation responds quickly to market changes to improve the products and services	1.00	5.00	4.3385	1.13816
Our company supply chain strategy has the ability to reduce operational complexities	1.00	5.00	3.3923	1.59211
Our company supply chain corporation's focused on operational aspects rather than financial aspects	1.00	5.00	2.5692	1.48866
Our company supply chain strategy has the ability to change production capacity quickly based on customer demands	1.00	5.00	3.4692	1.57593
Financial Performance				
Our company uses supply chain strategy to increase organisation operational performance	1.00	5.00	4.1846	1.28065
Our company uses supply chain strategy has positive impact on organizational financial performance	2.00	5.00	3.9462	.72936
Our company uses supply chain strategy to reduce expenses and increase its profitability	2.00	5.00	4.4000	.99300
Our company corporation has the capability to control the sales and distribution network which ultimately will impact financial performance	1.00	5.00	3.9077	1.42212

Source: Field Data, 2022

Table 4.4 displays the findings of the descriptive statistics on operational performance. The study discovered that the majority of respondents stated that their corporate corporation reacts quickly to market changes to improve the products and services, with a mean of 4.33 and a standard deviation of 1.13. Again, their organisation uses supply chain strategy to enhance organisational operational performance, with a mean of 4.18 and a standard deviation of 1.28. Additionally, to reduce expenses and increase profitability, their company employs supply chain strategy, with a mean of 4.40 and a standard deviation of 0.99. With a mean of 3.39 and a standard deviation of

1.59, the majority of respondents did not believe that their company's supply chain strategy might help to minimize operational complexity. Again, with a mean of 3.46 and a standard deviation of 1.57, their corporate supply chain strategy has the flexibility to quickly alter production capacity in response to client demands. Additionally, with a mean of 3.94 and a standard deviation of 0.72, their company's use of supply chain strategy has a favourable impact on organisational financial success. Additionally, their corporate entity has the capacity to exert control over the sales and distribution network, which, with a mean of 3.90 and a standard deviation of 1.42, will ultimately affect financial performance. The results suggest that the majority of respondents agreed that their corporate corporation swiftly reacts to market changes to improve the products and services thanks to operational performance practises. Their business once more employs supply chain strategy to improve organisational performance. Additionally, their business uses supply chain strategy to lower costs and boost profitability.

4.5 Validity and Reliability Test

Factor analysis and Cronbach alpha were used in testing for the validity and the reliability of the measurement instruments. Validity and reliability are prerequisites to assure the integrity and quality of measurement instrument (Haynes et al., 2017). The acceptance and rejection of the measurements constructs have been presented below.

4.5.1 Factor Analysis on Sustainable Supply Chain Management Practices

Validity and reliability are prerequisites to assure the integrity and quality of measurement instrument (Haynes et al., 2017). The factor analysis and Cronbach alpha scores used to gauge the constructions of sustainable supply chain management practices are shown in Table 4.5.

According to Hair et al. (2014), a measurement is considered to be accurate when the Cronbach alpha score is higher than the minimum acceptable value, which is 0.7 or better, and the factor loading is 0.5 or higher. The score of the Cronbach alpha is 0.850, and factor loading ranges from 0.528 to 0.866. The result indicated that sustainable supply chain management practices have met the minimum acceptable rate for both Cronbach alpha and factor loading. Hence, the measurement instrument for the construct is said to be valid and reliable. This result confirms the study of Kubai (2019), who indicated that, when the correlation between the two sets of test is significant then observations have not changed substantially hence the aspect of time is very critical for this type of reliability. Also, a research instrument can be reliable and not valid this is not the case in this study (Kubai, 2019).

Table 4.5: EFA on Sustainable Supply Chain Management Practices

	Factor Loading
Our company considers quality as our number one criterion in selecting suppliers	.725
Our company regularly solves problems jointly with our suppliers	.648
Our company includes our key suppliers in our planning and goals-setting activities	.583
Our company actively involves our key suppliers in new product development processes	.835
Our company frequently interacts with customers to set reliability, responsiveness and other standards for us	.583
Our company frequently measures and evaluates customer satisfaction	.720
Our company frequently facilitates customers' ability to seek assistance from us	.820
Our company periodically evaluates the importance of our relationship with our customers	.528
Our company purchases recycled packaging	.825
Our company purchases packaging that is of lighter weight	.866
Our company uses a life-cycle analysis to evaluates the environmental friendliness of products and packaging	.561
Our company asks suppliers to commit to waste reduction goals	.583
Our company meets the criteria for ease of production or assembly	.606
Our company has internal scrap and rework costs as a percent of product cost	.591

Our company has internal yield on new product introduction	.748
Eigenvalue	5.772
% of Variance	36.075
Cronbach Alpha	0.850

KMO=0.674; Chi-square=1455.292; df=120; Sig. = 0.000

Extraction Method: Principal Component Analysis.
a. 5 components extracted.

4.5.2 Factor Analysis on Competitive Advantage

Validity and reliability are prerequisites to assure the integrity and quality of measurement instrument (Haynes et al., 2017). Table 4.6 presents the factor analysis and Cronbach alpha results used in measuring competitive advantage constructs. According to Hair et al. (2014), a measurement is considered to be accurate when the factor loading is 0.5 or higher and the Cronbach alpha score is greater than the minimum acceptable value, which is 0.7. Factor loading ranges from 0.649 to 0.906, and the Cronbach alpha score is 0.708. According to the outcome, competitive advantage has achieved factor loading and Cronbach alpha levels that are at least adequate. As a result, it can be said that the measurement tool for the construct is valid and trustworthy. This result confirms the study of Kubai (2019), who indicated that, when the correlation between the two sets of test is significant then observations have not changed substantially hence the aspect of time is very critical for this type of reliability. Also, a research instrument can be reliable and not valid this is not the case in this study (Kubai, 2019).

Table 4.6: EFA on Competitive Advantage

	Factor loading
Our company has the capability to compete against major competitors based on low price	.828
Our company offer competitive prices	.649
Our company is able to offer prices as low or lower than our competitors	.747

Our company offer high quality products to our customer	.663
Our company offer products that are highly reliable	.865
Our company offer products that are very durable	.757
Our company delivers the kind of products needed	.896
Our company delivers customer order on time	.733
Our company provides dependable delivery	.906
Eigenvalue	3.721
% of Variance	41.344
Cronbach Alpha	0.708

KMO=0.790; Chi-square=415.382; df=36; Sig. = 0.000

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

4.5.3 Factor Analysis on Operational Performance

Validity and reliability are prerequisites to assure the integrity and quality of measurement instrument (Haynes et al., 2017). Table 4.7 presents the factor analysis and Cronbach alpha results used in measuring operational performance constructs. A measurement according to Hair et al. (2014), is reliable when the Cronbach alpha score exceed the minimum acceptable value that is 0.7 or better and the factor loading is 0.5 and above. The score of the Cronbach alpha is 0.789, and factor loading ranges from 0.511 to 0.879. The result indicated that operational performance has met the minimum acceptable rate for both Cronbach alpha and factor loading. Hence, the measurement instrument for the construct is said to be valid and reliable. This result confirms the study of Kubai (2019), who indicated that, when the correlation between the two sets of test is significant then observations have not changed substantially hence the aspect of time is very critical for this type of reliability. Also, a research instrument can be reliable and not valid this is not the case in this study (Kubai, 2019).

Table 4.7: EFA on Operational Performance

	Factor loading
Our company corporation responds quickly to market changes to improve the products and services	.511
Our company supply chain strategy has the ability to reduce operational complexities	.617
Our company supply chain corporation's focused on operational aspects rather than financial aspects	.845
Our company supply chain strategy has the ability to change production capacity quickly based on customer demands	.667
Our company uses supply chain strategy to increase organisation operational performance	.832
Our company uses supply chain strategy has positive impact on organizational financial performance	.739
Our company uses supply chain strategy to reduce expenses and increase its profitability	.879
Our company corporation has the capability to control the sales and distribution network which ultimately will impact financial performance	.666
Eigenvalue	3.624
% of Variance	45.302
Cronbach Alpha	0.789

KMO=0.731; Chi-square=437.707; df=28; Sig. = 0.000
Extraction Method: Principal Component Analysis.
a. 2 components extracted.

4.6 Correlation Matrix

Table 4.8: Correlation Matrix

	Sustainable SCM	Competitive Advantage	Operational Performance
Sustainable SCM	1		
Competitive Advantage	0.772 (0.000)	1	
Operational Performance	0.787 (0.000)	0.718 (0.000)	1

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

According to the correlation matrix table, there was a substantial association between sustainable supply chain and operational performance (r=0.787, p-value 0.05). Once more, the analysis

discovered a substantial association between competitive advantage and operational effectiveness (r=0.718, p-value 0.05).

