

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY, KUMASI**

**THE EFFECT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON
ORGANISATIONAL PERFORMANCE. THE MEDIATION ROLE OF
PROCESS CONTROL AND IMPROVEMENT.**

**BY
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**A THESIS SUBMITTED TO THE DEPARTMENT OF SUPPLY CHAIN AND
INFORMATION SYSTEMS, KWAME NKRUMAH UNIVERSITY SCIENCE AND
TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE AWARD OF**

**MASTER OF PHILOSOPHY
LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

OCTOBER, 2022

DECLARATION

I declare that this submission is my own work towards the Master of Philosophy (Logistics and Supply Chain Management Option) Degree and to that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University. Except where due acknowledgement has been made.

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DEDICATION

This work is dedicated to my lovely wife, Theresa and my children Sedem, Ewoenam and Esinam God bless you for coping well throughout the period I was pursuing this program.

KNUST



ACKNOWLEDGEMENTS

I give glory and thanks to the Almighty God for the strength to pursue this research study. No one ever writes a thesis “all by oneself” and in my case, this thesis has come to be, not by my ideas alone but because many other people gave of their time, talent and ideas. I am very thankful to my supervisor Mr. S. B. Rockson for his time, guidance, and all the support to make this work a success. I feel grateful to him for continuously delivering me moral support and endless motivation as well as encouraging me to pursue PhD after.

I also express my sincere gratitude to student colleagues and the staffs of companies in cape coast metropolis which allowed me to use their facilities for this project.

I can't forget the bone of my bone and the flesh of my flesh Theresa for her moral support and her dedication to be there for me at all time. To my children Sedem, Ewoenam and Esinam God bless you for coping well with me when I have to leave home early and come home late because of this thesis.

ABSTRACT

This study examined the relationship between supply chain management practices and operational performance of firms in the Cape Coast Metropolitan area. Using simple random and convenience sampling techniques to select a sample of 100 respondents, the study administered questionnaire for data gathering, and a response rate of 75% was obtained. The study was built on descriptive survey design, based on quantitative strategy. Field data collected was analysed using descriptive and inferential statistics, applying mean scores, standard deviations and correlation estimates. The models developed were tested using multivariate linear and hierarchical regressions. The ordinary least squares estimation procedure was applied for generating and reporting the results. The findings show a positive significant relationship between all dimensions of supply chain management practices (top management support, customer focus and supplier management) and operational performance. Top management support emerged as the dimension with the strongest effect on operational performance. Further, the study found that customer focus management and supplier management practices have positive significant relationship with firms' business process controls and improvements, and that process control and improvement fully mediates the relationship between supplier management practices and operational performance. The study recommends that managers should continue to provide supportive directions, guidance and resources for the design and implementation of strategic supply chain management activities.

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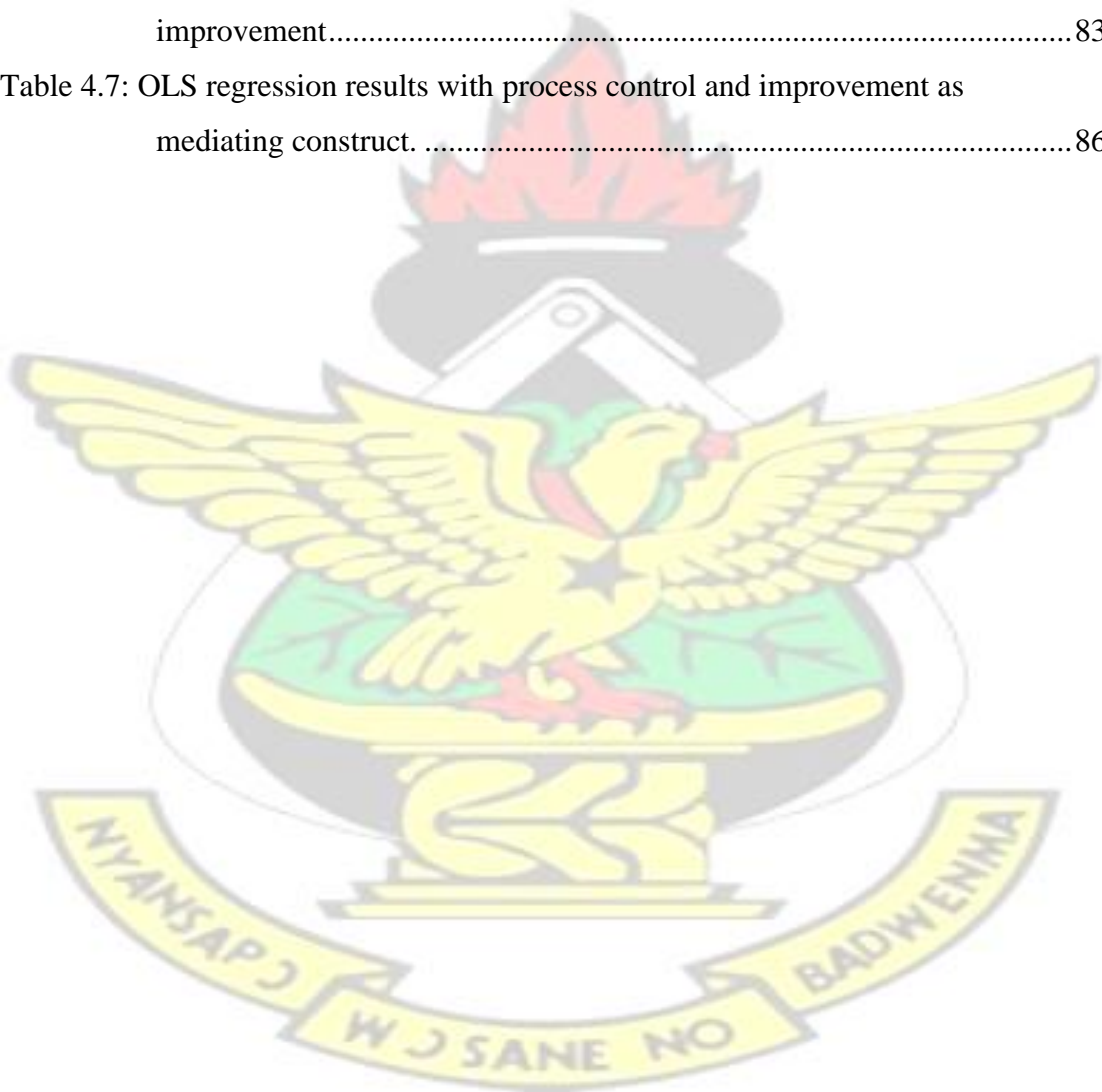
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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The rapid changes in time and the environment have resulted in great competitive pressures on organisations. In order to survive in this turbulent environment of growth, a lot of organisations are actively looking for means to develop capabilities and enhance their competitive advantages to cope with the changes in this globalised era (Zhang et al., 2014). Supply chain management has increasingly become an important topic of study by researchers as well as organizations involved in business. Focus has been on the creation of an effective supply chain which has been known to be a critical tool in product and service management and improving the competitive advantage for firms (Christopher, 1998). The concept of supply chain management plays critical role in aiding firms improve performance. Supply chain management (SCM) refers to the strategic management of resource movement along the supply chain. To add value, supply chains need to be organized in such a way that creates workable processes and goals among the supply chain members.

Harrison and New (2002) argued that the successful implementation of supply chain management (SCM) practices provides opportunities to improve operational performance along the supply chain. Eduardo et al. (2014) argued that supply chain management practices (SMPs) lets companies reduce costs by developing new technologies that mitigate their activities. This is particularly relevant because increasing supply chain practices benefits companies in other ways: improved efficiency, higher product quality, a lead on competitors and legislation, access to new

markets, increased employee motivation and satisfaction, improved public relations, financial aid, and better organizational reputation.

Kim (2006) argued that effective construction of various SCMPs requires close integration of internal functions within the firm and external linkages with suppliers, customers and other channel members in order to be highly competitive and at the same time achieve profitability growth. Although some organizations have realized the importance of implementing supply chain management, they often do not know exactly what to implement, due to a lack of understanding of what constitutes a comprehensive set of SCMPs (Li et al., 2006a).

Although a number of studies have been done on the link between SCMPs and firm performance, there is far too little knowledge available on the role of organizational culture in moderating the influence of SCMPs and performance. SCM practitioners need clarity about the scope of processes to include in their integration plans, the individuals and entities to involve, the practices and methodologies to follow as well as key performance areas to focus on in the measurement of performance. This opinion is supported by Lambert (2008) who states that there is a need for broadly accepted normative tools and methods for SCM practice.

SCM contributes to the success of all firms general. It involves the association between a company, vendors and its customers. It is also considered as a network of organizations working together with their key stakeholders to efficiently supply product to customers. Organisations operate their businesses in global platforms

which have increasing complexities due to interconnected processes of globalization and internationalization of businesses (Ball et al., 2008 and Boschman, 2006). Companies have to involve all parties and incorporate their activities to form a seamless and efficient network of processes and functions to produce goods and offer services that meet the needs of customers. Hence the current study will be based on supply chain management practices and how they influence process control and improvement and operational performance among Ghanaian firms, testing mediation analysis.

1.2 Statement of the Problem

As the investments made by most of companies in developing countries, supply chain management holds important position in maintaining the flow of the raw materials to the processing units up to supplying finished goods to the end consumer. Nowadays, process control and improvement has become necessary to ensure effective supply chains (Kaynak, 2003). Supply chain is one of the areas identified by researchers as having a great potential to boost efficiency and reduce costs of most manufacturing firms. Burgess et al. (2006) highlighted the importance of SCM but noted there is little research done on supply chain practices. Any inefficiency incurred by any of the supply chain members can impact on the performance of the whole chain. This is because inefficiencies add to the company costs in the long run. Timely exchange of information in the SCM at the right time helps to improve the performance of all the members in the chain (Chopra and Meindi, 2004) by reducing variations and shifts in inventory and customer demands.

Information is a key resource in supply chain management and coordination hence the need for it to be managed so that all the supply chain teams can achieve their objectives. Researchers have examined the relationship between SCM practices and firm performance; they conclude that SCM practices have a positive impact on firm performance at the operations level, as well as at the business level (Cheng et al., 2012). Suhong et al. (2014) examined the effect of supply chain management practices on competitive advantage and organizational performance. The results indicate that consistent application of SCM practice can lead to improved competitiveness and organizational performance.

Hamid (2013) sought to explain the relationship between supply chain management (SCM) practices and supply chain responsiveness (SCR) in relation to competitive advantage (CA). The results indicated a positive relationship between SCM practices, SCR and competitive advantage. Supalak (2010) examined supply chain management practices on the hotel food supply chains in south England. It was established that higher levels of service delivery translated to more flexibility regarding supplier selection at property level. It also revealed that service delivery will lead to more flexible and centralized sourcing techniques.

In Africa and other developing countries, studies have also been carried out on supply chain management. Shalakha (2015) in his research on innovative supply chain management practices of oil marketing companies in Kenya revealed that the key challenges facing oil marketers in the implementation of innovative supply chain management practices were; lack of proper training, failure to invest in modern technologies and lack of commitment by the top management. Miyare (2014) studied

supply chain management practices and organizational performance of Kenolkobil Limited. The findings revealed a strong relationship with their organizational performance.

Barua (2013) investigated the challenges facing oil marketing companies in the application of supply chain management principles. The study found that the challenges were as follows: transportation, equipment, communication, supplies innovation and finances. Mogire (2011) investigated the supply chain management practices in five-star hotels in Kenya and established that the major hindrances to be collaboration during planning, lack of understanding of the SCM Concept. The study also established that there were strategic relationships with suppliers and customers within the hotel industry, it did not however reveal about long term relationships between suppliers and clients. Even though the study shows that five-star hotel industries have adopted supply chain practices in their operations they have not fully embraced the practices.

However, there has not been studies conducted to delve into the direct and mediation relationships that exist among supply chain management practices, process control and improvement and operational performance. This study therefore sought to explain the existing knowledge gap by answering the following questions: What is the relationship between supply chain management practices and operational performance of firms? What is the relationship between supply chain management practices and firms' process control and improvements? Does process control and improvement mediate the relationship between SCM practices and operational performance? These are questions that this study seeks to find answers for.

1.3 Objectives of the Study

The general objective of the study is to examine the relationship between supply chain management practices and organisational operational performance in Ghana. This objective is scaled down to the following specific objectives.

1. To examine the relationship between dimensions of supply chain management practices and operational performance.
2. To determine the relationship between supply chain management practices and process control and improvement activities of the selected firms.
3. To examine the mediation role of process control and improvement in the relationship between supply chain management practices and operational performance of the selected firms.

1.4 Research Questions

The study is guided by the following research questions:

1. What is the relationship between dimensions of supply chain management practices and operational performance?
2. What is the relationship between supply chain management practices and businesses' process control and improvements?
3. What role does process control and improvement play in the relationship between supply chain management practices and operational performance?

1.5 Significance of the Study

For true development to take place, strategy formulation and implementation need to extend along an organization's supply chain for improved performance (Green et al., 2012). The study would help the Ghanaian government to holistically understand the influence of supply chain management practices in all the government institutions and come up with relevant policies, laws and regulations that are based on empirical evidence. Further the government may also be able to understand the impact of various supply chain management practices on performance. The government can also draw from the findings to understand the influence of supply chain management practices on operational performance in their respective institutions for purposes of coming up with better strategies to help improve on their level of compliance hence improved performance.

The study would be beneficial to academia as it would add to knowledge on supply chain management practices and open up more gaps for research hence those in the academic realm interested in conducting further research in this area will have more materials for references. The study may benefit the general public since an in depth understanding of the influence of supply chain management practices on operational performance via process control and improvement and may enable the government to come up with better strategies and relevant policies and laws that may improve on compliance, cost reduction and social concerns hence economic growth which may have a positive effect on the standard of living of all Ghanaians.

In conclusion, the study contributed to the existing body of knowledge regarding how manufacturing firms can leverage on supply chain management practices to influence operational performance of manufacturing firms in Ghana, a developing region. In

addition, the study served as a resource for those who wished to conduct research on the variables utilized in the study.

1.6 Overview of Research Methodology

This study adopts descriptive survey design as the building block for achieving the set objectives. Data collection method was cross-sectional survey, making use of structured questionnaire. Convenience sampling was adopted for selecting 100 respondents who are managers and staff members of the selected firms. Data analysis was conducted through descriptive statistics involving the mean and standard deviation scores; and inferential statistics involving correlation and multivariate ordinary least squares regression estimates. To test mediating roles of variables, this study applied hierarchical multivariate regression for the variables under study. The data gathered was analyzed quantitatively using the Statistical Package for Social Sciences (SPSS) latest version. Specifically, descriptive statistics such as means and frequencies was used to describe the characteristics of the data and also to present quantitative descriptions in simpler summary. Also, regression analysis was used to examine the level of statistical association between the variables based on the formulated hypothesis of the study to arrive at the study findings.

1.7 Scope of the Study

The study is written within the supply chain management context and focused on supply chain business management practices. The study looks at whether the SCM practices positively relates to operational performance through process control and improvement of Ghanaian firms in Cape Coast Metropolis. Therefore, the study

focuses on top management support, customer focus management and supplier management practices of selected firms.

1.8 Limitations of the Study

The treatment of constructs of supply chain management practices and operational performance is undertaken with data from employees of firms in the Cape Coast Metropolis. This means that the study's geographical scope is quite small, and therefore, the findings are restricted and applicable to firms in the study area. Users of this study's outcomes are notified of this limitation. Also, this study pivots around three main supply chain management practices-top management support, customer focus management and supplier management practices. Other practices such as outsourcing and inventory management are not covered as part of the study's scope. Also, no control variable construct was introduced, and if any control variable had been used, the study's outcomes may have changed.

1.9 Organization of the Thesis

The study contains five chapters outlined as follows. Chapter One is the general overview of the study that describes the background from which the study is developed. It also prescribes the statement of research gaps, objectives and corresponding research questions around which the study revolves. Chapter Two delves into the literature behind the study, and discusses theoretical, conceptual and empirical aspects of the literature. Chapter Three is the research methodology chapter that describes the actions, steps and procedures undertaken, as well as resources assembled by the researcher for developing the study. Chapter Four is meant for the presentation of results and discussion. Chapter Five summarizes the findings,

concludes the study and makes recommendations available for management application.

KNUST

The logo of KNUST (Kwame Nnamkoma University of Science and Technology) is centered in the background. It features a red flame above a white and grey shield, which is flanked by two yellow wings. Below the shield is a yellow banner with the text 'WUJ SANE NO' and 'BAI WENIA'.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

On the topic "Examine the link between supply chain management practises and organisational operational performance in Ghana," this chapter gives a relevant evaluation of the literature on the subject. In order to facilitate reading, the chapter is divided into five (5) major parts, which are as follows: A review of the conceptual literature is presented in Section 2.1, which discusses concepts such as supply chain management and organisational performance. A review of the theoretical literature is presented in Section 2.2, which discusses concepts such as resource-based view theory, knowledge-based view theory, and customer service theory, among others. Specifically, Section 2.3 presents the empirical reviews and hypothesis formulation, whereas Section 2.4 presents the conceptual framework. The summary of the chapter is presented in Section 2.5.

