FACTORS AFFECTING SUPPLY CHAIN MANAGEMENT PERFORMANCE: A CASE OF INDOCHINE APPAREL MANUFACTURING PLC IN HAWASSA INDUSTRIAL PARK SIDAMA (ETHIOPIA)

A THESIS SUBMITTED TO HAWASSA UNIVERSITY SCHOOL OF MANAGEMENT AND ACCOUNTING FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION IN MARKETING MANAGEMENT

BY

MENGISTU ALEM NIGAT

ID (GPMAMW /0029/14)

ADVISOR:- LEGESSE GUDURA (PHD)

CO-ADVISER:- TAREKEGN B. (MBA)

HAWASSA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF MANAGEMENT AND ACCOUNTING

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Declaration

I hereby declare that this thesis entitled: **Factors affecting supply chain management performance: A case of indochine apparel manufacturing plc in Hawassa industrial park Sidama Ethiopia**, submitted to the School of Management and Accounting, Hawassa University for the award of the Degree of Masters of Business Administration with specialization of Marketing Management. This thesis is my original research work carried out by me myself under the supervision and guidance of Legesse Gudura (PHD)and Tarekegn A.(MBA). This work has not been submitted earlier in full or in a part thereof, for the award of other similar degree, Diploma, Fellowship, Associate ship or any other similar titles to this or any other University or Institution.

Name of student: Mengistu Alem Nigat

ID: GPMAMW/0029/14

Date:----------

Segniture----------

APPROVAL SHEET

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We hereby certify that this thesis entitled "Factors affecting supply chain management performance: A case of indochine apparel manufacturing plc in Hawassa industrial park Sidama Ethiopia" submitted to the School of Management and Accounting for the award of the Masters of business administration in Marketing Management is done by Mengistu Alem Nigat ID. Number 0029/14, under our supervision and guidance. The subject on which the thesis has been prepared is based on his original research work and it has not been submitted earlier in full or a part for the award of any of degree, diploma or any other similar titles in this or any other University or institution.

	Signature	Date
Name of the Chairperson	----------	----------
Name of Principal Advisor	----------	----------
Name of Co- Advisor	----------	----------
Name of Internal examiner	----------	----------
Name of External examiner	----------	----------
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Final approval and acceptance of the thesis is contingent upon the submission of the final copy of the thesis to the School of Graduate Studies (SGS) through the School Graduate Committee (DGC/SGC) of the candidate's department.

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Acronyms

SC: supply chain

SCM: supply chain management

SCMP: supply chain management performance

HIP: Hawassa industrial park

GSCM: Global supply chain management

AGOA: African Growth and Opportunity Act

KPI: key performance indicators

Abstract

The main objective of the study was to identify the factors affecting supply chain management performance:a case of indochine apparel manufacturing plc. The analysis of this study was conducted by discussing various views of supplier selection practice, external environment, internal policy and procurement practices and their influence on the supply chain management performance and the key SCMP indicators quality,cost,time and productivity. The study adopted both descriptive and explanatory research design and stratified sampling technique was used and the sample was selected from each strata by simple random sampling technique lottery method. descriptive and inferential analyses statistics was applied for data analysis. Mean and Standard deviation explained the descriptive statistics while Pearson Product Moment Correlation Coefficient and Multiple Regression describes the inferential. Information was gathered using a five point Likert scale questionnaire from a sample of 295 out this 290 questioner were properly filled and collected from the respondent and data analysis were contacted based on 290 sample 5 questioners was rejected. The study used both primary and secondary source of data. Primary data was gathered from employees of the company thought structured questionnaires and interview and secondary data from office documents. The study applied both descriptive and inferential data analysis methods to analyse the collected data. The researcher analyzed the collected data by the help of SPSS version 26. Regression was used to establish the relationship between the study variables. The study found that internal policy and procurement practice, supplier selection practice and external environment were significantly affects the supply chain management performance of the company. The study recommends that the company should improve and take a serious action in to those factors to gate high competitive advantages in the world markets. In addition to this the study recommends that it is better the company pay more attentions to internal policy and procedures in order to improve cycle time, operation skills and capabilities to enhance the supply chain management performance of the company.

***Keyword**: supplier selection practice, external environment, internal policy and procedure and procurement practice and supply chain management performance*

CHAPTER ONE

1. BACKGROUND OF THE STUDY

1.1 INTRODUCTION

Global supply chain management (GSCM) is the since of planning how the distribution of good and service will make it form manufacturer to consumer. It is one of the most important disciplines in 21st century business(Agrawal, Smith & Tsay, 2021).

As the term implies, the supply chain is a series of interlinked functions, companies and individuals. It starts with those who produce and supply raw materials or components to manufacturers, continues with the logistics firms that move finished goods to warehouses and distribution centers, and concludes with the hand-off to wholesalers and retailers Balsmeier. P.W., & Voisin WJ. (2016).

In today's global competitive environment, individual companies no longer compete as autonomous entities but as supply-chain networks. Instead of brand versus brand or company versus company, it is increasingly suppliers-brand-company versus suppliers-brand-company. In this new competitive world, the success of a single business increasingly depends on management's ability to integrate the company's intricate network of business relationships. Supply-chain management (SCM) offers the opportunity to capture the synergy of intra and inter company integration and management. SCM deals with total business-process excellence and represents a new way of managing business and relationships with other members of the supply chain (Modgil, S, & Sharma, S, 2017).