4.7 Regression Analysis

Table 4.9: Multiple Regression

	Performance Model 1	Performance Model 2	Performance Model 3	p-value
	Beta (t-value)	Beta (t-value)	Beta (t-value)	
Direct effect				
Sustainable supply chain mgt.	0.447(14.421)			0.000
Competitive advantage		0.755(11.680)		0.000
Mediating role				
SSCM			0.326(6.954)	0.000
Competitive advantage			0.288(3.319)	0.001
Model Indices				
R	0.787	0.718	0.806	
R Square	0.619	0.516	0.649	
Adjusted R Square	0.616	0.512	117.624	
Df	1	1	2	
F-statistics	207.953	136.420	117.624	
p-value	0.000	0.000	0.000	

based on what the regression table shows. Three hypotheses were addressed by the study. Examining how sustainable supply chain management practises affect operational performance is the first hypothesis. The second hypothesis looks at how competitive advantage affects operational performance, and the third hypothesis looks at how competitive advantage mediates the link between operational performance and sustainable supply chain management strategies. The study found that, sustainable supply chain management practices had significant effect on operational performance (Beta = 0.447, T-statistics = 14.421, p-value = 0.000) as presented in the model 1. Moving on with the model 2, the study found that, competitive advantage had significant effect on operational performance (Beta = 0.755, T-statistics = 11.680, p-value = 0.000). Finally, the study found that, competitive advantage significantly mediate the

relationship between sustainable supply chain management practices on operational performance (Beta = 0.326, T-statistics = 6.954, p-value = 0.000) (Beta = 0.288, T-statistics = 3.319, p-value = 0.001).

4.8 Discussion of Results

4.8.1 Relationship between Sustainable Supply Chain Management Practices and Operational Performance

The study discovered that operational performance was significantly impacted by sustainable supply chain management practises. The theory is accepted, and evidence supports it. For instance, Supply chain management activities typically include monitoring the integration of sustainability criteria and supporting the supplier selection process (Lee, 2021). According to the literature, several aspects of supply chain management, such as strategy, supplier partnerships, customer relationships and knowledge sharing, influence various aspects of firm performance, such as financial performance, operational performance and value for money (Khaddam et al., 2020). According to Karim and Rafiee (2014), effective SSCM can improve business performance in five areas, including customer relationships, supplier relationships, information levels, information sharing and inhibition. Furthermore, research findings (Oelze, 2017; Nkemkiafu et al., 2019) suggest that SSCM is an internal and external integration that provides competitive advantages in pricing, product innovation, quality, delivery, information sharing and market synchronisation. Furthermore, (Palandeng et al., 2018; Nkemkiafu et al., 2019) state that SSCM is a key factor in achieving competitive advantage. Therefore, SCM is strongly related to firm performance, which supports the findings of (Nkemkiafu et al., 2019) that SCM is positively related to product quality and performance (Khaddam et al., 2020), which also supports this study and suggests that SCM has a positive impact on firm performance.

Also, Baah and Jin (2019) looked into how the logistics industry's firms' function and how sustainable supply chain management (SSCM) affects this. The data analysis demonstrates that SSCM significantly and favourably affects organisational performance and competitive advantage. Competitive advantage has been shown to have a major impact on organisational success. Competitive advantage influences SSCM and organisational performance indirectly. The results offer managers and researchers crucial insights into how supply chain management is integrated with sustainability and how this integration impacts corporate performance in the current industrial and business environment.

As part of their research, Raza et al. (2021) developed a model of sustainable supply chain management practises and sustainability performance and looked at it from the perspective of dynamic capacities. The results show that SSM practices positively influence SCM, NC and SP practices; the relationship between SCM and SP practices depends on SCM and NC practices. The results show that firm size has a differential effect on expected commitment in large and small firms. Prasad et al. (2020) provide a comprehensive review of critical success factors that influence SCM practices and processes. Using structural equation modelling (SEM), the study found that the intra-firm environment has a significant positive relationship with SCM practices in the Indian steel industry.

The effects of SCM practises such green supply chain management, environmental management, and performance management on company performance in Ghana were examined by Adegoken et al. in 2021. Through the use of structural equation modelling, they discovered a link between SCM procedures and business performance: Environmental management practises (EMP)

enhance both environmental performance (EPE) and sustainable economic performance (SEP); they also highly correlate with company performance, competitiveness (COMP), and sustainability (SEP). The following indicators are relevant for environmental performance and sustainable economic performance: A positive correlation between environmental and safety management practices and business performance indicates that sustainable management principles are finally being implemented.

A significant addition to empirical research on the effects of sustainable supply chain management practises on Chinese firm performance is made by Wang and Dai (2017). The findings suggest that the social and environmental performance of businesses is positively impacted by their SCM practises. Additionally, there is a positive correlation between social and environmental success and economic performance. Asamoah and Nadarajah (2020) extend and refine the concept of innovation theory based on the concepts of sustainable supply chain management (SSCM) and institutional theory. Empirical results show that sustainable supply chain management is positively related to firm performance. In contrast, the direct explanation shows a weak correlation. The implication is that the inclusion of innovation in the SSCM performance model may increase the predictability of the concept in relation to performance goals.

4.8.2 Relationship between Competitive Advantage and Operational Performance

Additionally, the study discovered that operational performance was significantly impacted by competitive advantage. The second theory is supported by evidence and accepted. A sustainable competitive advantage provides a set of benefits that a company can use as a resource to ensure

adequate performance and create the value needed to continue to compete in the market, increase profits and maintain a high level of efficiency. This means that it can indirectly help to implement the strategies needed to improve the performance and competitiveness of the organisation (Studies and Adeeleh, 2020) According to (Nkemkiafu et al., 2019), competitive advantage improves business performance (CP), which indicates a direct positive impact of competitiveness on organisational performance. However, it should be noted that a firm's competitive advantage is strengthened when its CP is higher than that of its competitors. (Quynh and Huy, 2018) argue that competitive advantage is temporary, as competitors often look for ways to exploit the acquired competitive advantage. However, an organisation must ensure that it continuously develops new competitive advantages to stay ahead. A company's success depends on its competitive advantage under the right conditions. Palandeng et al. (2018), point out that in order to achieve competitive advantage, a company does not have to be the best in all dimensions, (Quynh and Huy, 2018), but according to (Rahman and Ramli, 2014), a company must excel in value creation, (Rahman and Ramli, 2014), they note the correlation between competitive advantage and company performance. Competitive advantage can be developed from the value a company provides to its customers through price, quality, delivery reliability, time to market and product innovation (Alawadi et al., 2019; Daeng et al., 2019; Dursun et al., 2020).

Christian (2020), for instance, looked at company performance and competitive advantage in Delta State. For instance, the researcher discovers that the resources' accessibility benefits the strategic performance of particular organizations. Bringing together the expertise and resources of many groups can boost product performance. The primary constructs connecting firms' operational and financial performance to the competitive environment of the European brewing

sector are presented by Zanotti et al. (2018). The study shows that the competitive structure of the industry is significantly related to firm financial performance, but not necessarily to operational performance. Furthermore, corporate governance structure is not always significantly related to firm financial performance.

The relationship between core skills, competitive advantage, and company performance is examined by Agha et al. in 2012. According to the findings, competitive advantage had a considerable impact on organisational performance in addition to having a strong beneficial impact on core competencies and competitive advantage. In SMEs in the creative sector, Muafi and Rustica (2014) investigated the relationship between IT use and elements relevant to competitive advantage and organisational success. They looked at how managerial commitment and direct and indirect government backing, among other factors, greatly impacted IT adoption. IT use did not significantly affect business performance directly. The findings imply that competitive advantage is what drives the influence of IT use on business performance. There is a need to develop and enhance collaboration between senior management and the board since IT usage necessitates senior management involvement and board support.

Potjanajaruwit (2018) specifically investigated the causal relationship between technological capability and inter-organisational collaboration that influences the competitive advantage of Thai start-ups. The results showed that the causal relationship between technological capability and inter-organisational collaboration has a direct positive impact on the competitive advantage of start-ups. Ramlawati (2018) found that survey analysis has a direct positive impact on the competitive advantage and firm performance of Thai start-ups. Based on partial least squares (PLS) data analysis, it was found that timely production has a significant impact on competitive

advantage and firm performance. Bishwajit et al. (2022) conducted a literature review that traced the theoretical and temporal evolution of the concept of 'competitive advantage'. The results show that competitive advantage has emerged in various forms over time, but that recent research has focused on improving economic performance in combination with social benefits.