2.1 Conceptual Review

This section discusses the concepts relevant in this study. A number of concepts including supply chain, and its management, supply chain management practices and its dimensions and operational performance are explained.

2.1.1 Supply Chain

The concept of supply chain has evolved over the past several decades, with each period or era making significant contributions, additions, and subtractions. Earlier definitions of the concept regarded the supply chain as the evolution/cycle of products from inception to disposal. In essence, the concept of supply chain has been defined from various perspectives and has garnered considerable attention from academia and industry due to its critical position in the achievement of organizational goals and objectives. The supply chain is considered dynamic as a result of the interfaces between firm-level decisions and external interactions with other external parties. (Swaminathan, Smith and Sadeh, 1998). A supply chain primarily extends beyond manufacturers and suppliers to include other essential elements such as warehouses, transporters, retailers, and customers and is primarily concerned with the creation of enhanced value for the final consumer via the passage of goods and services through the value chain. (Chopra and Meindl, 2007). In this regard, Chopra and Meindl (2007) defined supply chain as all stakeholders involved directly or indirectly in the fulfillment of a request or order. Similarly, supply chain is defined as the interrelationship between firms that are primarily concerned with the creation and delivery of products and services to the final consumer via upstream and downstream value-creating activities and processes. (Christopher, 2005).

Christopher (2016) defines supply chain as the management of upstream and downstream relationship with suppliers and customers in order to deliver superior value at less cost to the supply chain as a whole. Supply chain (SC) is a system of organizations, activities, resources, information and people involved in transporting a product or service from supplier to the customer. SC activities involve transformation of natural resources, raw materials, and components into a finished product that is delivered to the end user. SC is a sequence of activities that aims to meet the requirements of customers and take place within and between different supply chain stages, it does not only includes manufacturer and its suppliers but also include facilities, location, transporters, retailers and customers themselves. Businesses no longer compete on company to company basis but rather on supply chain to supply chain, the efficiency and effectiveness of your supply chain determines your survival in the competitive market (Christopher, 2016).

There are many worldwide researchers conducting studies to develop efficient methods to improve operational performance. As competition move from organizations to supply chains, the term Supply Chain Management has become popular. The implementation of SCM practices is considered as a base for improvement of operational performance (Li et al., 2009). Building a best-in-class supply chain requires money, time, talent, energy, focus, commitment, and guts (Blanchard, 2010).

Christopher and Peck (2004) define SC as the network of organizations, which works by means of upstream and downstream linkages throughout the processes of the organizational activities and results in the creation of value for customers. Chopra &

Meindl (2007) defines SC to consist of all parties involved, directly, in fulfilling a customer request. They argued that SC includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers, and even customers themselves. Within each organization, such manufacturer, the supply chain includes all functions involved in receiving and filling a customer request. These functions include, but not limited to, new product development, marketing, operations, distribution, finance, and customer service. Meindl and Chopra (2013) stated that the failure of online business can be attribute to weaknesses in the supply chain design and planning, also successful supply chain management requires many decisions relating to the flow of information's, products and funds. Supply chain performance drives on facility, inventory, transportation, information, sourcing, and pricing. These drivers interact to determine the SC performance in terms of efficiency and responsiveness.

Facilities are the physical structures in the SC where materials, products, semi-finished goods are stored, fabricated and assemble including their location in the chain. For a firms SC to be efficient and responsive, the location of the manufacturing plant, warehouses and distribution centers are very important. Establishment of plant, warehouse and distribution centers close to the customers may increase responsiveness but may not be efficient; therefore it is very critical taking decision in this regards (Meindl & Chopra, 2013).

Transportation within the SC involves the movement of inventory from one point in the chain to the other point in the supply chain but not limited to one specific routes and modes of transportation. Depending on the nature of business, the urgency, customer location, cost of transportation, etc. decision are made in the best interest of

the firm in other not to transfer into the price of the product which may be posted to the customer (Meindl & Chopra, 2013).

Apart from quality, pricing also affects the buying powers of buyers which may go a long way to affect the performance of SC. Price is how much a firm will be willing and accept for a product or service enjoyed in the SC. In market segmentation, responsiveness may be good to some segment without necessarily looking at the price whiles other segment will prefer efficiency to responsiveness taking price into consideration. There is always a trade off the firm has to make when it comes to issue of responsiveness and efficiency in regards to price of a product (Meindl & Chopra, 2013).

Inventory is the raw materials, semi-finished goods, goods in transit, and finished goods within a supply chain. Inventory is a stock of money for a firm that has to be handle with care, the level of inventory held by a firm at a particular time determines the firm's responsiveness and efficiency of the SC. Stocking large amount of inventory will be beneficial to a firm when demand increases unexpectedly, yet it also increases inventory holding cost. Firms many at times take decision to breakeven (neither over stock nor under stock) (Meindl & Chopra, 2013).

A firm cannot provide all they need for operation in-house, therefore the need to select firms or individuals who has the capacity to meet the demand of the firm to complete a product and place the product in the hands of the consumer. Among this outsource activities are transportation, warehousing, production, management of information, and after sales service. The firm always must take a strategic decision on

what to outsource and that which to be performed by the firm, mostly non-core activities are the best to outsource and the firm perform the core function, this is because the secrecy of the business rest in the core activities of the firm and if outsource will endanger the firm (Meindl & Chopra, 2013).

Information is a major tool on which SC moves, without information the parties to the chain cannot operate. Information is needed on inventory, transportation, price, costs, facilities and customers throughout the supply chain. Management needs information to make decision for the firm operations, the information must be sufficient and accurate. It is better not entering into a business when you have no information because information is key (Chopra & Meindl, 2013).

2.1.2 Supply Chain Management

Though it is a concept that emerged in the 1980s, supply chain management (SCM) has been defined from different perspectives by various authors and has been widely covered. Because of the complexities of businesses, reliance on external partners, and intense competition among firms, supply chain management has gotten more focus in recent decades. Mentzer et al. (2001 P. 18) defined supply chain management as "the systematic, strategic coordination of the traditional business functions and the tactics across the business functions within a particular organization and across organizations for the purposes of improving the long-term performance of the individual organizations and the supply chain as a whole". Mentzer et al. (2001) define supply chain management as encompassing functions such as marketing, sales, research and development, finance, information systems, and customer service in addition to

purchasing, logistics, and production as part of the broader umbrella of supply chain management.

Similarly, supply chain management is viewed as a method of fulfilling customer expectations with the goal of improving the overall competitiveness of the supply chain by integrating organizational functions along a supply chain to facilitate how materials, information, and funds will be coordinated. (Stadtler, 2015). Many critical decisions regarding supply chain design, planning, and operation are essential for the flow of materials, information, and funds. The goal of the many critical decisions is to increase the supply chain's profitability, which is the difference between the revenue produced by a supply chain and the total cost across the supply chain. (Chopra and Meindl, 2007). Furthermore, supply chain management is defined as a process that entails the effective planning, execution, and control of supply chain operations. (Simchi-Levi, 2004).

The term 'supply chain management (SCM)' is relatively new. It first appeared in logistics literature in 1982 as an inventory management approach with an emphasis on the supply of raw materials (Oliver and Webber, 1982). SCM needs integration among successive partners in the SC from primary producer to the final consumer to meet the demands of customers at the lowest possible cost and increase SC surplus (Lambert and Copper, 2000). SCM is the integrated planning, co-ordination and control of all business processes' and activities in the supply chain to deliver superior consumer value at less cost to the supply chain as a whole whilst satisfying requirements of other stakeholders in the supply chain (Van der Vorst, 2006). Christopher (2016) defines SCM as the design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building

a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand, and measuring performance globally. The definition portrays SCM as the aspect of study that cut across many traditional disciplines and is beyond the boundaries of every organization which gives the chances for competition and differentiation. The supply chain management of a firm must be strategic to have advantage over the competitors and to survive in the business market. For your supply chain to be strategic you need more than just innovation but creating a unique SC configuration that drives your strategic objectives to attainment.

In its concept, supply chain management (SCM) views the supply chain as a one entity, rather than as a collection of fragmented elements, each of which performs a specific job (Mentzer et al., 2001). In other words, supply chain management is a mindset that expands the notion of partnerships to include a multifirm endeavor to manage the complete flow of commodities from the supplier to the final client (Gentry, 1996). Thus, supply chain management (SCM) is a set of beliefs that each business in the supply chain has a direct and indirect impact on the performance of all other supply chain members, as well as the final, overall performance of the supply chain (Han, Wang and Naim, 2017). Management philosophy that promotes synchronization and convergence of intrafirm and interfirm operational and strategic skills into a single, compelling marketplace force is known as strategic corporate management (SCM) (Mahulo, 2015). In the context of supply chain management, as an integrative philosophy, participants of the supply chain are directed to concentrate on generating new solutions to provide unique, customized sources of customer value (Mentzer et al., 2001).

According to Langley and Holcomb (1992), the goal of supply chain management should be the synchronization of all supply chain operations in order to provide customer value (Min, Kim and Chen, 2008; Huo, Wang and Zhao, 2014). The SCM concept emphasizes that the bounds of SCM should cover not just logistics, but also all other tasks inside a business and across the supply chain that contribute to the creation of value and customer satisfaction for customers (Akdogan and Demirtas, 2014; Min, Zacharia and Smith, 2019; Fernandes et al., 2017). Knowing and comprehending the values and expectations of clients is critical in this environment (Fernandes, et al., 2017). In other words, the SCM concept encourages supply chain participants to place a high value on the needs of their customers. According to the findings of the literature research, it is argued that SCM as a management philosophy has the following characteristics: 1. A systems approach to seeing the supply chain as a whole, and to controlling the whole flow of products inventories from the supplier to the final consumer (Singh and Verma, 2018); 2. A strategy orientation toward cooperative efforts to synchronize and converge intrafirm and interfirm operational and strategic capabilities into a unified whole (Korsita, Cania, and Korsita, 2017); and 3. A customer focus to generate unique and customized sources of customer value, leading to increased customer satisfaction (Lehrer et al., 2018).

In order to successfully implement a supply chain management philosophy, businesses must first build management practices that allow them to act or behave in a manner that is compatible with the philosophy (Cooper and Slagmulder, 2017). As a result, several writers have concentrated their attention on the tasks that comprise supply chain management. For enterprises to be completely successful in today's competitive climate, Akdogan and Demirtas (2014) believe that they must broaden

their integrated behavior to include consumers and suppliers. Supply chain management is the term used by Bowersox and Closes to describe the expansion of integrated behaviors via external integration (Horch, 2009). In this environment, the philosophy of supply chain management is transformed into the practice of supply chain management, which is a collection of actions that carry out the philosophy (Palmieri et al., 2019). Among the supply chain participants, such as suppliers, transporters, and manufacturers, this collection of operations is referred to as supply chain management. Its goal is to dynamically adapt to the demands of the end consumer (Mentzer, 2004). It is necessary to share information across supply chain participants in order to execute a supply chain management philosophy, particularly for planning and monitoring activities, which are related to integrated behavior (Min, Mentzer and Ladd, 2007; Chandra and Kumar, 2000; Kim, 2017). Spens and Bask (2002) underlined the need for regular information updating among supply chain stakeholders in order to achieve efficient supply chain management.

Information sharing, according to the Global Logistics Research Team at Michigan State University (1995), is defined as the readiness to make strategic and tactical data accessible to other members of the supply chain, regardless of the source of the data. Supply partners benefit from the open exchange of information on inventory levels, forecasts, sales promotion methods, and marketing strategies since it lowers uncertainty between them and results in improved performance (McCarthy and Golobic, 2002; Wan and Sanders, 2017; Bowersox, Closs, and Stank, 2000; Li et al., 2009). Effective supply chain management also necessitates the sharing of risks and benefits that result in a competitive advantage (Richey, Adams, and Dalela, 2012). Risk and reward sharing should take place over a lengthy period of time (Wilson,

2010). Shared risk and reward is critical for long-term focus and collaboration among participants in the supply chain (Anbanandam, Banwet and Shankar, 2011; Ramesh, Banwet and Shankar, 2008). Effective supply chain management necessitates collaboration among all components of the supply chain (Tan, 2002; Hudnurkar, Jakhar, and Rathod, 2014). Cooperation refers to identical or complementary, coordinated operations carried out by enterprises in a commercial partnership in order to achieve improved shared results or single outcomes that are mutually anticipated to occur over time as a result of the cooperation (Ellram and Cooper, 1990). It occurs at multiple management levels (e.g., top and operational managers), and it involves cross-functional coordination among supply chain participants. Cooperation is not restricted to the requirements of the present transaction (Miled and Fiore, 2014). Joint action in close relationships is the term used to describe the process of carrying out focused activities in a cooperative or coordinated manner with others (Miled and Fiore, 2014). Joint planning and control activities to assess the performance of supply chain members as well as the overall performance of the supply chain are the beginning and ending points of collaboration (Sanei, MAMIZADEH, and Samaei, 2011). Joint planning and assessment are continuous procedures that take place over a number of years (Castillejo, 2016). To minimize supply chain stocks and achieve supply chain-wide cost savings, collaboration is required in addition to planning and control efforts (Rotonen, 2017). Furthermore, supply chain participants should collaborate on new product development and product portfolio selection to ensure a successful product launch (Lambert and Enz, 2017). To conclude (Ajiboye et al., 2017), the design of quality control and delivery systems is likewise a collaborative effort.

According to Cetinkaya et al. (2011), a supply chain is successful if all of the participants in it are working toward the same objective and are equally focused on servicing consumers. Policy integration is the process of bringing all participants in a supply chain together around the same purpose and a common emphasis. According to Taggar (2013), successful partnerships strive to integrate supply chain rules in order to reduce duplication and overlap, while also pursuing a degree of collaboration that enables participants to be more effective while incurring lower levels of operational cost. Integration of policies is achievable if the supply chain participants have cultures and management approaches that are compatible with one another (Rajaguru and Matanda, 2013). It is necessary to integrate operations from sourcing through production and distribution across the supply chain in order to execute SCM (Azevedo et al., 2012; Wright and Lund, 2003; Arawati, 2011; Tan, Shaw, and Fulkerson, 2000). It is possible to achieve integration via the use of cross-functional teams, in-plant supplier staff, and third-party service providers. Supply chain integration may be divided into four phases, each of which has its own planning and operational consequences (Christensen, 2015; Renner, 1996). Stage 1 represents the most fundamental scenario. As a result of fragmented activities inside an individual organization, the supply chain is characterized by staged inventories, autonomous and incompatible control systems and processes, functional segregation, and a lack of coordination between departments (Andersen and Engedal, 2013). After completing Stage 1, the organization will begin to concentrate on internal integration, which will be characterized by a concentration on cost reduction rather than performance enhancement, buffer inventory, preliminary examination of internal trade-offs, and reactive customer service. Stage 2 will conclude with a focus on external integration (Gajek and Sternad, 2020).

2.1.2.1 Components of Strategic SCM

The critical configuration components that strengthen firms SCM includes operational strategy, outsourcing strategy, channel strategy, customer service strategy and asset network (Cohen & Roussel, 2005).

Operational strategy: Firms decision on how, when, where, what and how to produce goods or offer service to customers falls within the operational strategy of the firm. Is your production going to be based on demand, make to stock, engineer to order, or a combination? Is your manufacturing going to be off shore? Will your firm establishes facilities close to the customers or uses channels to reach the customers? These are issues that needs critical attention and must be handle strategically to influence and shape your supply chain. The strategy should be communicated to all staff for wholesome contribution (Cohen & Roussel, 2005)

Outsourcing strategy: This is one area that needs a strategic decision on what to produce in-house and what to outsource to third party. Decision is taken base on what the company is really good at and that which it has little or no knowledge of, also not forgetting the cost of outsourcing. It is for a good reason that a company does what it can do better (core functions) and outsources that which it cannot do better (non-core function) to a company which can do it better in other to meet specification and quality (Cohen & Roussel, 2005). Decision here is very critical in the sense that if your core value is exposed or outsourced, the secret of the firm is known and this can jeopardize the entire business, hence every firm must have a core value.

2.1.3 Supply Chain Management Practices

According to Lambert (2008), the length, breadth and width of supply chain practices of organizations differ from one organization to the other and argue that the operational activities determine the SC practices of companies. Again, the SC practices of service organizations are likely to be different from that of manufacturing organization and so forth. Adebayo (2012) defined supply chain management practices as a set of activities undertaken in an organization to promote effective management of its supply chain. The concept of supply chain management practices has been considered from different points of views in different bodies of literature. There are no specific elements that are conventionally accepted as best supply chain management practices. Ibrahim and Hamid (2012) assert that many authors who have studied supply chain management practice have used various elements and dimensions to measure the supply chain management practices.