4.8.3 Competitive Advantage as a mediator on SSCM and Operational Performance

Additionally, the study discovered that the relationship between effective operational performance and sustainable supply chain management practises is highly mediated by competitive advantage. The third theory is supported by evidence and accepted. For instance, Barney has shown that organisations can develop sustainable supply chain management (SCM) through specific resources related to incompetence, scarcity and competition (Cetin and Knouch, 2018). Sustainable supply chain combines the concepts of SCM and sustainability (Turker and Altunt, 2014) and requires all organisational functions to improve SCM sustainability. Performance drivers include product development strategies, supplier management, production and distribution, planning and control, sourcing and information quality. This study (Nkemkiafu et al., 2019) shows that SCM can effectively increase an organisation's competitive advantage based on established relationships with suppliers and customers, reduce delays and ensure high quality of raw materials and products, thereby increasing competitiveness in the market. It also helps to provide fast service with a wide range of products at low cost to compete effectively in a sector considered highly competitive (Palandeng et al., 2018; Nkemkiafu et al., 2019) The results also establish a link between supply chain management and competitive advantage. Using the results from (Nkemkiafu et al., 2019) also helps to establish the link between supply chain management and competitive advantage. It should also be noted that good SCM practices can

improve a company's operational and financial performance (Khaddam et al., 2019). Some SCM indicators, such as supplier collaboration strategies, knowledge sharing and customer relationships, price, product innovation, quality, time-to-market and security of supply, are also important, some of which affect aspects of competitive advantage.

Further, Das and Hassan (2022) evaluated how competitive advantage (CA), customer relationship management (CRM), and sustainable supply chain management (SSCM) affected organisational performance (OP). The findings supported the theories. The results of the research revealed that SSCM and CRM were strongly associated to OC, whereas CA and OP had a favourable but non-significant association. SCM and CA are being used by an increasing number of businesses in emerging nations to attain OC. But we discovered a favourable correlation between CRM and OP.

Mukhsin and Suryanto (2022) conducted a stakeholder study in a joint venture ceramics manufacturing company (JBG) in Banten, Indonesia, to investigate the impact of sustainable supply chain management on the company's performance in transferring competitive advantage. The findings supported the notion that sustainable supply chain management impacts competitive advantage, competitive advantage influences company performance as well as sustainable supply chain management, and sustainable supply chain management effects business performance directly. The study's findings are shown in the section below.

In their study from 2021, Stroumpoulis et al. focused on the relationship between information systems and sustainable supply chain management as well as the circumstances in which information systems can enhance internal performance or a firm's competitive advantage. The results imply that SSCM practises can be supported by the use of information technologies in

conjunction with solid inter-organizational ties and collaboration. Although it doesn't always result in a competitive edge, this can be very advantageous to firms by, for instance, boosting efficiency and customer loyalty. According to the study's findings, SSCM is a viable topic for further investigation.

The relationship between supply chain management techniques, logistics effectiveness, logistics integration, and competitive advantage in SMEs in developing countries was investigated in a study by Tukamuhabwa et al. (2021). The findings demonstrated a substantial and favourable relationship between supply chain management techniques and logistical integration and competitive advantage. Furthermore, logistics integration was strongly and favourably correlated with both supply chain management techniques and logistical performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The study's conclusion is presented in this chapter. The chapter includes an overview of the main conclusions, a recommendation, and areas for further research.

5.1 Summary of Findings

5.1.1 Relationship between Sustainable Supply Chain Management and Operational Performance

The study discovered that operational performance was significantly impacted by sustainable supply chain management practises. Additionally, the majority of respondents concurred that their company actively incorporates its main suppliers in the creation of new products. Their business also routinely engages with clients to establish standards for us in terms of dependability, attentiveness, and other areas. Once more, their business regularly assesses and monitors consumer happiness. Additionally, their business regularly assesses the significance of our relationship with our clients. Additionally, their business buys lighter-weight packaging. Furthermore, their business satisfies the requirements for simple assembly or production. Additionally, their business complies with the demands of the client's production process. Additionally, their business charges internal fees for scrap and rework as a percentage of product costs. Finally, their business has an internal yield on the launch of new products.

5.1.2 Relationship between Competitive Advantage and Operational Performance

Furthermore, the study discovered that competitive advantage had a big impact on how well operations functioned. Furthermore, the majority of respondents concurred that their business had the ability to compete against significant rivals on the basis of low price. Additionally, their business has affordable prices. Once more, their business may give pricing that are on par with or lower than those of our rivals. Additionally, their business sells clients high-quality products. They also concurred that the things their business sells are quite durable. They concurred once more that their business provides the required products.

5.1.3 Competitive Advantage as a mediator on SSCM and Operational Performance

Additionally, the study discovered that the relationship between operational success and sustainable supply chain management is mediated by competitive advantage. Furthermore, the majority of respondents concurred that their business adapts swiftly to market developments in order to improve its goods and services. Their business once more employs supply chain strategy to improve organisational performance. Additionally, their business uses supply chain strategy to lower costs and boost profitability.

5.2 Conclusion

The main objective of the study is to assess the effect of sustainable supply chain practices, on operational performance and mediating role of competitive advantage in the service sector of Ghana. Specifically, the study examines the relationship between sustainable supply chain management practices on operational performance, the relationship between competitive advantage on operational performance and the mediating role of competitive advantage on

operational performance. The analyses were performed with the aid of the statistical software namely, statistical package for the social sciences (SPSS) version 26. The following analyses were performed, frequency and percentages, descriptive statistics, reliability and validity test, correlation matrix as well as regression analysis. The study discovered that operational performance was significantly impacted by sustainable supply chain management practises. Moving on, the study discovered that operational performance was significantly impacted by competitive advantage. The study also discovered that the association between sustainable supply chain management practises and operational performance is highly mediated by competitive advantage. As a result, the study comes to the conclusion that competitive advantage and sustainable supply chain management practises are predictors of operational performance in Ghana's service industry.

5.3 Recommendations

In light of the foregoing, it is suggested that, in order for the service sector to outperform its rivals, sustainable supply chain management practises be improved.

According to the survey, managers and department heads should communicate with customers often in order to distinguish their businesses apart from the competition in terms of dependability, responsiveness, and other factors. Once more, management and leaders should understand how important it is to set higher quality standards than their rivals. The managers should also ensure that the business routinely makes it easier for clients to contact them for assistance. The business should also concentrate on establishing sustainable purchasing practises, such as committing to waste reduction targets, buying recycled packaging, and engaging in the purchase of environmentally friendly items and packaging.

Furthermore, the study suggests that, for the sector to have advantage over their competitors, the managers should set their prices low as compare to that of their competitors. Again, the company should offer high quality products to their customers. Also, the leaders and managers of the sector should encourage durable products. Managers should encourage the employees to be cooperative with their customers. They should deliver the products request of customers. And also they should be reliable so that the customers would not have alternative sources.

Once more, the study suggests that managers should encourage staff to react rapidly to market changes in order to improve products and services if they want operational performance to be successful and efficient. The management should also ensure that the business employs supply chain strategy. Additionally, managers need to ensure that operational complexity has decreased.

5.4 Areas for future studies

The study's primary goal is to evaluate the impact of sustainable supply chain practises on operational effectiveness and the mediating role of competitive advantage in Ghana's service industry. The study's primary methodology was quantitative. It is urged that future studies employ various methodologies. Additionally, descriptive and explanatory designs were used in the study. The recommends that future research should concentrate on various designs.

REFERENCES

Aaker, D. A., and Jacobson, R. (2018). "The Financial Information Content of Perceived Quality." *Journal of Marketing Research*, Vol. 31 Issue 2,pp. 191–201. https://doi.org/10.1177/002224379403100204

Adediran O. and Adediran O. (2009). "Total Quality Management: A Test of the Effect of TQM on the Performance and Stakeholder Satisfaction." Thesis for Blekinge Institute of Technology.

Adegoke, I, Mingbao, C. Abredu, P. Ndafira, G. C. Amoateng, P. A. and Owusu-Gyan, L. (2021). "The Impact Of Sustainable Supply Chain Management Practices On Organizational Performance In Ghana." *Management Science and Business Decisions*, Vol.1 No.2. DOI: https://doi.org/10.52812/msbd.32

Adolfsson, A. and Lundin, E. (2014). "Development of a Decision Support Tool for the Process of Deciding Inventory Levels A Study at The Absolute Company*." Master Thesis*, Department of Engineering Logistics, Lund University.

Agha, S. Alrubaiee, L. and Jamhour, M. (2012). "Effect of Core Competence on Competitive Advantage and Organizational Performance." *International Journal of Business and Management,*Vol.7 Issue 1,DOI:10.5539/ijbm.v7n1p192

Agola, T. (2014). "Credit policy and financial performance of microfinance institutions in Kenya." *(Doctoral dissertation, University of Nairobi, Nairobi, Kenya).*

Agus, A. and Hassan, Z. (2008). "The strategic supplier partnership in a supply chain management with quality and business performance." *International Journal of Business and Management Science*, 1(2), 129-145.

Akpulonu, M.I. (2017). "The Implementation of Total Quality Management (TQM) in the Telecommunications Industry: Problems and Prospects (A Case Study of Globacom and Etisalat Limited, Enugu)." (Unpublished Doctoral Dissertation). University of Nigeria, Nsukka.

Akrani, G. (2013). *Definition of Product Qualityhttp://kalyan city.blogspot.com/2013/05/what-is-product-quality-definition.html*

Aldaweesh, M. (2018). "The Effective Implementation of Total Quality Management and Transformational Leadership in Higher Education Improvement: A Case of Saudi Universities." This Thesis is submitted for the Degree of *Doctor of Philosophy,* Brunel Business School.

Al-Douwiri, Maher (2015). "The impact of the international standards ISO 26000 for social responsibility in achieving competitive advantage in the Specialty Hospital, Amman - Jordan." *Unpublished MA thesis*, Middle East University, Amman, Jordan.

Ali, M., Babai, M., Boylan, J. and Syntetos, A., (2017). "Supply chain forecasting when information is not shared" *European Journal of Operational Research*, Vol. 260 No 3, pp 984-994.

Altmeppen, K. Hollifield, C. and Loon, J. (2017). "*Value-oriented media management. Decision making between profit and responsibility*." Cham, SWI: Springer.

Amanah, D. (2010). "Pengaruh Harga Dan Kualitas Produk Terhadap Kepuasan Konsumen Pada Majestyk Bakery and Cake Shop cabang H,M, Yamin Medan." *Jurnal Keuangan and Bisnis.*Vol. 2 Issue 1,pp. 71-87

Amemba, C. S., Nyaboke, P. G., Osoro, A. and Mburu, N. (2013). "Elements of Green Supply Chain Management." *European Journal of Business and Management.* Vol. 5 Issue 12,pp. 51-61.

Andriiuk, A. (2021). "7 Steps to Greater Operational Performance When Selling Digital Services." *Operations Management,*

Asamoah, K. and Nadarajah, D. (2020). "Enhancing the Influence of Sustainable Supply Chain Management on Manufacturing Firm Performance through Organizational Innovation." *International Journal of Academic Research in Business and Social Sciences.* Vol.10 Issue 8,pp. 59-74.http://dx.doi.org/10.6007/IJARBSS/v10-i8/7501

Ayman B. and Noor O. (2014). "The Impact of Supply Chain Management Practices on Supply Chain Performance in Jordan: The Moderating Effect of Competitive Intensity." *International Business Research,* Vol. 7 Issue 3,pp. 13-17.

Azim, M. D., Ahmed, H. and Khan, S. M. (2015). "Operational performance and profitability: an empirical study on the Bangladeshi ceramic companies." *International Journal of Entrepreneurship and Development Studies,* Vol.3 Issue 1,pp. 63-73.

Baah,C and Jin, Z. (2019). "Sustainable Supply Chain Management and Organizational Performance: The Intermediary Role of Competitive Advantage." *Journal of Management and Sustainability,* Vol.9 issue 1,pp.119 DOI:10.5539/jms.v9n1p119

Bain, B.J., Lewis, S.M. and Bates, I. (2006). "Basic Haematological Techniques. In: Lewis, S.M., Bain, B.J. and Bates, I., Eds., Dacie and Lewis Practical Haematology," 10th Edition, Churchill Livingstone Elsevier, Philadelphia, 26-54. http://dx.doi.org/10.1016/B0-44-306660-4/50007-6

Barney, J. (1991) "Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17, 99-120. http://dx.doi.org/10.1177/014920639101700108

Beamish, P.W. and Banks, J.C. (1987). "Equity Joint Ventures and the Theory of Multinational Enterprise." *Journal of International Business Studies*, 18, 1-16. http://dx.doi.org/10.1057/palgrave.jibs.8490403

Bessis, J. (2010). "*Risk Management in Banking*." New York: John Wiley and Sons.

Bezabh, S. K. (2017). "The Effect of Supply Chain Management Practices on the Operational Performance: The Case of Ethio telecom." *Degree of Master of Arts in Logistic and Supply Chain Management,* Addis Ababa University School Of Commerce, Addis Ababa, Ethiopia

Bishwajit, N, Sekhar, B. S. and Bala, K. (2022). "Exploring the black box of competitive advantage – An integrated bibliometric and chronological literature review approach." *Journal of Business Research*, Vol. 139, pp. 964-982.DOI: 10.1016/j.jbusres.2021.10.047

Bob Foster, M. M. (2016). "The Effect of Price and Service Quality on Customer Satisfaction in Mutiara Hotel Bandung." *American Research Journal of Humanities and Social Sciences (ARJHSS)*, Vol. 2, 2016,pp. 1-12. DOI: 10.21694/2378-7031.16008

Boudreau, M.-C. Chen, A. and Huber, M. (2008). "Green Is: Building Sustainable Business Practices."

Bugri, B. A., Michael, A., and Arthur, E. A. (2019). "Investigating the Impact of Sustainable Procurement on Economic Growth and Development." *Journal of Accounting, Business and Finance Research*, Vol. 5 Issue 2, pp 67-76.

Carrilho, M. G. (2016). "CRM strategies - An approach to Lidl, Sonae and Jerónimo Martins Firms." Dissertation submitted as partial requirement for the conferral of *Master in Management*, Instituto Universitario de Lisboa.

Carter, C. R., Kale, R., and Grimm, C. M. (2000). "Environmental purchasing and firm performance: an empirical investigation." *Transportation Research Part E: Logistics and Transportation Review*, 36(3), 219–228. doi:10.1016/s1366-5545(99)00034-4

Cascio, W. F. (2014). "Leaveraging employer branding, performance and human resource development to enhance employee retention." *Human Resource Development International*, Vol.17 Issue 2,pp.121-128.

Catalán-Matamoros, D. (2012). "An overview to customer relationship management." Advances in customer relationship management () InTech.

Çetin, O. and Knouch, M. (2018). "Sustainable Competitive Advantage in Green Supply Chain Management." In Sustainability and Social Responsibility of Accountability Reporting Systems; Springer: Berlin/Heidelberg, Germany, 2018; pp. 347–367

Chandler, A.D. (1962). "Strategy and Structure: Chapters in the History of American Enterprise." MIT Press, Boston.

Chandler, A.D. (1977). "The Visible Hand: The Managerial Revolution in American Business." Harvard University Press, Cambridge, 123-126.

Charted Institute of Purchase and Supply (CIPS). CIPS. Retrieved June 17,2015, from CIPS website: http://www.cips.org/

Chartered Institute of Purchasing and Supply (2011). CIPS Sustainable procurement review. Reviewed on 14th January 2015. from:https://www.cips.org/Documents/Products/Sustainable_Procurement_Review_%20new_.

Chavez, R.; Yu, W.; Gimenez, C.; Fynes, B. Wiengarten, F. (2015). "Customer integration and operational performance: The mediating role of information quality." *Decis. Support Syst*. Vol. 80,pp. 83–95.

Chomchaiya, S. and Esichaikul, V. (2016). "Consolidated performance measurement framework for government e-procurement focusing on internal stakeholders." *Inf. Technol. People* ,Vol. 29, pp.354–380.

Christian, O. S. (2020). "Competitive Advantage and Organisational Performance in Selected Firms*." International Research Journal of Management*, IT and Social Sciences Vol. 7 No. 5, pp 1 12. https://doi.org/10.21744/irjmis.v7n5.965

Coase, R. H. (1937). "The Nature of the Firm." *Economica*, 4, 386-405. http://dx.doi.org/10.1111/j.1468-0335.1937.tb00002.x

Cristo, M. Saerang, D. P. E. and Worang, F. G. (2017). "The Influence of Price, Service Quality, And Physical Environment On Customer Satisfaction. Case Study Markobar Cafe Mando." *Jurnal EMBA*, Vol.5 No.2, pp. 678 - 686

Daqar, A. D. and Constantinovits, M. (2020). "The role of total quality management in enhancing the quality of private healthcare services." *Problems and Perspectives in Management*, Vol.18 Issue 2, pp.64-78. doi:10.21511/ppm.18(2).2020.07

Das, S. and Hassan, H.M.K. (2022). "Impact of sustainable supply chain management and customer relationship management on organizational performance." *International Journal of Productivity and Performance Management*, Vol. 71 No. 6, pp. 2140-2160. https://doi.org/10.1108/IJPPM-08-2020-0441

Dedrick, J. (2010). "Green Is: Concepts and Issues for Information Systems Research." *Communications of the Association for Information Systems*, Vol.27 Issue 1), pp. 11

Dursun, H.; Hope, K.S. Nazir, H. Acar, N. Atakol, O. Dursun, H. and Atakol, O. (2020). "Towards low-impact-sensitivity through crystal engineering: New energetic co-crystals formed between Picric acid, Trinitrotoluene and 9-Vinylanthracene." *J. Mol. Struct*. 1219, 128614.