The absence of a comprehensive understanding of supply chain management practices, makes it more difficult for supply chain management decision makers to claim responsibility for the right practices, it also make it difficult to benchmark with other organizations and companies on the supply chain metrics for improvement on performance and also gives more room for research on the acceptable supply chain management practices.

2.1.3.1 Top Management Support

Organizational policies are developed by top management, which is the highest decision-making body in the company. As a result, they are accountable for the formation of organisational policy. Any information about the requirements and desires of customers that is used in the supply chain must have the full backing of the

company's senior management since the success or failure of the organisation rests on their shoulders. Market research information may be quite accurate for supply chain drivers to use, but without the backing of senior management, it will not be applied, and any efforts made by workers to do so would be ineffective. As a result, it is not true that only senior management is responsible for the demands and wishes of customers, but rather that everyone has a part of the responsibility (Lakhal et al., 2008). Top-level management support is required to guarantee that the necessary resources are available to conduct market research in order to establish the needs and requirements of customers, as well as to make all possible efforts to satisfy those needs and requirements (Kaynak, 2008). In this context, it is more appropriate to think of top management as a function rather than a human being, since it has a significant influence on the operation of a company's supply chain.

From the standpoint of supply chain management, its function is to impact and integrate the physical movement of items with the overarching strategic content of the organisation (Sandberg, 2007). From the standpoint of supply chain management, early consumer participation in product design plays a critical role in the success of the product and the organisation as a whole, and it serves as a way of reducing or achieving defect zero (Robinson and Malhotra, 2005). Top management sets the company's purpose, vision, goals, and objectives, which are the focal point for all workers as they do their jobs. They also serve as a guide for all other employees (Truong et al., 2017).

Every organization's success is dependent on the backing of its senior management. This is an issue on which many writers disagree. As a leader, effective top management is essential (Georgakakis, Greve, and Ruigrok, 2017; Hayibor et al., 2016). For many years, the issue of leadership has been a hot topic in a variety of

areas. Organizational performance has increased as a result of strategic planning, and leadership has played a critical role in the achievement of this aim (Rashid et al., 2016, Khayota, 2014; Antony, Gupta, and Gijo, 2018). A competent leader must choose the best course of action to take in order to accomplish the organization's objective. According to Ginter, Duncan, and Swayne (2018), various styles of leadership are employed as a medium for planning in different organisations. The concept that a leader's personal affairs might have an impact on strategic planning if they do not manage themselves appropriately is also presented. Furthermore, it has been shown that charismatic and transformative leadership has a major impact on relationship effectiveness (Madanchian et al., 2017) [15]. The importance of a person as a leader in strategic planning cannot be overstated. Furthermore, the ability to adapt to change has shown that leadership is important when planning for the long term.

Chief executive officers, chief financial officers, chief operating officers, and other senior-level managers are referred to as "top management." These individuals may include presidents, business owners, and other high-ranking executives (CEO, CFO, COO, and so on) (Patanakul, 2020). Several academics have emphasised the importance of top-level management in the execution of strategy. The majority of them emphasise the critical role of senior management as a figurehead in the process of strategy formulation (Alefari, Salonitis, and Xu, 2017; Knight and Paroutis, 2017; Mintzberg, Ahlstrand, and Lampel, 2020; Cote, 2017). The efficacy of strategy planning and execution is influenced, at least in part, by the calibre of the individuals who are engaged in the process of formulation and implementation. In this context, quality refers to the talents, attitudes, capacities, experiences, and other traits of individuals that are needed for a certain job or position (Walker and Lloyd-Walker; From, 2017). Using a study classification approach, Viseras, Baines, and Sweeney

(2005) classify 36 major success variables into three categories: people, organisations, and systems. Their surprising results show that the effectiveness of strategy planning is highly dependent on the human or people side of project management, and that it is less dependent on organisational and systems-related variables. The leadership style of a leader is also a significant element in receiving top-level management support. A leadership style that incorporates knowledge management into the overall plan results in both competitive advantage and increased productivity. Walker and Lloyd-Walker (2018), for example, have talked about the importance of the knowledge management leadership style as a way to get high levels of performance and productivity.

2.1.3.2 Top Management Commitment

Top management has a significant impact on creating and implementing a company's supply chain management practices; therefore, supply chain management will be nothing more than a promising idea if top management does not support it. (Sandberg, 2007). Top Management Commitment (TMC) is hailed as a critical enabler and precondition for real-world supply chain management. (Matchette and Lewinski, 2005; Gibson et al., 2005; Mangan and Christopher, 2005). Furthermore, the Council of Supply Chain Management Professionals (CSCMP) identified top management support as the most significant factor for supply chain management implementation in a survey research. (Larson et al., 2007). Top Management Commitment is essential for implementing supply chain management practices such as Sustainable Supply Chain Management Practices because it can make resource allocation and deployment decisions that are required for change. (Gonzalez-Benito, 2010).

Top management commitment is defined as an organization's top management's tangible support for sustainable operations and practices. (Chiou et al., 2011).

Furthermore, Chrusciel and Field (2003) defined Top Management pledge (TMC) as an active and visible support or pledge from the organization's management, often in the form of a champion for the application. TMC is regarded as a key factor in achieving peak performance; an organizational change strategy (Ciptono, 2008). Top management commitment thus focuses on both reform commitment and change ability. (Colwell and Joshi, 2011). Sustainability policies and practices are typically maintained by organizations as a normative institutional pressure; however, top management dedication to and ideology on sustainability are critical elements that determine the success of sustainability strategies. (Wijethilake et al. 2017a). Similarly, top management commitment is critical in developing and transforming an organization's managerial and organizational structures (Hoejmose et al., 2012), and basically provides the necessary support to implement and achieve green practices. (Burki and Dahlstrom, 2017). Furthermore, top management's firm commitment to sustainability indicates that a firm will take critical steps to create and implement the administrative and operational structures needed for implementing sustainability practices. (Hoejmose et al., 2010).

2.1.3.3 Customer Focus Management

Customer focus is a critical component of good supply chain management and operational performance because it pushes information about customers' requirements and desires to the organisation. In order to meet the wants and wishes of consumers, it is necessary that this information be accessible to all company personnel. The

application of customer focus practises allows businesses to have a better understanding of their customers' expectations as well as potential market prospects (Tan, 2002). In order to survive in today's business climate, products must meet the demands of their intended consumers. It is only when an organisation makes customer information accessible as a critical tool for employees to use that a firm is able to remain in business. Because consumer tastes and preferences vary over time, it is necessary to update customer information on a regular basis and to communicate this information to all workers. The more accurate customer information a company has, the better it can keep a balance between demand and supply and reduce operational changes (Lee et al., 1997).

Furthermore, customer focus is fundamental to the TQM management philosophy of continuous improvement of product and service quality in order to achieve a higher level of organisational performance and competitive advantage (Tasie, 2016).formation of a quality culture is essential for organisations to achieve business intensity via the happiness of their workers and customers. View metadata The fundamental goal of total quality management (TQM) is to satisfy customers. This goal is articulated by the organization's efforts to understand current and future customer wants and needs, as well as to meet those needs in the course of designing and delivering high-quality products and services (Ajmal and Aslam, 2016). If you want to increase the success of your firm, you must ensure that your strategies are centred on the needs of your consumers (Colli et al., 2019).

Furthermore, the current tendency in Pakistan's telecommunications industry is to expand the number of enterprises that are being established, with little attention being

devoted to developing customer-centric strategies and initiatives (Ajmal and Aslam, 2016). As a result, by expanding the number of branches, it is necessary to devote greater attention to clients. According to Zwet (2017), one of the most important views is total quality management (TQM), which emphasises the importance of analysing the questions and complaints of consumers as well as gaining and losing clients. The Total Quality Management (TQM) concept holds that the ultimate success of an organisation is dependent on its ability to satisfy and meet the expectations of its customers (Hasham, 2018). A company's reputation might be ruined if it fails to satisfy the expectations of its consumers (Scheltus, Guerin, and Pears, 2021). To accomplish their objectives, organisations are now attempting to not only fulfil and please their consumers, but also to do it more efficiently and effectively than their rivals (Topaloglu, McDonald, and Hunt, 2018).

Finally, in order to provide superior service quality, businesses must assess the level of customer sensitivity and the customer's perspective on service quality (Oliveras-Villanueva, Llach and Perramon, 2020). In order to communicate more effectively with consumers, it is vital to have ongoing contact with them in order to maintain relationship-building activities over the long term. New and cutting-edge ways of engagement with clients, such as email, SMS, and high-tech communication gadgets, are required for this complete system to function well (Raja, 2016). Customers (both internal and external) will be asked the following questions, and the answers will be recorded for future reference: These are the people who buy my products. What are their genuine requirements and expectations? How can I find out what they are, or how can I find out what these are? What criteria should I use to assess my capacity to satisfy their requirements and expectations? Does it seem that I will be able to match their requirements and expectations? Do I consistently satisfy their needs and exceed

their hopes and expectations? What methods do I use to keep track of changes in their requirements and expectations?

2.1.3.4 Supplier Management

Cooperation between a company and suppliers is a necessary key in SCM. Firms join forces with suppliers to provide those materials, goods and service needed for production. It becomes very necessary to develop a good relationship with these suppliers to have a good delivery of service for an effective running of your company (Chen and Paulraj, 2004; Kaynak and Hartley, 2008). The quality imputes delivered by the suppliers will travel a long way to affect the final product, effective supplier management can eliminate inventory waste and reduce lead time (Ou et al., 2010; Zhao et al., 2008). Early supplier involvement in designing stage of a product helps to have a complete and comprehensive manual for production due to their knowledge in the input to supply (Wagne & Hoegl, 2006).

2.1.5 Operational Performance

The capacity of companies to improve their performance is a critical driver for encouraging companies to use sustainable management practices. (Mamdouh et al., 2018). The achievement of a company's financial goals necessitates the optimization of its supply chain performance. Companies face the challenge of improving their performance metrics in order to achieve better performance in a volatile and competitive marketplace. (Shen, 2005). Despite the intense and volatile nature of the competitive marketplace, organizations are constantly under pressure to incorporate sustainability into their operations, which usually has financial consequences for businesses.

In the supply chain management literature, some metrics for evaluating operational performance include cost, time, quality, delivery, and flexibility. (Neely et al., 1995). Similarly, according to Banomyong and Supatn (2011), cost, time, and reliability are critical elements that influence supply chain performance metrics, and these elements are thought to have a direct effect on a firm's ability to fulfill customer requirements at a lower cost. However, some operational success indicators for supply chain sustainability include cost savings and increased efficiency, product quality improvement, increased market share, new market possibilities, and increased sales. (Hasan, 2013). Kotabe et al. (2003) described operational success in this context as "the combination of product development efficiency, process improvements, quality conformity, and short lead times."

A company's ability to reduce management costs, order times, lead times, and improve the efficiency with which raw materials are used and distribution capacity is measured is referred to as operational performance (OP) (Heizer and Render, 2008). Production cycle time, inventory turns, reliability, and other metrics used to assess how well a business is performing in its operations are all examples of operational performance. According to Alamro, Awwad, and Anouze (2018), important business indicators like market share and customer satisfaction are affected by how well a company does in its day-to-day work.

In recent years, the term "supply chain management" has gained popularity as the focus of competition shifts from organisations to supply chains. SCM practises are considered the foundation for improving operational performance (OP), and their implementation is considered essential (Li et al., 2006). In the literature, there has

been a great deal of discussion about the relationship between SCM practises and OP (Gunasekaran, 2004). The outcomes, on the other hand, have not been completely consistent. For example, the relationship between process management and performance has been extensively studied, and several studies have discovered a direct relationship between process management and performance (Kaynak and Hartley, 2008; Kroes and Ghosh, 2010). According to Quang et al. (2016), however, there is an indirect relationship between the two. Flynn and Flynn (2005), on the other hand, said that process management has a negative direct link with performance, or even if they are not related, is detrimental to performance. On the other hand, there is no clear association between top-level management support and overall performance. A large number of scholars assert that top-level management assistance has a favourable and immediate influence on performance (Lambert and Cooper, 2000; Arif-Uz-Zaman, 2014; Cachon and Fisher, 2000).

Historically, the notion of supply chain operational performance has arisen from the concept of supply chain strategy, which is derived from the concept of corporate strategy. In the words of Haber and Fargnoli, a competitive strategy is described as "the collection of consumer wants that the company strives to fulfil via its goods and services" (2019). It is the goal of any organisation to select a distinct competitive strategy that is compatible with its overall plan, and then to afford the appropriate skills and resources that will assist it in achieving that goal (Hsieh and Chen, 2011). Suppose one organisation strives to provide high-quality products at a high price, another strives to provide a large variety of reasonable-quality products at a low price, and yet another strives to provide an excessive number of products, in which case the organization's competitive strategy must be built around providing customers with

convenience, availability, and responsiveness, among other things. Lee (2002) explains that anyone who wants their business to be successful must find a means to combine their supply chain strategy with their overall competitive strategy. According to Chopra and Meindal (2007), strategic fit refers to the consistency between the client goals that the competitive strategy aspires to achieve and the competitive strategy itself (Stonebraker and Liao, 2006).

Academicians and academics have looked at the functioning of supply chains from a variety of different points of view. Beamon (1999) created a set of supply chain performance measurements that were primarily concerned with efficiency. Profits, delivery speed, and transportation expenses were investigated as performance indicators by Simatupang and Sridharan (2002a, 2002b). A study conducted by Um et al. (2017) looked at the supply performance of a business, which was comprised of factors such as flexibility, cost, relationships, and responsiveness. According to Hamid (2021), removing non-additional value operations, reducing order variation, and speeding up product flows all have an impact on an organization's overall performance. According to Xie, Huo, and Zou (2019), information technology and process innovation may make a considerable contribution to operational performance. According to Keith et al. (2017), organisations must understand the nature of trade-offs that exist between customer service and expenses. By matching the operations and choices of the supply chain with the organization's business plan, organisations hope to obtain competitive advantages. According to Keith et al. (2017), supply chain strategy should guarantee that the supply chain delivers greater value to the end user in a cost-effective way. Tien and colleagues (2019) emphasise that the success of a business is highly dependent on the performance of the supply chain in which it

participates as a partner. Taking a look at Porter's competitive strategies (reduced cost, focus, and differentiation), Liu and Atuahene-Gima (2018) claim that business strategy is concerned with strengthening the competitive position of a business unit's goods and/or services within a certain sector or market segment. The researchers Liu and Atuahene-Gima (2018) found that the performance of a company is very much affected by the resources that its suppliers have.

Naway and Rahmat (2019) came to the conclusion that logistic integration has a mediating influence on the performance of operational processes. According to Liao, Hu, and Ding (2017), using external linkage performance measurements to create end customer value results in the development of end customer value via the integration of operations and communication with other member businesses throughout the supply chain. Among the many points made by Shad et al. (2019) is the significance of operational performance measures as a standard framework for assessing operational performance, which encompasses both internal and external firm linkages. According to Shad et al. (2019), cost, customer service, productivity, asset measurement (including quality and time), innovativeness (including price), adaptability (including ability to collaborate), supplier profile (including marketing measures), and time are the performance evaluation criteria. This research looks at operational performance as a collection of standards and benchmarks that organisations accept and apply to gain competitive advantage, customer happiness, and the highest possible degree of profitability. (Haseeb et al., 2019).

The following characteristics of supply chain operational performance were examined in this study: flexibility, time (speed), quality, and cost. These dimensions were

chosen because they are regarded as the most prevalent variables that have been researched in prior studies (Gao, Yang, and Lu, 2016). Flexibility When developing a flexible competitive strategy, employees must commit to specific actions and activities in order for the plan to be successful. One example includes training the employee in preparation for a variety of jobs; persuading the employee to accept more flexible work hours; working in groups; and improving communication inside the organisation (Davidescu et al., 2020). According to Kaur, Kumar, and Kumar (2017), flexibility is defined as "the capacity of a business to build flexible operations in a hypercompetitive market in order to respond to the rapid changes in volume, product mix, and timetables that occur." When it comes to product or service specifications, volume, and on-time delivery, according to the study, flexibility is described as the capacity of an organisation to adjust to changes in demand (Palang and Tippayawong, 2018). It was assessed in terms of particular things that demonstrate the capacity of the organisations to cope with swings in consumer demand over time. The passage of time (speed) Work on the following areas is required when developing a plan based on shortening the time between consumer requests and satisfying these wants: predicting demand systems, coordination of work processes, organisational transformation, and transportation management (Kumar et al., 2020).

According to Van Looy and Shafagatova (2016), the conventional performance dimensions of delivery time and lead time are no longer applicable in today's business environment. According to some research, time is divided into two categories: lead time and cycle time. Cycle time is defined as the amount of time that elapses between one completed job or task and another (Grandl et al., 2016), i.e., the amount of time that elapses between beginning one process or task and starting the same process or

task again. Lead time is the amount of time that elapses between the time a customer places an order and the time the product or service (company and supplier) is delivered to the final customer, including manufacturing, transportation, processing, warehousing, and delivery of the product or service to the final customer (Alicke, Rexhausen, and Seyfert, 2017). Sarkar, B., Guchhait, and colleagues (2019) defined lead time as the amount of time required for the delivery of the items to the primary customer. Using delivery time specified by the firm, the researcher determines the amount of time it takes to provide a product or service to a client according to an agreed-upon schedule. It was determined by measuring a number of things that represent the speed with which goods and services are delivered to clients (Iovescu and Rao, 2017).