Ehsani, Z and Ehsani, M. H., (2015). "Effect of Quality and Price on Customer Satisfaction and Commitment in Iran Auto Industry." *International Journal of Service Sciences, Management and Engineering.* No.1.Vol 5. pp.52- 56.

Elijah, A. B. and Millicent, A-D. (2018). "The Impact Of A Sustainable Competitive Advantage On A Firm's Performance: Empirical Evidence From Coca-Cola Ghana Limited." *Global Journal of Human Resource Management*, Vol.6, No.5, pp.30-46.

Erdil, T. S. (2015). "Effects of Customer Brand Perceptions on Store Image and Purchase Intention: An Application in Apparel Clothing." *Procedia - Social and Behavioral Sciences*, Vol.207, pp.196-205.https://doi.org/10.1016/j.sbspro.2015.10.088

Faed, A. (2013). "An Intelligent Customer Complaint Management System with Application to the Transport and Logistics Industry." DOI:10.1007/978-3-319-00324-5

Fekadu, Y. (2018). "Effects Of Marketing Strategy On Market Performance From Employee Perspective Of Lion Bank." A Thesis Submitted To Addis Ababa University, School Of Commerce, School Of Graduate Studies In Partial Fulfillment Of The Requirements For The Degree Of *Master Of Marketing Management*, Addis Ababa University, Ethiopia.

Ferrell, O.C. (2012). "Marketing Strategy: Text and Cases," *Cengage Learning20*,pp.

Fradley, K., Troshani, I., Rampersad, G.C., and De Ionno, P. (2012). "An Organizing Vision Perspective on Green Is Development," *International Conference on Information Systems.*

Francis Buttle and Stan Maklan (2015). "Customer Relationship Management." (Concept and Technologies) 3rd edition.

Fu, Q. Abdul Rahman, A.A. Jiang, H. Abbas, J. and Comite, U. (2022). "Sustainable Supply Chain and Business Performance: The Impact of Strategy, Network Design, Information Systems, and Organizational Structure." *Sustainability*, 14, 1080. https://doi.org/10.3390/su14031080

Fuyane, N. (2011). "How Does Price And Quality Of A Service Affect Customer Satisfaction With Reference To Cross-Border (Zimbabwe-South Africa) Public Transport?" Submitted In Partial Fulfillment Of The Requirement For *Master Of Business Administration.*DOI:10.13140/RG.2.1.3648.6488

Gadde, L.E., Håkansson, H. and Persson, A. (2010). "Supply Network Strategies, Wiley, London".

Garvey, J. (2022). "Performance Objectives - What Are the 5 Business Objectives? American Marketing Association." *AMA Dictionary*.

Garvey, J. (2022). Performance Objectives - What Are the 5 Business Objectives?

Gnizy, I. and Shoham, A. (2014). "Uncovering the Influence of the International Marketing Function in International Firms." *International Marketing Review*, Vol 31 Issue 1,pp.51–78.

Goetsch, D and Davis, S. (2014). "Quality Management for Organizational Excellence. Pearson, Harlow, Essex," *7th edition*.

Goetsch, D.L. and Davis, S. (2016). "Quality Management for Organizational Excellence: Introduction to Total Quality." *14th Edition.* New Jersey, Pearson Education.

Goldenberg, B. J. (2008). *"CRM in real time: empowering customer relationships*." Boston Burr Ridge: McGraw-Hill.

Griffin, J. M., Kelly, P. J. and Federico, N. (2010). "Do market efficiency measures yield correct inferences? A comparison of developed and emerging markets." *Review of Financial Studies,* Vol. 23, Issue 8, pp. 3225-3277.

Halis, Mi., Twati, M. R., and Halis, Mu. (2017). "Total quality management implementation in the healthcare industry: Findings from Libya." *Management Issues in Healthcare System,* Vol. 3 Issue 1,pp. 4-21. http://dx.doi. org/10.33844/mihs.2017.60466

Hamdy, M. M. O. Elsayed, K. K. and Elahmady, B. (2018). "Impact of sustainable supply chain management practices on Egyptian companies' performance." *European Journal of Sustainable Development*, 7(4), 119-130

Harryani, S. (2017). "Customer Relationship Management Influence on Customer Value, Product Quality and Service Quality in Improving Customer Satisfaction and its Implication on the Customer Loyalty." *Jurnal Ekonomi Bisnis,* Vol. 22 No.2.

Hasan, M. (2012). "Sustainable supply chain management practices and operational performance." *American Journal of Industry and Business Management*, 3, 42-48

Haynes, M. C., Ryan, N., Saleh, M., Winkel, A. F. and Ades, V. (2017). "Contraceptive Knowledge Assessment: Validity and Reliability of a Novel Contraceptive Research Tool." *Contraception*, 95, 190–197.

Hennart, J-F. (1988). "A transaction costs theory of equity joint ventures." *Strategic Management Journal*, 9(4), 361-374

Hermawan, B. (2011). "Pengaruh Kualitas Produk terhadap Kepuasan, Reputasi Merek, dan Loyalitas Konsumen Jamu Tolak Angin PT. Sido Muncul." *Jurnal Manajemen Teori dan Terapan*, Vol. 4, Issue 2,pp. 9-17.

Herviana, V, P, S. and Anik, L. A., (2018). "Pengaruh Kualitas Produk Dan Harga Terhadap Loyalitas Dengan Kepuasan Sebagai Variabel Intervening (Effect of Product Quality and Price on Loyalty with Satisfaction as an Intervening Variable)", *Jurnal Ilmu Manajemen,* Vol. 6 Issue 1.

Herviana, V, P, S. and Anik, L. A., (2018). "Pengaruh Kualitas Produk Dan Harga Terhadap Loyalitas Dengan Kepuasan Sebagai Variabel Intervening (Effect of Product Quality and Price on Loyalty with Satisfaction as an Intervening Variable)", *Jurnal Ilmu Manajemen,* Vol. 6 Issue 1.

Ho, D.C.K., Duffy, V.G. and Shih, H.M. (2011). "An empirical analysis of effective TQM implementation in the Hong Kong electronics manufacturing industry." *Human Factors and Ergonomics in Manufacturing*, Vol. 9 Issue 1, pp. 1-25.

Ibijola, E.Y. (2014). "Regulatory Roles of the National Universities Commission and the Quality of Nigerian University Education." *Unpublished PhD Thesis Submitted to the Department of Educational Foundations and Management, Ekiti State University, Ado-Ekiti, Nigeria.*

Ioannou, I., (2011). "The Impact of Corporate Sustainability on Organizational Processes and Performance." *Management Science,* Forthcoming.

Ismail A. Zaki H. O. and Rose I. R. (2016). "Interlinkages between service quality, customer satisfaction and customer loyalty in Malaysia?: A case study of Armed Forces Medical

Organizations." *Malaysian Journal of Society and Space,* 12(7), 47-59 Vol. 7 Issue 7,pp. 47-59

ISO 20400 (2017), Sustainable procurement guidance, Published in Switzerland

ISO, (2017). *International Organization for Standardization*. [Online]Available at: https://www.iso.org/iso-9001-quality-management.html[Accessed 25 April 2017]

Jenkin, T.A., Webster, J., and McShane, L. (2011). "An Agenda for 'Green' information Technology and Systems Research," *Information and Organization*, Vol.21 Issue 1, pp. 17-40.

Kang, J., and Kinyua, A. R. (2016). *"Effect of Internal Control System on financial performance of Companies Quoted in the Nairobi Security Exchange*. Unpublished doctoral dissertation, Nairobi: Jomo Kenyatta University of Agriculture and Technology.

Kangethe, M. G. (2015). Customer Quality Focus And Operational Performance Of Kenyan Government Owned Entities, *Master Of Business Administration*, , University Of Nairobi, Kenya.

Kapologwe, L. A. (2013). The Impact Of Customer Relationship Management On Performance Of Banks In Tanzania A Case Of Exim Bank (T) Ltd,A Dissertation Report Submitted To School Of Business In Partial Fulfilment Of The Award Of *Master'S Degree In Business Administration (Corporate Management)* Of Mzumbe University.

Kennard, M. (2006). "Sustainable procurement, shaping the change" *XXIII FIG Congress Munich*, Germany, October 8-13, pp 1 – 10

Khaddam, A.A. Irtaimeh, H.J. and Bader, B.S. (2020). "The Effect of Supply Chain Management on Competitive Advantage: The Mediating Role of Information Technology." *Uncertain Supply Chain Manag*. 8, 547–562.

Khaddam, A.A. Irtaimeh, H.J. and Bader, B.S. (2020). "The Effect of Supply Chain Management on Competitive Advantage: The Mediating Role of Information Technology." *Uncertain Supply Chain Manag*. 8, 547–562.

Khaddam, A.A.; Irtaimeh, H.J. and Bader, B.S. (2020). "The Effect of Supply Chain Management on Competitive Advantage: The Mediating Role of Information Technology." *Uncertain Supply Chain Manag*. 8, 547–562

Kipkoril, L. E and Wanyoike D. M (2015). "Factors influencing implementation of sustainable Procurement in multinational Tea Company." *International Journal of Economics*. Vol 3 Issue 6, pp. 431 – 446

Kogut, B. (1988). "Joint Venture: Theoretical and Empirical Perspectives." *Strategic Management Journal*, 9, 319-332. https://doi.org/10.1002/smj.4250090403

Kotler, P and Amstrong, G. (2012). Principle of Marketing.*14th Edition*. New Jersey. Published by Prentice Hall.

Kotler, P. and Armstrong, G. (2010). Principles of Marketing 13th edition Pearson Education, Inc. Upper Saddle River New Jersey USA. ISBN-13:978-0-13- 700669-4/10987654321

Kotler, P., G. Armstrong, S. H. Ang, S. M. Leong, C. T. Tan and Hon-Ming,O. Y. (2011). *Principles of Marketing: An Asian Perspective.* Pearson Education South Asia Pte Ltd, Singapore.

Kotler, P., Keller, K. L., Goodman, G. Brady, M., and Hansen, T. (2019). *Marketing Management*. Pearson Education Limited.

Kotler, Philip and Armstrong, Garry, (2008). Principles of Marketing. *Edition Twelfth*, Volume 1. Jakarta: Penertbit PT. Erland

Kotler, Philip and Keller Kevin L. (2013). *Marketing Management, Fourteenth Edition, Horizon Edition*, England PEARSON Education Linited.

Kovács, G., (2014). "Perspectives on Sustainability in Humanitarian Supply Chains." *Disaster Prevention and Management: An International Journal,* Vol. 23

Kubai, E. (2019). Reliability and validity of research instruments. UNICAF University – Zambia

Kungu, P. W. (2017). Quality Management Strategies And Performance Of Oil Marketing Companies In Kenya, A Thesis submitted in Partial Fulfillment of the Requirement for the Award of the Degree of *Doctor of Philosophy in Business Administration (Strategic Management),* in the School of Business of Kenyatta University.

Kusdiyah, I. (2012). "Perceived price, Persepsi Merek, Perceived value, dan Keinginan Pembelian Ulang Jasa Clinic Kesehatan (Studi Kasus Erha Clinic Surabaya)." *Jurnal Manajemen Pemasaran*. Vol.7.No.1.pp.25-32.

Laitinen, J. (2021). Impact of service-level agreements on delivery reliability. *Master's Programme in Supply Management,* Lappeenranta-Lahti University of Technology.

Lamgat, N. (2016). Influence Of Product, Price, Promotion And Place On Enterprise Project Performance: A Case Of Safaricom Enterprise Project, Uasin Gishu County, Kenya,A Research Project Report Submitted in Partial Fulfilment of the Requirements of the Award of the *Degree of Master of Arts in Project Planning and Management* of the University of Nairobi.

Lao, Y., Hong, P and Rao, S.S., (2010). "Supply Management supply flexibility and performance outcomes: an empirical investigation of manufacturing firms." *Journal of Supply Chain Management,* Vol. 46 Issue 3,pp. 6-22.

Larosa, S. R. Sukresna, I. M. and Mudiantono, H. (2017). "Effect Of Product Quality, Service Quality, Product Attractiveness And Corporate Image On Decisions Saving On Bima Savings. Master of Management Program Faculty of Economics and Business, Diponegoro University, Semarang

Lee, S.Y. (2021). "Sustainable Supply Chain Management, Digital-Based Supply Chain Integration, and Firm Performance: A Cross-Country Empirical Comparison between South Korea and Vietnam." *Sustainability*, 13, 7315.

Lexico. (n.d.). Quality. *In Lexico.com dictionary*. Retrieved https://www.lexico.com/en/definition/quality.

Li, S. Ragu-Nathan, B. Ragu-Nathan, T. S. and Rao, S. S. (2006). "The Impact of Supply Chain Management Practices on Competitive Advantage and Organizational Performance." *Omega*, Vol.34 Issue 2, pp.107-124.

Liu, D. (2013). "Factors influencing Chinese Consumer Online Group-Buying Purchase Intention: An Empirical Study." UPPSALA University

Lotfi, Z. Sahran, S. and Mukhtar, M. (2013). "A product quality-supply chain integration framework." *Journal of Applied Sciences,*

Lusinskiy, V. Lukinskiy, V. and Churilov, R. (2014). "Problems Of The Supply Chain Reliability Evaluation." *Transport and Telecommunication*, Vol.15, No. 2,pp. 120–129, DOI 10.2478/ttj-2014-0011

Maestrini, V., Luzzini, D., Maccarrone, P., and Caniato, F. (2017). "Supply chain performance measurement systems: A systematic review and research agenda." *International Journal of Production Economics*, Vol. 183,pp. 299-315.

Maloba, B. E. (2014). Total Quality Management And Service Delivery At World Vision Kenya. Unpublished Project for University of Nairobi.

Mamun, A. (2015). "Evaluation of Stock Market Efficiency: A Case Study of Chittagong Stock Exchange (CSE)." *IIUC Business Review*, 3, 165-178

Masudin, I. Wastono, T. Zulfikarijah, F. and Liu, S. (2018). "The effect of managerial intention and initiative on green supply chain management adoption in Indonesian manufacturing performance." *Cogent Business and Management*, Volume 5, Issue 1,

Michael, J. A/P. (2015). Determinants Of Sustainable Purchase Behaviour For Penangite Consumers: Moderating Effect Of Consumer Social Responsibility (CSR), Thesis submitted in fulfilment of the requirements for the degree of *Masters of Business Administration.*

Mohammed, A. A. and Rashid, B. (2012). "Customer Relationship Management (CRM) in Hotel Industry: A framework proposal on the relationship among CRM dimensions, Marketing Capabilities, and Hotel performance." *International Review of Management and Marketing*, Vol. 2 Issue 4,pp. 220.

Muafi and Roostika, R. (2014). "Organizational Performance and Competitive Advantage Determinants of Creative SMEs." *Journal of Corporate Governance, Insurance, and Risk Management (JCGIRM)*, Vol. 1, Series 2.

Mukanga, D. (2011). Sustainability Strategies Adopted by International NGOs in Kenya. Project Research presented to the University of Nairobi, School of Business

Mukhsin, M.; Suryanto, T. (2020). "The Effect of Sustainable Supply Chain Management on Company Performance Mediated by Competitive Advantage." *Sustainability 2022*, 14(2), pp. 818. https:// doi.org/10.3390/su14020818

Muraguri, J. T. (2013). Implementation of the Youth Preference and Reservations Policy in Public Procurement in the Case of State Owned Enterprises in Nairobi: Unpublished MBA Project, University of Nairobi.

Mwangi, J. (2016). *Effect of financial structure on financial performance of firms listed at east Africa securities exchanges*, PhD Thesis. Jomo Kenyatta University Agriculture and Technology.

Nair, A. (2005). "Linking Manufacturing Postponement, Centralized Distribution and Value Chain Flexibility with Performance." *International Journal Of Production Research*, Vol.43 Issue 3, pp.447-463.

Nakhaima, F. K. (2016). Factors That Affect Financial Performance Of Small And Medium Enterprises In Kenya, A Research Project Report Submitted To the Chandaria School of Business in Partial Fulfillment of the Requirements for the Degree of *Masters of Business Administration (MBA)* ,United States International University- Africa

Nan, N and Tanriverdi, H. (2017). "Unifying the role of IT in hyperturbulence and competitive advantage via a multilevel perspective of IS strategy." *MIS Q.*Vol. 41, pp.937–958.

Nanda, V. (2016). Quality Management System Handbook for Product Development Companies. *CRC Press*. pp. 352.

Nechi, N. H. (2012). Impact Of Total Quality Management On Organizational Productivity (A Case Study Of Ama Brewery, 9Th Mile Corner, Enugu),A Project Presented In Partial Fulfilment of the Requirement for the Award of *Master in Business Administration (MBA)* Degree in Management Department of Management Faculty of Business Administration University of Nigeria Enugu Campus.

Njenga, R. W. (2018). "Operations Strategies and Operational Performance Of Architectural Consulting Firms In Nairobi." *Degree Of Master Of Business Administration*, University of Nairobi, Kenya.