2.1.5 Organizational Performance

The notion of organisational performance is founded on the premise that an organisation is a voluntary association of productive assets such as human resources, physical assets, and capital resources that come together for the purpose of accomplishing a common goal (Elisiva and Sule, 2015). According to Nthini (2013), people who provide the assets will only commit them to the organisation for as long as they are pleased with the value they get in return, when compared to the other applications for which the assets may be put to use. As a result, the creation of value lies at the heart of every successful performance (Vieira, Ferreira and So Joo, 2019). As long as the value created by the use of the contributed assets is equal to or greater than the value expected by those who contributed the assets, the assets will continue to be made available to the organisation, and the organisation will continue to exist, the assets will be made available to the organisation and the organisation will

continue to exist. Consequently, value creation, as defined by the resource provider, serves as the most essential overall performance metric for every organisation (Petri and Jacob, 2016)

Moreover, organisational performance is a process that increases both the efficiency of an organisation and the well-being of its people via the implementation of well-planned interventions (Van den Heuvel, Demerouti, and Peeters, 2015).

When much of the organization's development activities are committed to boosting organisational learning with the purpose of eventually affecting organisational performance, this will result in improved organisational performance (Combs et al., 2006). Organizational performance refers to the actual output or outcomes produced by an organisation as compared to the outputs, aims, and objectives that were intended by the organisation (BosiljVuki and Indihartemberger, 2008). Based on the research of Kehoe and Wright (2013), there are four different kinds of organisational performance measures: first and foremost are human resource and organisational results; second are financial accounting outcomes; and third, capital market outcomes. A variety of human resource outcomes were measured in relation to changes in employee behaviour, including employee satisfaction, turnover, and absenteeism. Returns on assets, return on equity, and profitability were some of the financial accounting outcomes that were measured. The capital market outcomes indicate how the market views an organisation, and they are comprised of three indicators: the stock price, the growth rate of the stock price, and the market capitalization of the company. Returns on assets, return on equity, and profitability were some of the financial accounting outcomes that were measured. A company's stock price, stock

price growth rate, and market returns all represent how the market views the firm, and these three indicators reflect that evaluation: stock price, stock price growth rate, and market returns (Barth et al., 2017).

Organizational outcomes, according to Habel and Klarmann (2015), include labour productivity, customer satisfaction, and the quality of product services provided by the organisation. Efficiencies and inefficiencies in an organization's performance may be described as the result that reveals or reflects the organization's efficiencies and inefficiencies in terms of corporate image, competences, and financial performance (Melewar and Akel, 2005). Work performance refers to the manner in which workers carry out their responsibilities. During a work performance review, an employer evaluates an employee's overall performance while also considering characteristics such as leadership abilities and productivity in order to evaluate each employee on an individual basis (Tang et al., 2022). Generally speaking, job performance evaluations are done on an annual basis, and they may help evaluate if an employee is entitled for a raise, whether a person is suitable for promotion, or even whether an employee should be dismissed (Bhanot, A.I., 2022). There were a plethora of methods for assessing an employee's job performance. It has been noted that high-performance work systems and practises are critical in the attainment of corporate objectives and the improvement of organisational effectiveness, according to Miao and Cao (2019). In spite of the fact that there is no consensus on the optimal configuration or bundle of high-performance work systems and practises, the logic is that high-performance work systems influence, align, and increase employee commitment to the organization's strategic goals while simultaneously decreasing employee turnover and increasing employee commitment to the organization's strategic goals (Dorta-Afonso

et al., 2021). According to Pradhan and Jena (2017), job performance includes not just tasks but also contextual aspects such as interpersonal and motivational components, all of which contribute to a two-dimensional performance construct.

Performance assessment, from the standpoint of evaluation, informs individuals of their current standing in relation to goals and standards, among other things (Armstrong, 2021). Thus, performance assessment serves as an input to choices about the allocation of awards and the administration of the organization's personnel divisions, among other things (Al-Douri, 2020; Zimmerman and Forrester, 2020). The use of performance assessment in counselling enhances the implementation of choices pertaining to the planning for and acquiring commitment to the continuing training and personal development of subordinates (Aguinis, 2019). Przychodzen and Przychodzen (2017). Przychodzen, Gómez-Bezares, and Przychodzen, as well as Przychodzen (2017). Historically, the success of a company has been correlated with the increase in shareholder value. It is possible to quantify success in terms of decreased environmental footprint, enhanced workplace health and safety performance, and greater customer satisfaction, among other metrics.

According to Sriwan (2004), the performance of a corporation should be evaluated in relation to a certain aim in order to determine whether or not the target has been met. The absence of an aim means that the organisation lacks a criteria for deciding between various investment strategies and initiatives. Consider the following scenario: If a company's goal is to maximise its return on investment, it will attempt to do this by adopting investments that have higher return on investment ratios than the company's present average return on investment ratio. However, if the company's goal

is to maximise its accounting profits, it will make any investment that would result in a positive accounting profit, even if this means lowering the company's existing average return on investment ratio in the process. Performance measurement is critical in ensuring that a firm stays on pace to meet its goals and objectives.

Furthermore, organisational performance is comprised of organisational outcomes, which are assessed in relation to the intended goals that have been established by the organisation, as previously stated (Kim et al., 2017). Organisational performance comprises three distinct aspects of company outcomes, which were formerly described as financial performance, product market performance, and shareholder return. When evaluating financial performance, profit margins are considered, as is return on investment (ROI) and return on assets (ROA), whereas product market performance is evaluated based on market share obtained when compared to rivals (Amina, Khairudin, and Damayanti, 2019). Investor return is assessed by overall shareholder return when an investor makes an investment in the organisation, as well as the economic value contributed by assuming the organisation will continue to develop in the future (Johan, 2018).

In general, non-financial performance that is related to aspects of strategy and operational performance such as delivery, productivity, response time, and distribution is also one of the firm outcomes that will determine organisational performance, in addition to product market performance and shareholder return (Grant, 2021). For the purposes of this research, financial and non-financial performance will be utilised to analyse organisational performance, and they will be classified in the following section according to their significance (Mu, Van Riel, and

Schouteten, 2022). Performance of the organisation: Typically, organisational performance is defined as a company's capacity to fulfil its market and financial objectives as assessed over time (Bryan, 2019), and it is associated with both financial and non-financial performance in the vast majority of situations. The following section discusses two important dimensions of organisational performance, as well as the classification for each of the specific dimensions of financial performance and non-financial performance, as well as the classification for each of the specific dimensions of non-financial performance (Glavan and Vuki, 2017).

According to a number of researchers (Alshehhi and colleagues, 2018; Glavan and colleagues, 2017; Makris, Charalabakis and Stavroyiannis, 2021; Rao et al., 2018), financial performance is related to the measurement of increase and growth in market share, increase and growth in return on investment (ROI), growing sales and increase in profit margin, and overall competitive position, among other things. In most cases, return on investment (ROI) is used to quantify profitability, while profitability refers to the independent aim of increasing market share. Sales and market share, as well as the increase of return on investment (ROI), are often used to measure financial success in organisations (Um, 2017). Holmberg (2000) has proven that financial measures are used to assess the success of organisations throughout time, as shown by his research (Khin and Ho, 2018). Aside from that, Narasimhan and Carter (1998) shown in their research that a business's market share, sales, and market position all have a substantial impact on the financial success of the organisation (Egbunike and Okerekeoti, 2018).

Non-Financial Performance: Despite the fact that organisational performance is simpler to assess than accounting data (financial indicators), as described in the preceding section, some researchers (Alarussi and Alhaderi, 2018) claim that market or value metrics such as product quality and new product development are more suitable than accounting-based measurements. Different reasons have resulted in a variety of metrics being used to determine the dimension of non-financial indicators that will have an impact on the performance of the company (Omran et al., 2021). Those businesses who are able to attain high levels of customer satisfaction, according to Tracey (1999), may benefit from expanded competitive capabilities and further higher market performance, both of which will aid in the improvement of organisational performance (Valmohammadi, 2017). As LaLonde (1995) and Kochan (2018) point out, fast order cycle times, high order fill rates, and accurate order and shipping information all contribute to improved overall organisational performance. Shortening production cycle time, lowering order cycle time, reducing inventory costs, and reducing delivery costs were all shown to be major operational elements that influenced the performance of organisations in Atnafu and Balda's (2018) research.

2.2 Theoretical Review

SCM practices are important to any organization as they improve an organizations leadership in the market, profitability improves overall strategic positioning through the market variables which include price, cost, quality, delivery, and product innovation among others (Wisner 2001). Three theories explain the SCM practices concept: Resource-Based View, Knowledge-Based View and Customer Service Theory.

2.2.1 Resource-Based View

Over the last several years, the resource-based view of the company (RBV) has evolved as one of the most prevalent theories of competitive advantage (Ray et al., 2004; Raduanet al., 2009). This has been demonstrated during the previous 20 years, where it has been demonstrated that the dimension of performance and/or organisational competitiveness has been evaluated from the perspective of the resource-based approach (Munodawafa and Johl, 2019).

This theoretical approach seeks to define, explain, and anticipate how businesses may gain a sustained competitive advantage via the acquisition and control of resources, as well as how firms can acquire a sustainable competitive advantage through the acquisition and control of resources (Frynas and Yamahaki, 2016).

Resources that are capable of providing a competitive advantage must meet the following criteria:

must be of strategic relevance to the company in order to be considered valuable.

Product or service must be one-of-a-kind or hard to find among existing and future competitors.

It is important for the resource to be a little bit immutable (inimitable) so that it can't be fully copied or duplicated.

In order to get the same results as the resource, competitors can't use another resource in its place (Marku, 2019).

When it comes to the resources of a business, there are three main parts: physical assets (equipment, plants), human assets (deployment, competencies, and skills), and

organisational assets (culture, business process, and management resources). Physical assets include things like technical equipment and plants, as well as human and organisational assets (Badewi et al., 2018). These include things like deployment, competency, and skill resources, as well as culture, business process, and management resources. In addition, resources are classified as either physical or intangible (Won and Chelladurai, 2016).

Furthermore, the RBV theory is used to investigate the relationship between an organization's resources and capabilities and the creation of competitive advantages, which ultimately results in improved overall organisational performance (Sikora et al., 2016). In Gubbi and Elango's 2016 paper, they say that having the resources that a company needs to stay alive is a good thing. There are several forms of financial muscle, geographical locations, human labour and effort, technical developments, and other qualities that may be used (Khan and Pathan, 2018). These resources and skills make a company stand out from its competitors and help it build a competitive advantage.

Moreover, the ownership of goods and services with distinguishing qualities or the use of particular and comprehensive work methods will effectively eliminate competition for the resources and competencies of a company (Chowdhury, Haftor, and Pashkevich, 2018). When it comes to coping with global competitiveness, the capacity of organisations to adapt to industrial and market changes may also be seen as an opportunity. A well-managed supply chain is critical for generating competitive advantage and adding value. (Ofoegbu and Elaho, 2021). Rather than between individual enterprises, competition is now mostly across supply networks (Cooper and

Slagmulder, 2017). So, the more effective an operation is, the more benefits this theory has. This is according to OrtizdeMandojana and Bansal, 2016.

Finally, according to the findings of the Ray et al. (2004) research, resources and capabilities that are not conditioned into sustaining activities and business processes will not have a favourable influence on the performance of the organisation (Aydiner et al., 2019). The idea is also used to explain disparities in performance within an industry, which is another use of the theory. According to the firm's RBV, variations in performance occur when well-performing organisations hold valuable resources that others do not possess, enabling them to receive rent in a quasi-monopolist form from their customers and suppliers (Curado, 2006). RBV may be used to analyse the relationship between SCM practises and competitive advantage in the context of real-world SCM practises in the real-world environment. That is, how the application becomes a valuable resource for the business and helps achieve excellent SCM performance (Li et al., 2006).

2.2.2 Knowledge-based view (KBV)

It has been widely recognised by several academics in the literature to support the notion that the KBV of a business is an extension of the firm's RBV (Akram et al., 2018; He et al., 2020; Popa et al., 2017; Rialti, 2019; Foroudi et al., 2021). In their view, knowledge-based thinking (KBV) is an expansion of resource-based thinking in which the idea of resources is expanded to encompass intangible assets and, more especially, knowledge-based resources. Chen, Jiao, and Zhao (2016) propose that enterprises be evaluated on the basis of their knowledge resources, arguing that knowledge is the most essential strategic resource (2020; Popa et al., 2017; Rialti,

2019; Foroudi et al., 2021). When it comes to manufacturing things and providing services, the capacity to incorporate the expertise of people into the production process of goods and services is what distinguishes the KBV from the rest of the world (Zahra, Neubaum and Hayton, 2020).

15 knowledge-based viewpoint, Grand (1997), who made major contributions to the creation of 15 knowledge-based views, discusses the contributions of a number of writers from diverse aspects to the development of this view. These are the measurements: Through the recombination of existing resources, organisational learning processes generate new knowledge that serves as the foundation for the growth and development of the organisation. From this viewpoint, organisations are seen as a collection of communities of practise. The environment is the laboratory in which each community of practise engages in experimental and interpretive activities with the environment from which sense-making originates, ultimately resulting in adaptive behaviour. As a result, organisations develop in response to the opposing viewpoints of distinct communities of practise (Weller, A., 2017). Although economic views of operations, such as those described by transaction cost theory and the classical resource-based view, encourage the acquisition of factors of production, such as labour and capital, for the purpose of achieving organisational goals, the knowledge-based view encourages the sharing of knowledge (Davis and DeWitt, 202), which is the most significant competitive advantage of them all in today's "new economic order," which is driven by knowledge and is based on knowledge. The ability to generate and maintain competitive advantages is regarded as the most significant organisational capability and competency. When it comes to high-

performance companies, superior personnel are widely acknowledged as the most important factor in sustaining competitive advantage over the long term.

In the long run, the ability to learn quicker than rivals may prove to be the sole source of continuous competitive advantage. Through the use of this dynamic skill, organisations may produce causal ambiguity (a barrier to imitability that makes it exceedingly difficult for other businesses to duplicate the unique historical development each organisation develops) and lay the groundwork for sustained competitive advantage through time. Capacity is difficult to recreate in a controlled environment. For example, it is very difficult and costly to replicate organisational processes, since replication is a competence that can only be acquired via the performance of organisational routines (Curado, 2006). 16. When a corporation applies competitive knowledge and skills to the production of goods and services, it may be able to create new products and processes, as well as enhance current ones, more efficiently and effectively than the competition (Bosch-Sijtsema and Postmab, 2004). It has become more popular in recent years to take a knowledge-based perspective (KBV) on how businesses operate. Due to the fact that they recognise the characteristics of fundamental economic developments, intangible assets (particularly knowledge) in the global economy are highly valued (knowledge is the King). As a consequence, they serve as the foundation for the establishment and maintenance of competitive advantages inside the organisation. For example, in the majority of industrialised countries, the transition from manufacturing to services is focused on the manipulation of information and symbols rather than the use of real things (Liukkonen and Tsai, 2016).

And last, when it comes to SCM techniques, information exchange has a positive impact on the process of putting them into practise (Haque and Islam, 2018). A number of studies have shown the importance of knowledge sharing in the adoption of SCM practises (Fernando, Abideen, and Shaharudin, 2020). This indicates that this research has provided evidence to support the notion that knowledge is the source of competitive advantage. As a result, the exchange of information promotes value generation throughout the supply chain (SC). For example, Liu et al. (2017) discovered a connection between knowledge transfer in buyer-supplier partnerships and the duration of the relationship. Liu and colleagues It has been established by Lin (2005) that collaborative interactions between consumers and suppliers result in the creation of new knowledge, and it has been demonstrated by Hernández-Kim (2017) that knowledge sharing and learning are critical in supply chains. Kumar and colleagues (2016) discovered that a culture of knowledge growth has a favourable impact on the performance of supply chains.

2.2.3 Customer Service Theory

In order to provide excellent customer service, you must first discover and then meet your clients' requirements while surpassing their expectations (Ehigie, 2006). When it comes to gaining and maintaining client loyalty, a firm must be completely devoted to providing consistently excellent levels of service (Slater and Narver, 1994). Everyone, from the highest levels of management on down, must be focused on what the consumer wants. Developing a customer service culture inside a firm may aid in the development of success (Grover et al., 2018). According to Strenitzerová and Gaa (2018), the level of customer satisfaction and loyalty is inextricably linked to the level of customer service and, ultimately, to the level of profitability of a company.

The theory's core principles are that you should create a customer service culture, get to know your consumers, define customer expectations, and communicate effectively (Rita, Oliveira, and Farisa, 2019). Create a culture of excellent customer service. Indoctrinate new workers into the company's customer service culture as soon as possible (Owade, 2017). They give extensive training programmes that enable people to become specialists in their profession (Phillips and Phillips, 2016). Make certain that the workforce providing front-line customer support is pleasant, helpful, and informed. Employees should be given the authority to make choices that will result in customer satisfaction (Shedid, 2019). Recognize and reward exceptional employee achievement via public acknowledgment in the business newsletter, celebration banquets, awards, and other benefits, among other things (Holston and Kleiner, 2017). Recognize and Respect Your Customers By profiling your consumers, you can get to know them better. You can directly inquire of them through customer comment cards and surveys available at your place of business and on your website, among other methods. Find out what they enjoy and hate, as well as how your product or service will directly benefit them, in addition to their demographic information (Forbes, 2016). Make a note of their purchasing habits and areas of interest.

Furthermore, evaluate how your clients perceive the level of quality. Establishing consumer expectations is essential. Your clients' expectations of your goods and services should be realistically set for them. Customers may be attracted to a product or service by clever marketing and inflated promises, but the product or service must always meet or exceed their expectations. 19. Keep all of your promises in order to earn consumer loyalty (Dessalegn, 2021). When clients are satisfied, they are more

likely to promote your company to their friends and family. Increased levels of customer satisfaction are accompanied with a rise in consumer expectations as well. Look for methods to make your goods and services better, as well as the entire experience of your customers. Communication Maintain an open line of communication with your consumers (Glozer, Caruana, & Hibbert, 2019). Keep them up to date on unique deals that are relevant to their needs and interests. Write, email, or contact your customers to express your gratitude for their business and express your appreciation for their time.

Finally, solicit feedback from your customers on a regular basis to ensure that you are consistently providing excellent customer service (Dessalegn, 2021). Customer feedback acquired via surveys should be used to inform the introduction of new goods and services to meet their evolving requirements. Investigate fresh and innovative methods to keep your clients interested (Dessalegn, 2021). Concentrate on providing excellent service to your present clients, and new ones will inevitably come.

2.3 Empirical Review

This part gives an empirical assessment of the research with regard to the goals that were set earlier in the section. Various studies have looked into the relationship between supply chain management practises and the operational performance of a company, as well as the role of process control and improvement in mediating the relationship between supply chain management practises and operational performance in the supply chain management literature. The empirical review is separated into two parts in this version, which are as follows: Section 1: 2.3.1 is based on research from a

developed economy, while Section 2.3.2 is based on research from a developing economy (or the other way around).

Khan et al. (2022) sought to determine the importance or value of effective supply chain management, as well as the influence of this on the performance of the manufacturing process and the quality of the final product. In addition, the function of the mediating element, production performance, in the link between SCM and product quality was investigated in depth. A total of 245 replies were obtained from manufacturing companies in Malaysia, which formed the sample data. This research employed a quantitative survey as a method in order to get the necessary information from these companies. The findings indicate that enhanced elements in supply chain management (SCM) or strategic supplier relationships had a substantial impact on the performance and quality of the product. It was also discovered by those who examined the findings that there was a clear correlation between how well a product operated and how well it was manufactured.

Sedyaningrum et al. (2019) explored in their research the implications of strategic supplier partnerships (SSP) and their implications for supply chain integration (SC) integration, SC performance, and farmer performance. The study focused on Indonesia and, in particular, the East Province. The final sample consisted of 200 replies, all of which were used in the data collection and analysis. In the study's findings, it was shown that SSP was not statistically significant in relation to any of the factors examined. However, it was shown that SC integration was substantially and favourably connected to both the success of the SC and the performance of the

farmers. Furthermore, it was discovered that the performance of the SC was significantly related to the performance of the farmers. According to the findings of the research, the most important thing they did to improve their performance and growth was to change how they used and handled their SCs.

From the viewpoints of suppliers and purchasers, Martins et al. (2017) researched cooperative groups in the food industry. The information for this investigation was gathered via evaluations that were distributed among two independent samples; the first specimen concentrated on buying businesses, while the second specimen concentrated on supplier firms. In one of the first results of the investigation, it was demonstrated that the anticipated display provides the guarantee of generalizability in the model. This is supported by the use of two independent samples in which respondents have alternate points of view: from the perspective of the purchaser and from the perspective of the provider. This result is interesting in and of itself because it demonstrates that providers and customers have differing points of view that are, for the most part, comparative rather than unique. It makes it more likely that cooperation will work out because the customer and supplier models aren't very different.

A study conducted by Jajja, Chatha, and Farooq (2018) investigated the impact of supplier association practises in management on supplier commitment (SC). It is connected with the buying efficiency of companies. The information was gathered via a survey of different methods of doing things, and the test was used to make the informed assumptions that were predicted. The study exam and set of questions were created on the basis of a lengthy and in-depth book review, which took many months.

According to the previous study, it was dependent on the process of creating value, which occurs concurrently with the operational efficiency of an organization's procurement operations, to be effective. Furthermore, the purchasing actions have a reasonable perspective on the value and non-importance of various items. The most important thing to remember is that value creation occurs throughout the production methods of the companies' buyers. It is possible that future studies may merge diverse items so that they function as a single unit with all other sources of consumer value generation in manufacturing organisations.

Earlier this year, Wafula and George (2015) conducted research to determine the influence that strategic supplier alliances have on the organisational performance of companies in the energy-related industry. The Kenya Pipeline Company Limited was used as a case study for this research. This corporation is often regarded as the dominant player in Kenya's energy industry. The research was descriptive in nature, and it was limited to 50 personnel from the department of procurement. It was decided to use the census technique for research since the target population was limited, and thus 50 workers were chosen as the overall sample. In this study, primary data was obtained via the use of a questionnaire, and both inferential statistics (such as frequency distribution) and descriptive statistics (such as linear multivariate regression) were utilised to analyse the data. According to the findings of this research, strategic supplier partnerships have assisted in improving networking and communication between organisations and their suppliers. Furthermore, the findings showed a neutral outcome, showing that the SSP has resulted in the computerization of the inventory management system as well as an increase in innovation in the distribution chain. The findings revealed that strategic supplier agreements have

resulted in an improvement in the delivery time of petroleum goods on the market, according to the findings. The demand prediction for the KPC was improved as a result of this strategic supplier arrangement. According to the findings of this research, SSP assisted in the development of networking and communication among suppliers and enterprises. The storage of petroleum products, on the other hand, did not benefit from this SSP.

Banerjee and Mishra (2017) conducted an investigation into the supply chain management practises of small merchants. After developing a review test list of inquiries to gauge the various builds of interest, a sampling procedure to obtain valid feedback from the number of inhabitants of interest was implemented, and the identified solid model was investigated using the PLS technique. This was followed by a final analysis of the identified solid model. connected with the elements that hold anything together and make it a powerful example of how to accomplish things. Based on the results of the study, PLS was used to determine the value, quantity, and quality of the research-educated estimates. Several different school disciplines, such as goal setting, company management, and information management systems, make use of the findings of this study. Instead of other SEM methods such as AMOS, PLS is a powerful equation modelling method that relies on the regression methodology to accomplish its objectives. For healthy data distributions, it is a frequent and regular occurrence; it is an instance of looking at something, noting it, or making a declaration of independence, or of a number, or of anything that alters metric evenness and equality. When researching anything that is strongly tied to the process of making or developing something, PLS works best.

Khalid et al. (2012) in his study carried out in Germany considered long-term relationship development, partner development, joint development, enhanced communication, learning stakeholder management in his study on supply chain management practices where he found that technological integration emerges as the core supply chain management practices frequently identified and is contingent with a number of other practices.

Lin (2014) examined the following practices; collaboration, adoption of information technology and enhancement of firm- supplier relationship on his study assessing inefficiencies in on-firm resource management that present opportunities for environmental improvement through supply chain management practices. Kimondo et al. (2016) contributed to the body of knowledge by examining long-term relationships, working with certified suppliers, prudent supplier selection and few supplier policies, supplier involvement in product development, good interaction and internal, trust and commitment with partners, strategic purchasing, supply network coordination, external integration, logistics integration and effective communication

In Kenya, Kazi (2012) considered tracking and trace products in the supply chain, alerting customers on product availability, timely delivery and reducing the lead time. Alerting customers on status of shipment, innovative design of a SC in his study on supply chain management practices and performance at Kenya Medical Supplies Agencies. Barasa (2016) in his study considered supply chain management practices that include; supply chain collaboration practice, green supply chain management

practice, information sharing practice and customer relationship management practice in his study on performance of steel manufacturing companies in Kenya.

Mwilu (2013) indicates that supply chain management practices like logistics, lean suppliers and information technology. Aura (2017) conducted a study on supply chain practices, reforms and performance in the Kenya National government ministries and identified tendering and the use of IT as the most common supply chain practices in ministries. In a study by Kimantira (2014) on supply chain management practices and competitiveness in the National Government of Kenya; a case study of Ruiru sub-county. The study found that the most important SCMP used as; planning and control, strategic partnership, reverse logistic and strategic outsourcing.

Chong et.al (2015) empirically tested a framework which identified the relationships between supply chain management practices, operational performance and innovation. Performance of Malaysian manufacturing and service firms. Data for the study were collected from a sample of 163 Malaysian manufacturing and service firms. The research model was tested using structural equation modelling. The results showed that SCM practices in both the upstream and downstream supply chain have a direct and significant impact on organizational performance among Malaysian firms. The findings also revealed that manufacturing and service firms in Malaysia did not have a significant difference in their SCM practices. Tracey et al. (2005) empirically tested the impact of Supply-Chain Management (SCM) capabilities on business performance so as to determine the degree customer-oriented SCM issues influence competitive position and organizational performance. Methodology was employed to generate reliable and valid measurement instrument. Responses from 474 manufacturing

managers were then utilized to test casual model using the results indicated significant positive relationships exit among three types of SCM capabilities.

Kiarie et al. (2017) focused on SCM practices in large private manufacturing firms in Kenya. The preliminary tests employed the use of Kaiser Mayer-Olkin (KMO) and Bartlett's Test. A sample of 52 large private manufacturing companies, which are members of Kenya Association of Manufacturers (KAM) was used. To establish SCM practices, 39 variables were used to measure the level of application among those firms. The variables were analysed using factor analysis procedure to achieve a simple and meaningful structure that is, have a nonzero loading of the explained variance for each individual factor. As a result 11 critical factors were established as the best practices: Operating policies, linkages within supply chain firms, improved performance, information technology systems strategic alliances, performance measures, goal orientation, customer and relationships, guidelines and procedures supplier selection and supplier evaluation. When benchmarked, these practices were found to be universal and compared with the best practices globally.

2.4 Conceptual Framework

This section of the study presents the theoretical framework of the study. The framework discusses the interrelationships among the variables that are deemed to be integral to the dynamics of the situation being investigated. The major features of the framework include clear explanations of the variables relevant to the study, a discussion on how the variables are related to one another (this is done for the important relationships that are theorised to exist among these variables) and a schematic diagram of the framework presented to aid readers to see and easily

comprehend the theorised relationships. Following these are appropriate hypotheses to test the relationships that are theorised and the logic/concepts that underpin each. A subtle operational definition for sustainable supply chain management is also proposed to arrive at the set objectives and conclusions that are relevant to the case under study. Figure 2.1 below shows the theoretical framework of the study:

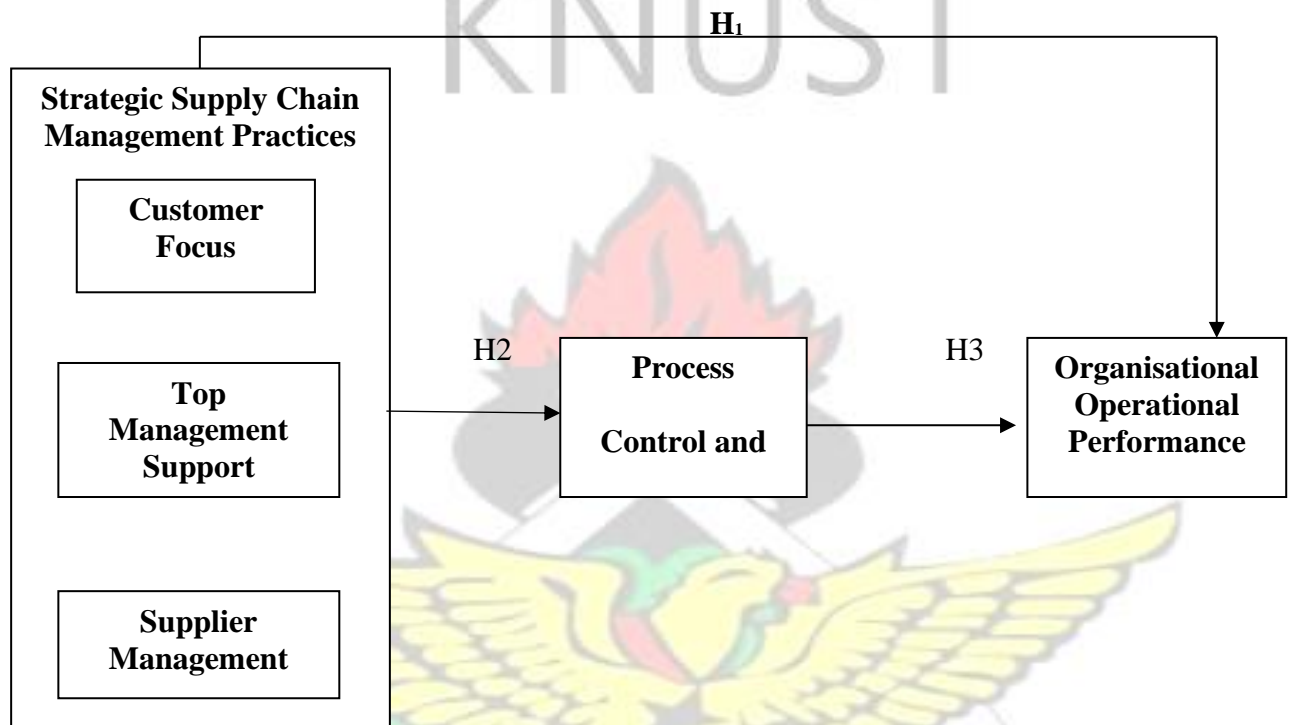


Figure 2.1: Conceptual framework

Source Author's Construct, 2021

From the Figure 2.1 depicting theoretical framework of the study, it could be seen that supply chain management practices among the Ghanaian firms leads to operational performance of individual firms and the industry as a whole. The conceptual framework depicts that each of the selected supply chain management practices – top management support (TMS), customer focus (CF), and supplier management (SM) has a positive effect on operational performance of individual firms in cape Coast metropolis.

According to Ondieki and Oteki (2015), supplier relationship management entails determining how company buyers interact with suppliers. It is a mirror image of customer relationship management. Just as a company needs to develop relationships with its customers, it needs to foster relationships with its suppliers to ensure quality goods and services, timely and assured deliveries and information flow to assist both organisations in planning. Coordinating operational activities through joint planning also results in inventory reduction, smoothing production, improve product quality, and lead time reductions argues that integration is an effective strategy in reducing with suppliers throughout the product lifecycle is an effective strategy in reducing supply uncertainty (Handfield and Nichols, 2004).

Effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage and improving organisational performance since competition is no longer between organisations, but among supply chains (Li et al., 2006). This implies that internal supply chain management processes are very key to ensure organisational performance and competitive advantage. Operational performance refers to how well an organisation achieves its market-oriented goals as well as its financial goals (Cao and Zhang, 2010). The short-term objectives of SCM are primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the supply chain (Tan et al., 1999).

The conceptual framework is that a simple construct of the interrelationships that exist among the variable to be studied. It clearly illustrates the causative variable, the

effects including other mediating factors in the relationship. The conceptual framework is useful in research because it provides a vivid illustration of the relationships among the different factors in a given research. It clearly outlines the structure of the research and guides the researcher in the whole research process.

The following hypotheses have been proposed for the study.

H1: Strategic supply chain management practices have a positive influence on operational performance.

H2: Strategic supply chain management practices have a positive influence on process control and improvements.

H3: Process control and improvements mediate the relationship between supply chain management practices and operational performance.

2.5 Chapter Summary

This chapter presented the literature background of the study. A review of concepts appropriate for the study were discussed while a section was created for theories. Three theories were discussed- systems theory, contingency theory and resource-based view. A list of prior studies was reviewed and presented under the empirical review section. The chapter ends with a conceptual framework which shows how the constructs are connected.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This Chapter presents the outline and process of conducting this study in terms of the research design and approach, population of the study, sample size and sampling techniques, sources of data, data collection methods and procedure, data analysis and ethical consideration made. It also looks at the operationalisation of the constructs of the study and how they were measured.