Nkemkiafu, A.G. Felix, N. and Asah, N.P. (2019). "Innovation Practices for Sustainable Competitive Advantage." *J. Chem. Inf. Model*. 53, 1689–1699

Ollila, S. (2011). Consumers' attitudes towards food prices, To be presented, with the permission of the Faculty of Agriculture and Forestry of the University of Helsinki, for public examination in lecture room C1, Viikki, on Wednesday, December 7, 2011 at 12 p.m. University of Helsinki

Onyango, C. O. (2013). Analysis Of Structure, Conduct And Performance Of Small Ruminant Stock Market Participants Of Isiolo –Nairobi Trading Market, Kenya,A Thesis Submitted to the Graduate School in Partial Fulfillment of the Requirements of the *Master of Science Degree in Agricultural and Applied Economics* of Egerton University, Egerton University.

Ortas, E. Moneva, M. J. and Etxeberria, A. I. (2014). "Sustainable supply chain and company performance: A global examination." *Supply Chain Management*, 19(3),

Pallister, J., and Law, J. (2006). *A dictionary of business and management*. Oxford, United Kingdom: Oxford University Press.

Penrose, E.T., (1959). The Theory of the Growth of the Firm. New York: John Wiley

Peteraf, A. M. and Barney, B. J. (2003). "Unraveling the resource-based tangle." *Managerial and Decision Economics*, 24(4),

Potjanajaruwit, P. (2018). "Competitive advantage effects on firm performance: A case study of startups in Thailand." *Journal of International Studies*, Vol.10 Issue 1, pp.104-111. doi:10.14254/2071-8330.2018/11-3/9

Prasad, D. S. Pradhan, R. P. Gaurav, K. and Sabat, A. K. (2020). "Critical Success Factors of Sustainable Supply Chain Management and Organizational Performance: An Exploratory Study." *Transportation Research Procedia*, Vol. 48, 2020, pp. 327-344 https://doi.org/10.1016/j.trpro.2020.08.027

Quynh, D.V.X. and Huy, N.H. (2018). "Supply Chain Management Practices, Competitive Advantages and Firm Performance: A Case of Small and Medium Enterprises (SMEs) in Vietnam." *J. Mod. Account. Audit*., 14, 136–146.

Rabah, K., Mohd, H. and Ibrahim, H. (2011). "A unified definition of CRM towards the successful adoption and implementation." *Academic Research International*, Vol. 1 Issue 1,pp. 220-228. http://www.savap.org.pk/journals/ARInt./Vol.1(1)/2011(1.1-20).pdf

Rahman, N.A.A. and Ramli, A. (2014). "Entrepreneurship Management, Competitive Advantage and Firm Performances in the Craft Industry: Concepts and Framework." *Procedia-Soc. Behav. Sci*. 145, 129–137

Rais, S. L. A., Bidin, Z. A., Bohari, A. A. M., and Saferi, M. M. (2018). "The Possible Challenges of Green Procurement Implementation." *In IOP Conference Series: Materials Science and Engineering*, Vol. 429 Issue 1, P. 012023, IOP Publishing.

Ramlawati (2018). "Just in time and competitive advantage: understanding their linkages and impact on operational performance." *Archives of Business Research*, Vol.6 Issue 8,pp. 189 204.DOI: 10.14738/abr.68.5041

Raza, J. Liu, Y. Zhang, J. Zhu, N. Hassan, Z. Gul, H. and Hussain, S. (2021). "Sustainable Supply Management Practices and Sustainability Performance: The Dynamic Capability." *Sage Journals*, pp.1-14.https://doi.org/10.1177/21582440211000046

Santikary, A. (2018). Market Orientation And Marketing Effectiveness In Business Schools Of Hyderabad And Rangareddy Districts Of Telangana State Doctoral Thesis Submitted In

Partial Fulfillment Of The Requirements For The Award Of The Degree Of *Doctor Of Philosophy In Management*, ICFAI University Jharkhand, Ranchi

Sarkis, J., and Zhu, H. (2008). "Information technology and systems in China's circular economy: implications for sustainability." *Journal of Systems and Information Technology*, Vol.10 Issue 3,pp. 202–217.

Saunila, M. (2014). "Innovation capability for SMS Success: Perspective of Financial and Operational Performance." *Journal of Advances in Management*

Schroeder, R. G., Shah, R., and Xiaosong Peng, D. (2011). "The cumulative capability "sand cone" model revisited: a new perspective for manufacturing strategy." *International Journal of Production Research*, Vol. 49 Issue 16,pp. 4879–4901.

Seidel, S., and Recker, J. (2012). "Implementing Green Business Processes: The Importance of Functional Affordances of Information Systems." *Australasian Conference on Information Systems* Geelong ACIS, pp. 1-10.

Seuring, S. and Mueller M. (2008). "Core issues in sustainable supply chain Management –A Delphi study." *Business Strategy and the Environment,* 17 (8), 455-466.

Sillanpaa, I, Shahzad, K and Sillanpaa, E. (2015). "Supplier development and buyer-supplier relationship strategies - a literature review." *International Journal of Procurement Management* ,Vol. 8 Issue 1/2,pp.227 – 250, DOI:10.1504/IJPM.2015.066283

Simatupang, T. M., Wright, A. C. and Sridharan, R. (2002). "The knowledge of coordination for supply chain integration." *Business Process Management Journal*,

Singhal, A. (2012). *Statutory and Regulatory Requirements in ISO 9001:2008,* ISO 9001 awareness program.

Sinkovics, R. R. and Ghauri, P. N. (2009). New Challenges to International Marketing", Sinkovics, R.R. and Ghauri, P.N. (Ed.) New Challenges to International Marketing (Advances in International Marketing, Vol. 20), Emerald Group Publishing Limited, Bingley, p. iii. https://doi.org/10.1108/S1474-7979(2009)0000020024

Sitanggang, J. M. Sinulingga, S. and Fachruddin, K. A. (2019). "Analysis of the Effect of Product Quality On Customer Satisfaction And Customer Loyalty Of Indihome ATPT Telkom Regional 1 Sumatera, Medan, North Sumatra, Indonesia." *American International Journal of Business Management (AIJBM),* Vol. 2, Issue 3, pp. 26-37

Small Business Administration. (2016). Office of Advocacy-Frequently Asked Questions. Retrieved from http://www.sba.gov/advocacy.

Smith, L. J, Flanagan G. W. (2006). *Creating Competitive Advantage: Give Customers a Reason to Choose You Over Your Competitors*, Vol. 208.

Stigler, G. (1961). The economics of information. *Journal of Political Economy*, 69 (3), 213-25.

Stroumpoulis, A. Kopanaki, E. and Karaganis, G. (2021). "Examining the Relationship between Information Systems, Sustainable SCM, and Competitive Advantage." *Sustainability* 13(21), pp. 11715. https://doi.org/10.3390/su132111715

Sujatha, R. (2014). A Study On Customer Loyalty In Public Sector Banks In Tiruchirappalli District With Special Reference To State Bank Of India, Abstract of the Thesis submitted to the Bharathidasan University, Tiruchirappalli – 24. in partial fulfillment of the requirements for the award of the *Degree Of Doctor Of Philosophy In Commerce*, Urumu Dhanalakshmi College.

Sunyoto, D. (2012). *Dasar-dasar Manajemen Pemasaran*. Yogyakarta: Buku Seru

Supriyadi and Ekawati, R. (2014). "The Effect of Strategic Partnership on Innovation Capability and Business Performance of Garment Industry in West Java – Indonesia." *International Journal of Scientific and Technology Research*, 3 (12)

Teng, S. and Chen, M. (2010). "The efficient analysis of the CRM based on information technology." In: *Information Science and Engineering (ICISE), 2009 1st International Conference* on, IEEE, 3116-3119

Tessema, G. M. (2017). The Impact Of Implementing Quality Management System On Organizational Performance: The Case Of National Tobacco Enterprise (Eth.) S.C,A Thesis Submitted To St. Mary'S University, School Of The Graduate Studies In Partial Fulfilment Of The Requirements For The Degree Of *Master Of Business Administration*, Addis Ababa, Ethiopia

Thai, V. V. (2013). "Logistics service quality: conceptual model and empirical evidence." *International Journal of Logistics Research and Applications*, Vol.16 Issue 2,pp. 114-131.

Tipu, S. and Fantazy, K. (2018). "Exploring the relationships of strategic entrepreneurship and social capital to sustainable supply chain management and organizational performance." *International Journal of Productivity and Performance Management*, vol. 67 No. 9, pp. 2046-2070. https://doi.org/10.1108/IJPPM-04-2017-0084

Todor, R. D. (2016). Blending traditional and digital marketing. Bulletin of the Transilvania University of Braşov. http://webbut.unitbv.ro/bu2015/series%20v/2016/BULETIN%20I%20PDF/06_Todor%20R.pdf

Tomal, D.R. and Jones, K.J. (2015). "A comparison of core competencies of women and men leaders in the manufacturing industry." *The Coastal Business Journal*, Vol. 14 No. 1, pp. 13-25.