3.1 Research Design

Research design is a plan or strategies use to achieve the expected results. There are different types of research design depending on the nature of a particular study. Specifically, the survey research method is employed for this study. The choice of the survey method is motivated by the fact that the study intends to gather the views of organisations and their views on the effect of supply chain management practices influenced by process control and improvement on their operational performance. The survey method enables the researcher to gather data on large number of organisations within a short period of time. Survey research was defined by Nesbary (2000) as the process of collecting representative sample data from a large population and using the sample to infer the attributes of the population. As such, a survey's main purpose is to estimate with significant precision, the percentage of population that has a specific attribute by collecting data from a small portion of the total population (Dillman, 2000; Wallen and Fraenkel, 2001). As such, this study seeks to investigate from the

members of the population who are either managers or top executives of their organisations on their view on the variables under the study.

3.2 Research Approach

In terms of research approach, there are two main types – qualitative approach and quantitative approach. Qualitative approaches do not make use of numbers but rather other characteristics such as attributes, colour, etc. and it is inductive in nature to come up with a theory. A quantitative approach rather involves numerical data, employs hypotheses to measure relationships among variables and it is deductive in nature. This study adopted a quantitative approach. Because the study was survey approach, and it intended to determine the mediating role of process control and improvement between supply chain management practices and operational performance, there was the need to administer questionnaires to measure each of the constructs to measure the effects. For this reason, hypotheses were developed to test the relationships among the variables and this can only be possible in quantitative study. According to Denzin and Lincoln (2000) quantitative methods are usually deductive in nature, adopt hypotheses and allows generalization of results but fails to incorporate new paradigms.

3.3 Population of the Study

The aim of this study is to investigate the mediation effect of process control and improvement on the relationship between supply chain management practices and operational performance of Organisations in Cape Coast Metropolis in Ghana. As such, the population of this study is all organisations in the Cape Coast Metropolis in Ghana represented by managers or top executives and staff members. There is no

official statistics on number and characteristics of organisation in Ghana and for that matter Cape Coast metropolis.

3.4 Sample Size and Sampling Techniques

Sample size refers to a part of a research population that is used to represent the whole. The study selected one hundred (100) organisations represented by managers or top executives and staff members as sample given the time constraints and limited resources available. The sampling procedure was non-probabilistic sampling. According to Saunders et al. (2009), non-probability sampling (subjective sampling) provides a range of alternative techniques to select samples based on your subjective judgment to answer research questions and meet the objectives. Non-probability sampling techniques also provide researcher with the opportunity to select the sample subjectively and to reach a wide range of members of the population. The researcher followed appropriate procedure to avoid errors that may occur and cost the whole study. The study also employed a non-probability sampling technique (thus, convenience sampling technique) so as to reach managers or top executives of organisations who would be available as at the time of data collection.

3.4 Data Collection Method

Assembling data for this study took the form of cross-sectional survey. Largely, cross-sectional surveys permit data to be gathered from a target group of persons at a particular point in time (Bhattacharjee, 2012). This is made possible using already prepared set of questions (Klassen, Creswell, Clark, Smith & Meissner, 2012). The cross-sectional field survey method of drawing data is appropriate for this study given the nature of work of the respondents. Further, the use of cross-sectional survey

(using questionnaire distribution) supports the data analysis which is based on statistical methods deployed for this study. Xenos and Christodoulakis (1997) submit that survey methods involving the use of questionnaire are quantifiable, and allow for the application of simple descriptive statistical data analysis methods. The implication is that data analysis can easily be conducted in a manner of statistical techniques when questionnaire survey is used to assemble data.

In practical terms, the data collection activity for the study took place in the factory locations of the firms, whereby the researcher personally gave out paper questionnaires to respondents to complete. One important role of the researcher during data collection activity was to offer guidance and directions as to how the questions or statements were to be approached by the respondents. Thus, by explaining the demands of various sections of the questionnaire to respondents, the researcher facilitated the data gathering process, and assisted respondents in building understanding of the entire exercise. In the end, the researcher's intervention allowed participants to go about providing answers to the questions and statements with ease. Given the busy nature of respondent during working hours, the researcher agreed with those respondents who wanted to complete and return the questionnaire in a later date. A specific date was then set by both the researcher and the respondents.

3.5 Research Instrument

For a quantitative such as this one, questionnaire is used as the main research instrument. The questionnaire items were adopted from extant studies to measure the key variables - Supply chain management practices, process control and improvement

and performance of organisations. The questionnaire has five sections. Section “1”, contains items measuring supply chain management practices. It has a total of 13 items; Section “2”, dwells on 5 items measuring the process control and improvement construct. Section “3” measures the operational performance construct, with 10 items. Section “4” is on firm background information and demographic data of the respondents.

The content and structure of the research instrument were determined by the constructs contained in the research questions and objectives under scrutiny. Statements items in the questionnaire were arranged on a scale of 1 to 7 for strongly disagree through to strongly agree. Taking directions from empirical literature, appropriate statements describing the constructs were captured under each section. The essence of using survey questionnaire for data collection is that unlike interviews, questionnaires are far cheaper to administer, and they do not excessively consume data collection time. Also, data generated from questionnaire instruments are relatively straightforward for statistical analysis. More importantly, using the 7-point rated questionnaire offers numerical values based on which descriptive and inferential statistical tools can be applied for quantitative analysis.

3.5.1 Validation of the Questionnaire

The questionnaire designed for the study was subjected to a validation process for face and content validity. Face and content validity have been defined by McBurney (1994) as the idea that a test should appear superficially to test what it is supposed to test; and content validity referring to the notion that a test should sample the range of behaviour represented by the theoretical concept being tested. In the validation

process of this study, copies of the questionnaire and copies of the research questions were given to some experts and compared to related literature instruments.

These experts went through the research questions and the questionnaire carefully to ascertain the appropriateness and adequacy of the instrument. They suggested structuring the questionnaire in the Likert fashion, on a five-point scale instead of modified 4 point Likert fashion (Nworgu, 1991). The researcher preferred the modified Likert scale because according to normal Likert scale, strongly agree assigns 7 points, agree 6 points, Somehow agree 5 points, Neither Agree nor Disagree 4 points, Somehow Disagree 3 points, Disagree 2 points and Strongly Disagree 1 point. Useful observations and suggestions by the experts were modified, and the corrections were made. Having validated the questionnaire, a pilot testing was carried out on the instrument using 10 managers or top executives who were conveniently available to the researcher in the focus area in which the actual research was carried out. This was done in order to see how the subjects would react to the questionnaire, and whether the items are clear enough and easily understood; whether there was the need to include more items in certain areas; or whether there were items to which they would not like to respond; as well as to determine the workability of the proposed method of data analysis for the study. From the pilot test, the researcher was able to understand the ambiguity of some items and so had to modify it to the level of the questionnaire. That is, the researcher resorted to using simple English.

3.6 Measurements of Constructs

The definitions and measurement scales of the constructs under study are provided in this section under the following sub-headings.

3.6.1 Supply chain management practices

Adebayo (2012) defined supply chain management practices as a set of activities undertaken in an organization to promote effective management of its supply chain. The main predictor variable for the study is supply chain management practices was adopted from several sources. Since it was measured by 3 sub-constructs, the study adopted measures from existing scales. For top management support, 6 items were used to measure this construct using a 7-point Likert scale ranging from 'Strongly Disagree – 'Neither Agree nor Disagree' – 'Strongly Agree' The items were adopted from the studies of Kaynak (2003), Saraph et al. (1989) and Flynn et al. (1995). For supplier management, 6 items were used to measure the construct, and were adopted from the study of Li et al. (2005). Finally, for customer focus, 5 items used to measure the construct were adopted from Lakhali et al. (2006). The respondents were asked to indicate their opinions with respect to supply chain management practices.

3.6.2 Process Control and Improvement

The mediating variable identified for this study was process control and improvement. Three items were used to measure this construct which were adopted from the studies of Kaynak (2003), Saraph et al. (1989) and Forker (1997). Also, using a 7-point Likert scale ranging from 'Strongly Disagree-'Neither Agree nor Disagree' – 'Strongly Agree', the respondents were asked to judge the statements in relation to their firms' processes and improvement activities. The results were put to reliability tests, initially using Cronbach Alpha, where problematic items were deleted. This was to determine items which were reliable and had a good internal consistency depending they were able to exceed the minimum threshold of 0.70.

3.6.3 Operational Performance

This study adopted the definition of operational performance provided by Heizer and Render (2008). Thus, operational performance describes firms' capacity to minimize managerial expenses order-time, lead-time, and improving effective ways of resource usage and distribution capacity. Operational performance is the outcome variable of the study. Eight items were used to measure this construct which were adopted from the study of Devaraj et al. (2007). These items include the extent of percent product returned by the customer, percent defects during production, delivery speed, delivery reliability, production costs, production lead time, inventory turns and the flexibility of the process. Also, using a 7-point Likert scale ranging from 'Not Very Good'- 'Average'- 'Very Good', the respondents were asked to measure the performance of each dimension for the past three years. The results were put to reliability tests, initially using Cronbach Alpha, where problematic items were deleted. This was to determine items which were reliable and had a good internal consistency depending they were able to exceed the minimum threshold of 0.70.

3.7 Data Analysis Methods

Analyzing the data for this study involved the application of a number of statistical methods explained in the following sub-headings.

3.7.1 Preliminary Data Analysis

Three kinds of preliminary analysis of data was conducted in this study. This began after demographic information of respondents and reliability properties of the constructs were analyzed. The first preliminary data analysis involved examination of

the descriptive statistical characteristics of the variable constructs. For this purpose, the study made use of mean scores (composite construct averages) and standard deviation statistics along with low and high values for determining the nature of summary statistics of the raw field data. The estimated mean figures were used to determine the order of respondents' opinions relative to the positions on the Likert scale to decide whether or not a particular mean represents a state of agreement or disagreement of respondents' opinion. Overall mean numbers were also estimated for purposes of comparing individual constructs averages with the general average opinion of respondents. Standard deviations for each variable construct were compared to the mean numbers to ascertain the degree of variation or dispersion of respondents' opinion from the mean opinion. Variance inflation factors of the constructs were also computed and analysed as part of the descriptive statistics. The second part of preliminary data analysis dealt with the application of correlation estimates to determine the strength and direction of correlation amongst the variable constructs. After that, normality characteristics of the constructs were ascertained using the Jarque-Bera test statistic and kurtosis score.

3.7.2 Multivariable Regression Analysis

Data for objectives one and two was analyzed using multivariable linear regression coefficients estimated through the method of ordinary least squares. Interpretation of estimated regression weights represents the key activity of data analysis for these objectives. For this purpose, coefficient signs were used to measure the positive or negative relationships of the predictor variables with the dependent variable. The statistical significance of the independent variable constructs explaining the variation in the dependent variable were examined using the probability numbers, the standard

errors and the t-statistical numbers. Again, the strength and extent of influence of each independent variable construct was ascertained by comparing the absolute coefficient figures for decision purposes.

3.7.3 Hierarchical Multivariable Regression Analysis

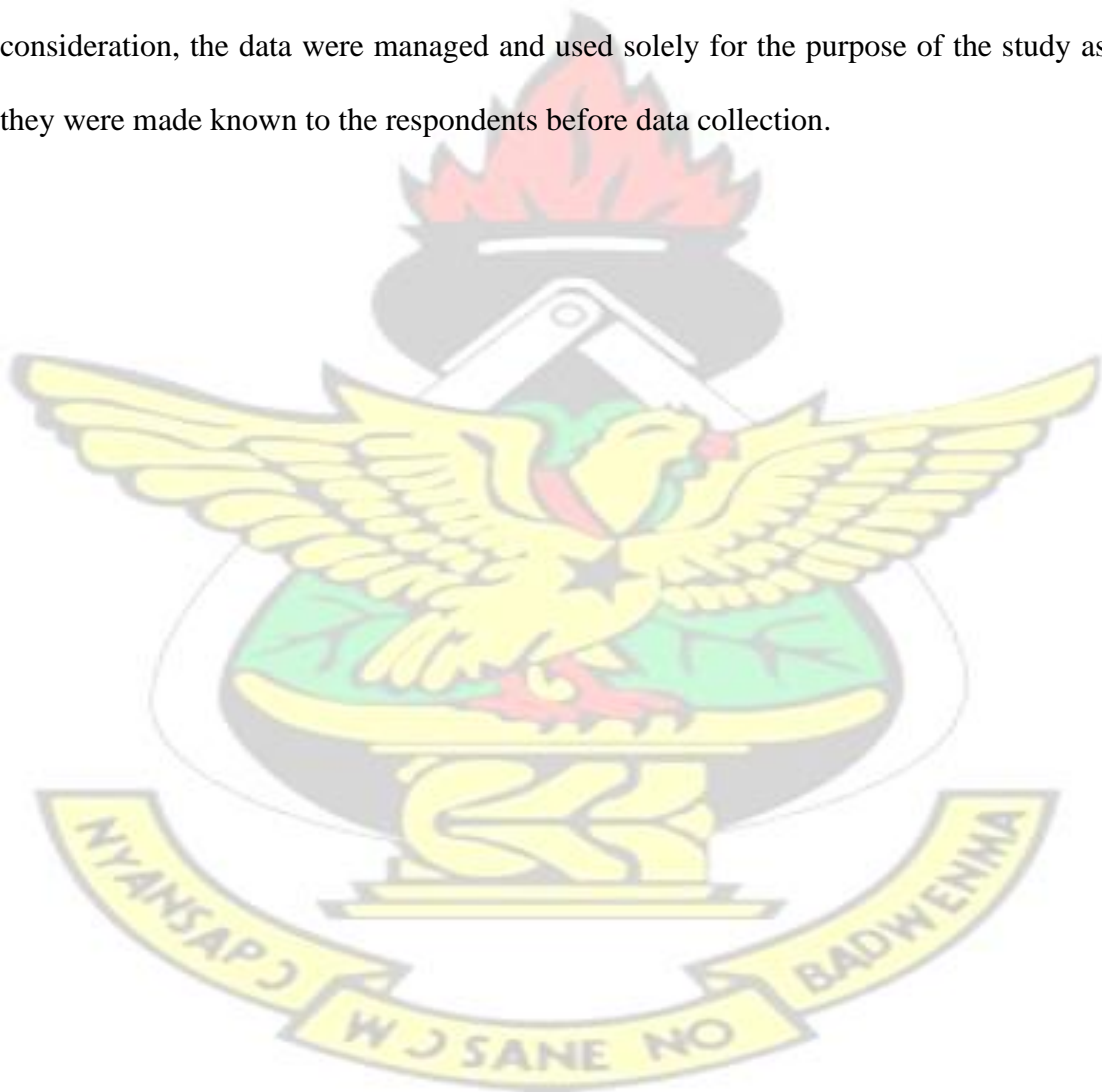
Data for objective three was analyzed following hierarchical multiple regression strategy introduced by Baron and Kenny (1986). Here, the causal relationship between the mediator and the independent variable construct is already tested in the preceding analysis under objective two. After that, the degree of mediation is tested by introducing the mediation construct and predictor construct in the model simultaneously. Full mediation is obtained if the results show that the influence of the independent variable is made insignificant in the presence of the mediator. A partial mediation is found if the results show that the influence of the independent variable on the dependent variable is weak but still statistically significant in the presence of the mediator. The field data was processed using the Statistical Package for the Social Sciences (SPSS) and Microsoft Excel.

3.8 Validity and Reliability

The questionnaire used for this study went through rigorous procedures before it was finally developed. The final data gathered were examined and screened before used for analysis. Furthermore, other statistical methods were employed to test if there was existence of bias as well as the validity and reliability of the instrument.

3.9 Ethical Consideration

For a study as this, there was the need to place much emphasis on ethical issues relating to survey studies at the firm-level. As such, the study was not enforced on unwilling people or organisations but those who willingly accepted to participate were considered. By interacting with them through several conversations, their consent and approval to partake in the study was sought and they were assured of absolute confidentiality on their responses and their business. Also, as part of ethical consideration, the data were managed and used solely for the purpose of the study as they were made known to the respondents before data collection.



CHAPTER FOUR

DISCUSSIONS OF RESULTS

4.0 Introduction

This chapter presents the analysis of the field data collected to answer the research questions for this study. Out of one hundred (100) questionnaires administered, 75 were returned representing 75% response rate. After this introductory section, the rest of the chapter is arranged as follows. Section 4.1 submits the demographic information of respondents. Section 4.2 contains reliability test results, while section 4.3 deals with analysis of preliminary data in the form of descriptive statistics, correlation analysis and normality. Section 4.4 presents results for objective one, while section 4.5 presents results for objective two. Sections 4.6 explain results generated from the mediation analysis for objective three. Section 4.7 discusses the results and findings in line with literature. The last section 4.8 summarizes the findings obtained from the analysis of data.

4.1 Demographic Data of Respondents

The details of demographic characteristics of the respondents sampled for this study are shown in Table 4.1. For the purpose of this study, age, gender, educational level, number of years of work and staff categorization of respondents are considered.

Table 4.1: Respondents' demographic data

Variable	Category	Frequency (N =75)	Percent (100)
Gender of respondents	Male	52	69.3
	Female	23	30.7
Age of respondent	Less than 20 years	0	0
	20 - 30 years	32	42.7
	31 - 40 years	27	36.0
	41 - 50 years	13	17.3
	50 years and above	3	4.0
Number of years of work	Less than 1 year	3	4.0
	1 - 3 years	19	25.3
	4 - 6 years	26	34.7
	7 - 9 years	19	25.3
	10 years and above	8	10.7
Educational level	JHS/SHS	21	28.0
	HND/Equivalents	26	34.7
	First Degree	18	24.0
	Second Degree	10	13.3
Staff category of respondent	Management	9	12.0
	Senior Staff	25	33.3
	Junior Staff	41	54.7

Source: Field survey, 2021

From Table 4.1, it could be seen that the selected firms for the study is dominated by males with 52 (69.3%) of respondents who are males and the rest 30 (30.7%) who were females. For the age range, most of the respondents were between 20-30 years representing 42.7% of responses. The next was 31-40 years representing 36.0% and those below between 41-50 years represented 17.3% of responses. With regards to the number of years worked within their respective companies, it was realized that most

of the respondents had worked there between 4-6 years, representing 34.7% of responses, followed by those who had been working there for more 1-3 years or 7-9 years who represented 25.3% of responses respectively. Those with over 10 years' experience were represented by about just 10.7% of responses. For their educational background, it could be seen that most of the respondents were HND/Equivalents certificate holders with 34.7% of responses, followed by the next 28% who had had JHS/SHS education. About 24% of the respondents had first degree certificates whereas about 13.3% had Masters.

Finally, with their specific level of management, it ranged from positions but most of them (54.7%) were junior staff, then about 33.3% were senior staff. Only 12% of management staff partook in the survey. Hence, it could be concluded that the respondents were knowledgeable about the strategic supply chain management and process control and improvement practices and were able to understand the questionnaires posed to them to ensure validity of the study.

4.2 Reliability Test Results

In checking for reliability of the measures, Cronbach's alpha was used to verify the internal consistency of the measures. The results shown in Table 4.2 indicate alpha values ranging from .769 to .841. This implies that all items for the five constructs passed the initial test of reliability as they were far above the recommended threshold of .70.

Table 4.2: Reliability Test Results

Construct	Number of items	Alpha value
Top management support	6	.830
Customer focus	5	.769
Supplier management	6	.834
Process control and improvement	3	.814
Operational performance	10	.841

Source: Field survey, 2021

4.3 Preliminary Data Analysis

The introductory part of analysis of numerical data is undertaken in this section under the following sub-headings.

4.3.1 Descriptive Statistics of Constructs

The summary statistics of the variable constructs around which this study revolves are presented in this section. This study was conducted on three broad concepts, namely, supply chain management practices, operational performance and process control and improvement. Supply chain management practices were proxied by three sub-constructs of top management support, customer focus and supplier management. A total of 30 items (statements) was constructed for all the constructs. The descriptive statistics presented in Table 4.3 are based on composite constructs computed from the averages of the items for each construct. The variance inflation factors (VIFs) for the independent variables are also presented.

Table 4.3: Descriptive statistics

Constructs/Statistics	Mean	Min	Max.	Std. Dev.	VIF	Obs.
Top management support	5.084	4.333	6.000	0.439	1.052	75
Customer focus	5.437	4.000	7.000	0.619	1.108	75
Supplier management	4.508	3.500	5.167	0.473	1.058	75
Process control and improvement	4.658	2.667	6.000	0.848	1.018	75
Operational performance	4.284	3.500	4.800	0.332	-	75
Overall mean and deviation	4.794			0.542		

Source: Field survey, 2021

Table 4.3 shows that each of the constructs has a mean score of approximately 5, with the exception of operational performance whose mean score is 4.284 with the lowest deviation of 0.332. The rest of the variables also have deviations that are relatively low. This tells us that the majority of respondents “agreed” with each of the statements presented to them. This is depicted by the overall mean score of 4.794 with its deviation of 0.542. The relatively low standard deviation suggests that the respondents were quite confident and certain about their opinions expressed on the statements.

In specific terms, top management support has numbers ranging from 4.333 to 6.000 with a mean score of 5.084 and a standard deviation of 0.439. Similarly, customer focus contains a mean number of 5.437, deviating by 0.619. These statistics suggest that respondents affirmed the statements pertaining to top management support and customer focus constructs.

In the same vein, the statistical numbers for supplier management show the lowest and the highest values of 3.500 and 5.167 respectively, averaging at 4.508 and spreading at a rate of 0.473. Process control and management produces statistical numbers showing a minimum of 2.667 and a highest of 6.000, averaging at 4.658 and deviating at 0.848. The operational performance construct has numbers expanding from 3.5 to 4.8, and averaging 4.284 with a deviation of 0.332. These data paint a picture of stable opinions expressed by respondents about the statements. The relevance of conducting descriptive statistical analysis is that it provides insights and understanding about respondents' level of agreement or disagreement with the statements. It equally lets us know how stable respondents' opinions can be over time. The results of VIFs for the independent variable constructs show the absence of multicollinearity in the data since none of the variables has VIF coefficient of 10. The highest VIF estimate is 1.108 for customer focus, followed by 1.052 for top management support and 1.018 for supplier management.

4.3.2 Correlation Analysis

The correlation results shown in Table 4.4 generally reveal that all the strategic supply chain management practices have positive correlations with operational performance and they are significant at 0.01 or 0.05. However, the relationships are not strong since most of the coefficients are less than 0.5. However, correlation between process control and improvement and operational performance is positive and quite high (.528) and significant at 0.05. Overall, the correlation coefficient estimates show that the constructs do not exhibit the prevalence of multicollinearity.

Table 4.4: Correlation analysis

Constructs	1	2	3	4	5
1. Top Management Support (TMP)	1				
2. Customer Focus (CF)	.115	1			
3. Supplier Management (SM)	.370**	.162	1		
4. Process Control and improvement (PCI)	.448**	.156	.416**	1	
5. Operational Performance (OP)	.374**	.001	.385**	.528**	1

Source: Field survey, 2021. Notes: ** for $p \leq 0.05$

4.3.3 Normality Properties of Series Residuals

To check for normal distribution property of the data, this study follows the Jarque-Bera and Kurtosis test statistics, and reports the results in Figure 4.1. Given a Kurtosis of 2.702 and a test statistic of 0.446, having non-significant probability of 0.800, the null hypothesis for the test cannot be rejected. This indicates that the residuals for the dataset has normal distribution properties, and therefore do not pose problems with the normality distribution features of the data.

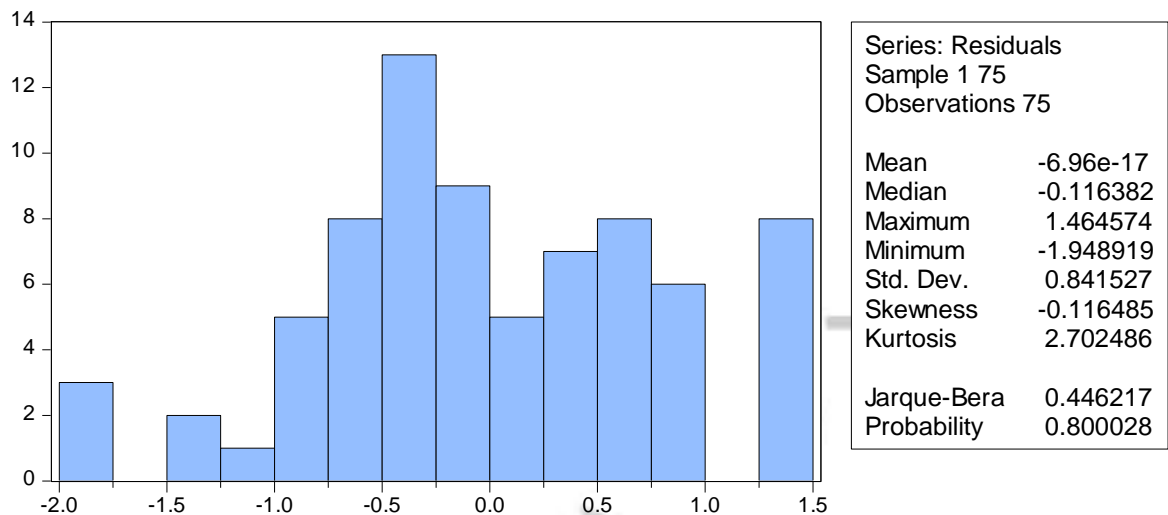


Figure 4.1: Normality test results

Source: Field survey, 2021

4.4 Relationship between SCM practices and Operational Performance

The first objective of this study relates to examining the relationship between supply chain management practices and operational performance of the selected firms. Three dimensions of supply chain management practices, namely top management support, customer focus management and supplier management practices were selected and presented to respondents. The statistical results generated from estimation of field data are presented in Table 4.5

Table 4.5: OLS regression results for SCM practices and operational performance.

Variable constructs	Coefficient	Std. Error	t-Statistic	Prob.
C	5.413023	0.625393	8.655401	0.0000
Top management support	0.352017	0.081650	4.311276	0.0001***
Customer focus	0.078240	0.059372	1.317803	0.0918*
Supplier management	0.052202	0.075954	0.687281	0.0441**
R-squared	0.212793			

Adjusted R-squared	0.179531
S.E. of regression	0.300434
F-statistic	6.397427
Prob(F-statistic)	0.000673
Durbin-Watson stat	1.985807

Source: Field survey, 2021. Notes: *** for $p \leq 0.01$; ** for $p \leq 0.05$ and * for $p \leq 0.1$

Evidence shows that all three dimensions of supply chain management practices have positive relationships with operational performance at statistically significant levels. The general impression being gleaned from the results is that the selected firms benefit tremendously from implementation of supply chain management practices through improvements in operational performance. However, the degree of each supply chain management practice's influence on operational performance varies from one another.

In specific terms, we find that top management support practices invoke the most powerful influence on operational performance after introducing relatively highest coefficient (0.352017) in the regression model. The positive coefficient for the top management support variable suggests that all else equal, an improvement in top managers' support services in the areas of policy formulation and implementation support and resource allocation, engineers proportionally significant benefits towards operational performance by 0.352017. This coefficient is absolutely stronger among the list, indicating its strength of influence on operational performance. The impact of the top management support variable on operational performance is further explained by its 1% significant probability of 0.0001. The intuition behind this result can be formulated by saying that if management desire to seek innovations in supply chain

activities, and then follows it up with participation in same activities, then one would only expect that this can translate into operational performance enhancements. Further inference from this outcome is that in situations where managers take personal interests in achieving flexible production and delivery systems, efforts can be geared towards initiatives aimed at removing administrative and managerial bottlenecks.

Similarly, the results put the numerical data for customer focus dimension of supply chain management practices at a coefficient of 0.078240 with a probability of 0.0918. By achieving a-10% statistical significance, customer focus's relationship with or contribution for operational performance is substantial. Managing supply chain processes through a conscious attempt at factoring customers' needs and preferences, and information exchange may be a vehicle for growing operational activities, procedures and processes. Equally, the result obtained for the customer focus variable indirectly implies that customer management practices embedded in supply chain systems seeking to improve customers' experience and satisfaction may end up translating into operational performance metric. Therefore, service quality proposition and delivery, from the perspective of customers may be used to judge how well a firm is performing operationally.

The results further show that management of another important stakeholders in supply chain programs, suppliers, culminates in operational performance gains. We find that the supplier management construct imposes a-5% positive significant (probability of 0.0441) coefficient of 0.052202 in the regression setup. Holding other variables' impact constant, an improvement in supplier management may lead to operational performance improving by 0.052202. The indication that can be extracted from this

result is that having durable, collaborative and mutually beneficial relationship with suppliers may go a long way in shaping stakeholders' assessment of operational activities. We can additionally infer from this result, and say that the processes through which suppliers are selected, and the criteria for the selection, may be useful measures for determining supplier quality, which can determine how firms may perform operationally.

The overall results can be summed up by pointing out that firms seeking improvements in operational activities, in areas of efficiency and effectiveness, flexibility, cost-savings and competitive advantage, cannot ignore quality management of supply chain stakeholders like customers and suppliers. Also, the role of top managers in accelerating this goal is firmly supported by the results of this study.

4.5 Relationship between SCM practices and Process Control and Improvement

The second objective of this study dwells on the determination of the relationship that may exists between supply chain management practices and process control and improvement. The quantitative results generated from the data estimation phase are reported in Table 4.6.

Table 4.6: OLS regression results for SCM practices and process control and improvement

Variable construct	Coefficient	Std. Error	t-Statistic	Prob.
C	2.997166	1.788375	1.675916	0.0982
Customer focus	0.165831	0.169779	0.976742	0.0332**
Top management support	0.016796	0.233488	0.071934	0.9429
Supplier management	0.149380	0.217199	0.687757	0.0493**
R-squared	0.017308			
Adjusted R-squared	0.024214			
S.E. of regression	0.859122			
F-statistic	0.416847			
Prob(F-statistic)	0.074144			
Durbin-Watson stat	2.223107			

Source: Field survey, 2021. Notes: ** for $p \leq 0.05$

The results show that all the three constructs have positive relationships with process control and improvements. However, we find that both customer focus management practices and supplier management practices contain statistically substantial relationship with the dependent variable. The regression weight for customer focus practices stands at 0.16581, significant at 5% probability level, while supplier management practices follow with a coefficient of 0.149380, also significant at 5% probability level. These results inform us that business process controls and improvements become better if attention is paid on customers and their requirements. The logic behind this result is that businesses exist partly because of customers, without whom the survival of firms may be unsustainable. In view of this, processes, procedures and systems are usually put in place with the customers in mind. Thus, the object for introducing new processes, and improving existing ones may relate to enhancing customer experience and satisfaction. Therefore, it is not surprising that customer focus management practices have the leading edge over top management

support practices in associating with process control and improvements. By placing the customer at the centre of business operation re-engineering, and control initiatives, all processes and routine innovations can only end up getting better.

Correspondingly, the positive significant relationship between supplier management and process control and improvements signals that seeking to improve internal control systems, processes and regulations cannot be complete without recourse to supplier requirements and standards. This means that integrating supplier protocols and satisfaction in process improvements and control upgrades may be a precondition for sustaining progressive relationship with suppliers. The coefficient (0.149380) of supplier management places second in absolute terms after customer focus management practices. This suggests that firms' consideration for suppliers' issues and concerns in process control design and implementation can add weight to their reputation for supplier-focused process controls and improvements.

The association between top management support and process control and improvement is equally positive (coefficient = 0.016796), but statistically non-significant (probability = 0.9429). Despite that the results lack statistical backing, the role of top management during business process design and implementation cannot be relegated to the background. The inputs that can be submitted by senior managers during strategic planning processes and control activities may be huge and impactful. Thus, being key decision-makers and overseers of firms' resources, senior managers play critical role in ensuring process enhancements. The results seem to suggest that when it comes to business process controls and improvements, top managers' role is less relevant. This outcome needs further interrogations.

4.6 Mediation Role of Process Control and Improvement in the Relationship between SCM practices and Operational Performance

Objective three of the study examines the mediating role of process control and improvements in the relationship between supply chain management practices and operational performance. To establish or test the occurrence of mediation, this study implements hierarchical multiple regression procedure suggested by Baron and Kenny (1986). The procedure involving the hierarchical approach to multiple regression prescribes a number of conditions that must be satisfied to achieve mediation. The first condition is that the predictor variable, in this case, supply chain management practices, must cause or relate to the outcome construct (operational performance). This condition is tested and satisfied under objective one of the study where the relationship between supply chain management practices and operational performance was examined. The second requirement for mediation is that the relationship between the predictor variable (supply chain management practices) and the mediation variable (process control and improvement) must be established, and this is done under objective two. Having satisfied the pre-requisites for mediation processes, the study proceeds to ascertain the nature or degree of mediation role process control and improvement plays in the relationship between supply chain management practices and operational performance.

According to Baron and Kenny (1986), the decision rules for mediation state that there is full mediation role if the effect of the independent variable is dampened when the mediator and the independent variables are simultaneously slotted in the regression model. That is, the independent variable must become insignificant in its relationship with the dependent variable in the presence of the mediation variable.

The other decision rule is that partial mediation exists if the effect of the independent variable on the dependent variable is weak but still significant when both the mediating variable and the independent variable are introduced in the regression model simultaneously. In view of these rules, the study re-estimated the basic regression model in a hierarchical order by introducing the mediating construct in the model. The results generated from the re-estimated model are reported in Table 4.7

Table 4.7: OLS regression results with process control and improvement as mediating construct.