Touboulic, A. and Walker, H. (2015). "Theories in sustainable supply chain management: A structured literature review." *Int. J. Phys. Distrib. Logist. Manag*. Vol. 45, p.16–42.

Tuimala, J., Lukka, A. (2002). The Importance of Strategic Alliances in Intermodal Transport; Theoretical implications and an empirical pre-evaluation of the phenomena in the South-Eastern Finland.

Tukamuhabwa, B., Mutebi, H. and Kyomuhendo, R. (2021). "Competitive advantage in SMEs: effect of supply chain management practices, logistics capabilities and logistics integration in a developing country." *Journal of Business and Socio-economic Development*, https://doi.org/10.1108/JBSED-04-2021-0051

Tunisini, A., and Sebastiani, R. (2015). "Innovative and networked business functions: customer-driven procurement." *Journal of Business and Industrial Marketing*, 30(3/4), 302-311. https://doi.org/10.1108/JBIM-06-2014-0118

Turker, D. and Altuntas, C. (2014). "Sustainable Supply Chain Management in the Fast Fashion Industry: An Analysis of Corporate Reports." *Eur. Manag. J*., 32, 837–849.

Vom Brocke, J., Watson, R.T., Dwyer, C., Elliot, S., and Melville, N. (2013b). "Green Information Systems: Directives for the Is," *Communications of the Association for Information Systems*, Vol. 33, pp. 509-520.

Voss, C. A., Åhlström, P., and Blackmon, K. (1997). "Benchmarking and operational performance: some empirical results." *International Journal of Operations and Production Management* , 17 (10), pp.1046 - 1058.

Wang, H-L. (2014). "Theories for competitive advantage" (2014). *Faculty of Business - Papers (Archive)*.Vol. 408. https://ro.uow.edu.au/buspapers/408

Wang, J. and Dai, J. (2017). "Sustainable supply chain management practices and performance." *Industrial Management and Data Systems*, https://doi.org/10.1108/IMDS-12-2016-0540

Wang, J. and Dai, J. (2018). "Sustainable supply chain management practices and performance". *Industrial Management and Data Systems*, Vol. 118 No. 1, pp. 2-21. https://doi.org/10.1108/IMDS-12-2016-0540

Wang, S. and Feng, C., (2010). "Ways to Maximize Customer Perceived Value in E- commerce Age from the perspective." *International Conference on Networking and Digital Society.*

Wanyoike, R. W. (2016). Quality Management Practices And Firm Performance Among Manufacturing Firms In Kenya, A Thesis Submitted to the School of Business in Partial Fulfillment for the Award of the Degree of *Doctor of Philosophy in Business Administration (Human Resource Management)* of Kenyatta University.

Wanza, L., Ntale, J.F., and Kirwa, M. K. (2017). "Effects of Quality Management Practices On Performance of Kenyan Universities". *International Journal of Business and Management Review*, Vol. 5 Issue 8, pp. 53-70.

Wernerfelt, B. (1984). "The Resource-Based View of the Firm." *Strategic Management Journal*, 5, 171-180, https://doi.org/10.1002/smj.4250050207

Whitten, G. D., Green Jr, K. W. and Zelbst, P. J. (2012). "Triple-A supply chain performance." *International Journal of Operations and Production Management*, Vol. 32 No. 1, pp. 28-48.

Wilson, K. (2018). Customer Service And Relationship Management, Thesis, *Business Management*, Centria University Of Applied Sciences

Winter, M. and Knemeyer, A. M. (2013). "Exploring the Integration of Sustainability and Supply Chain Management: Current State and Opportunities for Future Inquiry". *International Journal of Physical Distribution and Logistics Management*, 43 (1): 18–38

Yahaya, O. A., and Lamidi, Y. (2015). "Empirical examination of the financial performance of Islamic banking in Nigeria: A case study approach." *International Journal of Accounting Research*, Vol. 42 Issue 2437, pp. 1-13.

Yassin, A., and Ahmed, S. (2012). "Factors affecting the performance of Jordanian insurance companies listed at Amman stock exchange." *Journal of Management Research*, Vol. 4 Issue 3,pp. 266-269.

Yigitbasioglu, O.M. (2010). "Information sharing with key suppliers: a transaction cost theory perspective". *International Journal of Physical Distribution and Logistics Management*, Vol. 40 No. 7, pp. 550–578

Zachary, G. M. (2019). Financial Structure And Financial Performance Of Selected Firms Listed At Nairobi Securities Exchange, Kenya, Thesis Submitted To The School Of Business In Partial Fulfillment Of the Requirements For The Award Of The *Degree Of Doctor Of Philosophy In Business Administration (Finance Option*) Of Kenyatta University.Kenya.

Zanotti, C. Reyes, F. and Fernandez, B. (2018). "Relationship between competitiveness and operational and financial performance of firms: An exploratory study on the European brewing industry." *Intangible Capital.* Vol.14 Issue 1,pp. 99-115. https://doi.org/10.3926/ic.1104

APPENDIX

SURVEY QUESTIONNAIRE

This questionnaire is aimed to assess the impact of sustainable supply chain management on operational performance with the moderating role of competitive advantage in the service sector in Ghana. Kindly select the right response from among alternative answers for each question by ticking in the appropriate box. Where alternative answers are not provided, fill in the gaps provided. You are assured of the confidentiality of this exercise because it will be solely used for academic purpose. Thank you for your contribution and cooperation].

Section A: Background Information

1. **Indicate your Gender**
   a. Male
   b. Female

2. **Indicate your Age**
   a. 21–25 years
   b. 26–30 years
   c. 31–35 years
   d. 36–40 years
   e. Above 40 years

3. **Indicate your Level of Education**
   a. SSSCE/A level
   b. Diploma/HND
   c. Bachelor degree
   d. Masters' degree
   e. Others

4. **Indicate your Job designation**
   a. Administrative manager
   b. Supply chain manager
   c. Accountant
   d. Supply chain officer
   e. Others specify…….

5. **How many years have you worked with the institution?**
   a. 0-3 years
   b. 4-7 years
   c. 7-10 years
   d. 10 years and above

Section B: Sustainable Supply Chain Management

Listed below are some of the attributes of the sustainable supply chain management practices adopted by firms. Please rank by ticking in the appropriate box the extent to which they are practiced using the following rating; where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
Strategic Supplier Partnership					
Our company considers quality as our number one criterion in selecting suppliers					
Our company regularly solves problems jointly with our suppliers					
Our company includes our key suppliers in our planning and goals-setting activities					
Our company actively involves our key suppliers in new product development processes					
Customer Relationship					
Our company frequently interacts with customers to set reliability, responsiveness and other standards for us					
Our company frequently measures and evaluates customer satisfaction					
Our company frequently facilitates customers' ability to seek assistance from us					
Our company periodically evaluates the importance of our relationship with our customers					
Sustainable Purchasing					
Our company purchases recycled packaging					
Our company purchases packaging that is of lighter weight					
Our company uses a life-cycle analysis to evaluates the environmental friendliness of products and packaging					
Our company asks suppliers to commit to waste reduction goals					
Product Quality					
Our company meets the criteria for ease of production or assembly					
Our company matches the requirements of the customer's production process					
Our company has internal scrap and rework costs as a percent of product cost					
Our company has internal yield on new product introduction					

Carter et al. (2000); Li et al. (2006); Lotfi et al. (2013); Hamdy et al. (2018)

Section C: Competitive Advantage

Listed below are some of the attributes of competitive advantage adopted by firms. Please rank by ticking in the appropriate box the extent to which they are practiced using the following rating; where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
Price					
Our company has the capability to compete against major competitors based on low price					
Our company offer competitive prices					

Our company is able to offer prices as low or lower than our competitors					
Quality					
Our company offer high quality products to our customer					
Our company offer products that are highly reliable					
Our company offer products that are very durable					
Delivery Dependability					
Our company delivers the kind of products needed					
Our company delivers customer order on time					
Our company provides dependable delivery					

Li et al. (2006)

Section D: Operational Performance

Listed below are some of the attributes of operational performance adopted by firms. Please rank by ticking in the appropriate box the extent to which they are practiced using the following rating; where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
Market Performance					
Our company corporation responds quickly to market changes to improve the products and services					
Our company supply chain strategy has the ability to reduce operational complexities					
Our company supply chain corporation's focused on operational aspects rather than financial aspects					
Our company supply chain strategy has the ability to change production capacity quickly based on customer demands					
Financial Performance					
Our company uses supply chain strategy to increase organisation operational performance					
Our company uses supply chain strategy has positive impact on organizational financial performance					
Our company uses supply chain strategy to reduce expenses and increase its profitability					
Our company corporation has the capability to control the sales and distribution network which ultimately will impact financial performance					

Fu et al. (2022)