Variable constructs	Coefficient	Std. Error	t-Statistic	Prob.
C	5.505469	0.639678	8.606623	0.0000
Top management support	0.351499	0.081914	4.291075	0.0001***
Customer focus	0.083355	0.059960	1.390178	0.0168**
Supplier management	0.056809	0.076450	0.743091	0.4599
Process control and improvement	0.030844	0.041634	0.740843	0.0461**
R-squared	0.218917			
Adjusted R-squared	0.174284			
S.E. of regression	0.301393			
F-statistic	4.904794			
Prob(F-statistic)	0.001521			
Durbin-Watson stat	1.995623			

Source: Field survey, 2021. Notes: *** for $p \leq 0.01$ and ** for $p \leq 0.05$

From Table 4.7, we find partially positive mediation role of process control and improvement in the relationship between supply chain management practices and operational performance. This is because, even in the presence of the all three dimensions of supply chain management practices, the process control and improvement variable is positive and significant, containing coefficient of 0.030844 and a 5% probability of 0.0461. However, we see that the process control and improvement variable could not weaken the positive significant relationship between all the three dimensions of supply management practices and operational performance. Top management support maintains its positive (coefficient = 0.351499) and significant (probability = 0.0001) association with operational performance, just like customer focus management systems (coefficient = 0.083355, probability = 0.0168). In terms of supplier management, process control and improvement has full mediation role for supply chain management practices and operational performance relationship. This is because the supplier management construct is now having positive but non-significant weight (0.056809, $p = 0.4599$) due to the presence of process control and improvement construct. The results can be construed to imply that not all supply chain management practices succumb to process control and improvement initiatives. The contributions of top management support and customer focus management remain undistorted in the midst of process control and improvement systems. But supplier management's impact on operational performance is dwarfed by process control and improvement.

4.7 Discussion of Findings

This study focused on three objective areas, and the results obtained are discussed in this section under the following paragraphs. The first objective focused on examining the relationship between dimensions of supply chain management practices and operational performance. The outcomes from analysis of data for this objective show that all dimensions of supply chain management practices (top management support, customer focus management and supplier management practice) have significant positive relationship with operational performance, with top management support having the leading impact on operational performance. The findings are consistent with Barasa (2016) whose study found customer relationship management having profound influence on performance of steel manufacturers in Kenya. Similar findings are reported by Mwilu (2013) when the author examined the relationship between lean supplier systems and operational performance, and documents positive correlation between supplier management practices and operational performance. The findings of this study further provide credibility to Chong et al (2015) that supply chain management practices' impact on organizational performance of Malaysian manufacturing and service firms is direct and statistically significant. This study's outcomes equally lend support to that of Kiarie et al (2017) whose work on supply chain management practices among private sector manufacturing enterprises show positive significant association with performance. Thus, Kiarie et al's study precisely show that customer relationship management, supplier selection and evaluations practices go a long way to improve firms' performance.

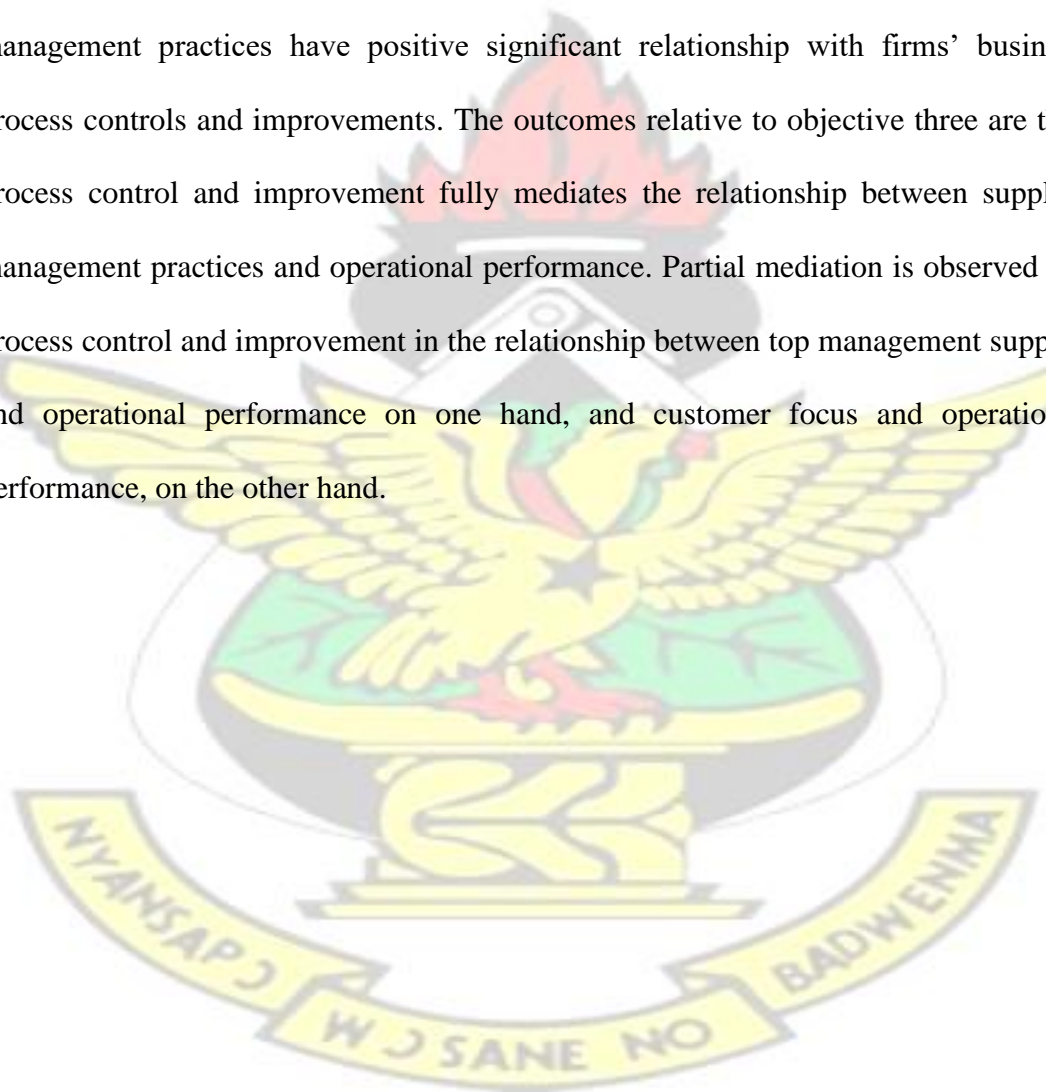
Objective two of this study focused on the relationship between supply chain management practices and firms' process control and improvements. Findings show

that customer focus and supplier management practices contain positive significant relationships with process control and improvement systems. Comparing these results with the current literature, it can be seen that this study's findings are not far from what prior research has documented. For example, the results for this study are consistent with Kimantira (2014) whose study on supply chain managerial practices and firm competitiveness report that implementation of adopted supply chain practices significantly improve firms' planning and control activities. Likewise, the disclosures made by this study corroborate Kazi (2012) that innovative supply chain activates contribute to improving process designs and strengthen control mechanisms.

For the last objective, this study examined the mediation role of process control and improvements in the relationship between supply chain management practices and operational performance. The results show a full mediation role of process control and improvements in the relationship between supplier management practices and operational performance. On the other hand, a partial mediation prevails for process control and improvement in the relationship between top management support and operational performance on one hand, and customer focus and operational performance, on another hand. These findings mimic that of Barasa (2016) who report of positive interactive effect of customer relationship management practices and firms' control systems on performance. In the same way, the findings for mediation in this study are consistent with Kimondo et al (2016) whose work highlights the positive mediation effect of business process re-design on the connection between supply chain and operational performance.

4.8 Chapter Summary

The submission made in this chapter is based on analysis of data for three objectives. The findings retrieved from the numerical results are summarized as follows. For objective one, the study finds a positive significant relationship between all dimensions of supply chain management practices (top management support, customer focus and supplier management) and operational performance. For objective two, the study discovers that only customer focus management and supplier management practices have positive significant relationship with firms' business process controls and improvements. The outcomes relative to objective three are that process control and improvement fully mediates the relationship between supplier management practices and operational performance. Partial mediation is observed for process control and improvement in the relationship between top management support and operational performance on one hand, and customer focus and operational performance, on the other hand.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter finalizes the study under the following sub-headings. Section 5.1 summarizes the numerical results and findings relative to the objectives of the study. Section 5.2 concludes the study, by highlighting and explaining the implications of the findings. Section 5.3 submits policy recommendations while section 5.4 shows pathways for further research work.

5.1 Summary of Findings

The study examined the relationship between supply chain management practices and firms' operational performance, focusing on firms operating in the Cape Coast Metropolitan area. Therefore, main objective of the study was to examine the relationship between supply chain management practices and organisational operational performance in Ghana using quantitative research approach. Using a census survey approach 100 respondents participated in the study. The target population for the study from which data are collected comprises all organisations in the Cape Coast Metropolis in Ghana represented by managers or top executives and staff members. Structured questionnaire was the main instrument used to gather primary data. The study adopted multiple regression approach to analyze the data and test the research hypotheses. The development of the study was based on three thematic objectives, and the results obtained for each objective are summarized in this section as follows.

The first objective examined the relationship between dimensions of supply chain management practices and operational performance. The study finds a positive significant relationship between all dimensions of supply chain management practices (top management support, customer focus and supplier management) and operational performance at statistically accepted levels. Top management support emerged as the dimension with the strongest effect on operational performance.

The second objective focused on the relationship between supply chain management practices and firms' business process control and improvement. Findings for this objective show that all dimensions of supply chain management practices have positive relationship with process control and improvement. However, only customer focus management and supplier management practices have significant association with firms' business process controls and improvements. The third objective of the study examined the mediation role of process control and improvement in the relationship between supply chain management practices and operational performance. The outcomes relative to this objective are that process control and improvement fully mediates the relationship between supplier management practices and operational performance. Partial mediation is observed for process control and improvement in the relationship between top management support and operational performance on one hand, and customer focus and operational performance, on the other hand.

5.2 Conclusion

This study examined the relationship between supply chain management practices and operational performance of firms in the Cape Coast Metropolitan area. Supply chain

management practices have been studied extensively in the industrial economics field of research. There are only few studies which explore how operational performance is predicted by strategic supply chain management practices vis-à-vis process control and improvement especially in Sub-Sahara Africa. The limited scope of research in this area therefore necessitated this research. Using simple random and convenience sampling techniques to select a sample of 100 respondents, the study administered questionnaire for data gathering, and a response rate of 75% was obtained. The study was built on descriptive survey design, based on quantitative strategy. Field data collected was analyzed using descriptive and inferential statistics, applying mean scores, standard deviation and correlation estimates. The models developed were tested using multivariate linear and hierarchical regression. The ordinary least squares estimation procedure was applied for generating and reporting the results. A number of intuitions, implications or inferences can be drawn from the findings of obtained from data analysis. First, the results imply that businesses ability to enhance operational activities and performance requires efficient management of supply chain stakeholders, the key among them being customers and suppliers. That is, by collaborating, engaging and integrating stakeholders, especially customers and suppliers, firms' operational activities may be all-inclusive; and this may favorably position firms towards competitive advantage. The results further reveal the central role of senior managers in achieving operational excellence. The results suggest that top managers' involvement and directions during formulation and implementation of strategic supply chain planning programs are crucial. Another important deduction from the results is that process control and improvements can deliver desirable outcomes and successes if customers' requirements, standards and needs are placed at the center of implementation. Although consideration for suppliers' protocols are

important, the results imply that consideration for customers' requirements outweigh all other considerations. Overall, the results lead us to think that achieving operational excellence is conditioned on complementarities with process control and improvement programs.

5.3 Recommendations

Originating from the findings and conclusions is that efforts towards improving operational performance is accomplished with consideration for supply chain partners. The following recommendations are proffered for usage by businesses surveyed.

1. The study found top management support having the strongest positive significant relationship with operational performance. The study recommends that managers should continue to provide supportive directions, guidance and resources for the design and implementation of strategic supply chain management activities.
2. The study observed that focusing on customer and supplier management activities promotes business process controls and improvements. The study therefore recommends that business enterprises should always integrate customers' and suppliers' preferences and suggestions in innovations towards business process controls and improvements. Thus, flexibility is required from business operators, owners and managers in adopting integration of stakeholders' concerns in process controls and innovations.

3. The study found process control and improvements mediating positively in the relationship between supply chain management practices and operational performance. The study suggests that business strategic planners should incorporate process control and improvement plans in supply chain management activities for outstanding operational excellence.

5.4 Theoretical contributions

Empirically, the research has expanded knowledge on resource-based view theory to emerging economies such as Ghana, where such intangible resources were previously underutilized. Previously, researchers exposed the existing literature to demonstrate the importance of the RBV theory in Western and developed East Asian countries. (Oppong et al., 2019; Tumpa et al., 2019). However, emerging economies such as Ghana had seen little or no expertise in the field of supply chain management contributions to operational performance. As a result, the study's results have increased knowledge and understanding of supply chain management, top management commitment, and operational performance of Ghanaian manufacturing firms.

Again, despite their relative significance, the study has narrowed Sub-Saharan Africa's under-representation in the research landscape on issues of top management support, supply chain management impacts on operational performance. In conclusion, the empirical contribution of this study has exposed existing literature to the novel effect supply chain management and operational performance, despite the fact that the current study found insufficient evidence to confirm top management's mechanistic role in ensuring competitive advantage of manufacturing firms in Ghana.

5.5 Practical Implications

The study's findings should serve as a wake-up call to top managers and owners of both old and new manufacturing firms in Ghana to be aware of their behavior and attitudes toward supply chain management practices and its associated gains such as operational performance and achieving competitive advantage in both the domestic and global supply chain sectors. In order to be socially acceptable in the locations in which they operate, the study attempted to propose that top managers and owners of manufacturing firms who make important decisions for the firm must ensure the unavoidable integration of environmental programs. Managers and owners of manufacturing firms, in particular, must emphasize the importance of being dedicated to ensuring that all aspects of the supply chain process, whether economic, social, or environmental, are sustainable in order to promote healthy living in our societies. Manufacturing firms should prioritize societal environmental requirements in order to gain a competitive advantage.

5.1

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APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

QUESTIONNAIRE

I am a Master of Philosophy (MPhil) student of KNUST. As part of the requirements for the award of MPhil in Procurement and Supply Chain Management, I am undertaking a research work to determine the *mediating role of process control and improvement in the relationships between supply chain management practices and operational performance of organisations in the Cape Coast Metropolis*. This work

is purely for academic purposes and the data collected and the results will not be used in any way to jeopardize the interest of your unit and your business as a whole. I guarantee your anonymity and complete confidentiality.

SECTION A: STRATEGIC SUPPLY CHAIN MANAGEMENT PRACTICES Strongly Disagree-Neutral--Strongly Agree

<i>What is the extent of accuracy concerning your company's supply chain activities?</i>	1	2	3	4	5	6	7
1. Top management at my firm offer of innovation and continuous improvement policies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Top management at my firm provide necessary resources for processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Top management at my firm promotes partners' involvement in firm's activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. There is high participation of top management of my firm in supply chain improvement process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. There is review of supply chain issues in top management meetings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Top management at my firm takes responsibility for operational performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. My organisation determines customers' needs and wants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. My organisation uses information from customers in designing products and services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. My organisation understands products or services designed by internal employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. My organisation is committed to satisfying customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. There is a relationship between my organisation's goals and customers' expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. There is reliance on a few suppliers by my organisation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Selection of suppliers by my organisation is based on quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. There is development of long-term relationship with suppliers by my organisation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. There is clarity of the specifications provided by my organisation to suppliers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. There is assessment of suppliers' capabilities and performance by my organisation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. In our relationship, my organisation's major supplier can be trusted at all times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION C: PROCESS CONTROL AND IMPROVEMENT Strongly Disagree ---Neutral---- Strongly

Agree

What is the extent of accuracy concerning your 1 2 3 4 5 6 7

own values and attitudes?

- | | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. My organisation uses fool-proof for process design, statistical techniques, automation, preventive equipment. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. There is clarity of work or process instructions in my organisation. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. My organisation identifies problem easily | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SECTION D: OPERATIONAL PERFORMANCE

Using a scale of 1 – 7 [where 1=much worse; 7=much better], indicate this firm's performance in relation to that of key competitors for the past 3 years:

	1	2	3	4	5	6	7
1. The extent of flexibility in production/service delivery processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The time it takes to serve customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The consistency in meeting the needs of customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The extent of variety in products/services offered to customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The nature of product/service support to customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Resource utilisation (e.g. human skills, time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Cost of production/operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The time it takes to introduce new	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

products/service offerings							
9. The extent of product returns/service failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The ability to handle varied customer/market needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION G: FIRM BACKGROUND & RESPONDENT'S INFORMATION

1. Please indicate your gender ☐ Male ☐ Female
2. Please indicate your age (years) ☐ Less than 20 ☐ 20 to 29 ☐ 30 to 39 ☐ 40 to 49 ☐ 50+
3. Please indicate your current position in this firm ☐ Owner-manager ☐ Executive ☐ Manager
4. Please indicate the number of years that you have held your current position in this firm.....

Thanks for participating in this study