Top-performing supply chains have three distinct qualities. Lee (2004, October). First, they are agile enough to readily react to sudden changes in demand or supply. Second, they adapt over time as market structures and environmental conditions change. And, third, they align the interests of all members of the supply-chain network in order to optimize performance. These characteristics—agility, adaptability, and alignment—are possible only when partners promote knowledge-flow between supply-chain nodes. In other words, the flow of knowledge is what enables a supply chain to come together in a way that creates a true value chain for all stakeholders. Knowledge-flow creates value by making the supply chain more transparent and by giving everyone a better look at customer needs and value propositions. Broad knowledge about customers and the overall market, as opposed to just information from order points, can provide other benefits, including a better understanding of market trends, resulting in better planning and product development (Myers, Cheung, 2008). With the rise of globalization the role and importance of supply chain management has increased. Global supply chains commonly extend between industrialized and developing countries.

Differences in economy, legislation's, regulations and standards pose difficulties in managing such supply chains. Developing countries, usually playing the role of raw material suppliers or manufacturers, face problems which affect the performance of supply chains . Common problems with developing countries include instability of governments and policies, corruption, labor intensive industries, deteriorated infrastructure and limited use of new technologies, underemployment, child lobar, and low education level of the population. Due to customer pressure and legislation in industrialized countries, sustainability of the supply chain is a main goal to achieve.

Supply chain performance is the ability to deliver quality products and Services in precise quantities and at precise times with the aim to minimize total cost of the products and services to the ultimate customers of the supply chain (Gibson, B. J., Mentzer, J, T, & Cook, R, L, 2015).

Although organizational managers are ultimately held accountable for organizational performance organizational success first depends upon the performance of the supply chains in which the organization functions as partner. Supply chain performance is optimized only when an inter- organizational, Inter-functional strategic approach is adopted by all partners operating within the supply chain (Chopra, Meindl. 2004).

Supply Chain in the context of manufacturing company is the network created through the flow of services, supplies, information and finances between buyer and seller, beneficiaries, suppliers and different units of participants, in order to provide good, service and related information's to the customers effective supply chain management (SCM) has become a potentially valuable way of improving organizational performance. It requires close integration of internal operational within corporate and efficient relationships with the external functions of members in the Supply Chain (Hau, Billington, 2016).

The Hawassa Industrial Park (HIP) is an eco-industrial park is found in Hawassa city, Sidama Region, Ethiopia. It is currently located in dato kebele which is situated in the sub-city of addis ketema. Established on 13 July 2016, the park is a government-supported project focusing on the manufacturing of garments, apparel, and textiles. The initial development of the industrial park encompasses 130 hectares of land, with potential expansion up to 400 hectares. This enables companies to meet stringent environmental standards required by international markets, allowing them to focus on exports. The park consists of 37 sheds (22 sheds of 11,000 m2, 12 sheds of 5,500 m2, and three specialized sheds). The park phase has the capacity to create employment for approximately 20,000 up to 60,000 people; however, Hawassa Industrial Park faced significant challenges in 2022, including factory close and job losses following the United States

government's decision to remove Ethiopia from the African Growth and Opportunity Act's (AGOA) duty-free access to US markets.

1.2 Statement of the problem

Currently Supply chain management becomes a vital entity to organizations performance measurement and metrics, and has received much attention from researchers and practitioners. For decades, supply chain performance had been a significant area of attraction for researchers. However, studies have established the factors affecting supply chain performance in manufacturing and commercial organizations whose focus is to deliver value to customers in order to make a profit (Reichhart & Holweg. (2015). The focus on the industrial supply chain is the final customer. As Benita notes "The majority of existing supply chain research focuses on managing or improving the profit-making supply of goods and services.

Ethiopia's long history in textiles began in 1939 when the first garment factory was established. At present, as a company is working in global arena, there are number of factors that are believed to affect it. They are environmental Uncertainty,competition, outdated technology, quality of the product, cost of the product, skilled manpower, price of the product, shortage of currency,utilities like electric power, companies policy, inflation (Quayle, 2016).

Hawassa textile Company has faced serious competition from domestic and international competitors. The competitors are waging fierce battles because they are using same resource as input for manufacturing and marketing their products. As the competitors are competing quality-wise and price-wise, producing quality product is a must for the company in order to survive in the market. However, producing quality product requires additional high costs for research and development. The increased cost, in turn, increases the price of the product. Moreover, these products are competing with the other products which are coming from China, India, Japan and others. The competitors from abroad tend to use the latest technology to produce the products efficiently. They are also using more skilled manpower in their manufacturing companies. These all gave them a competitive edge and advantage in domestic markets.This study will undertake the goal to establish the factors that affect the supply chain performance of the companies(Benetto,Becker, Welfring,2019).

In order to understand how a supply chain works, it is important to identify the factors affecting supply chain management. It is clear that execution of supply chain management has an impact on the outcome of the companies. The question still remains as to which specific factors affect the performance of the supply chain management that have the greatest effect. Though some studies (Henry, Quesada, 2016). shows and point out different factors affecting SCP of manufacturing and industrial sector as stated before, in this research the main focus was what are the factors that affect supply chain management performance of

indochin apparel manufacturing plc in Hawassa industrial park. To address this question, the study was focus on the effect of supplier selection practice, external environment, internal policy and procedure and procurement practice on the supply chain performance of the company.

1.3. Objectives of the study

1.3.1 General objective

The general objective of the study is factors affecting supply chain management performance: A case of I ndochine apparel manufacturing plc in Hawassa industrial park.

1.3.2 Specific Objectives

- To portray how supplier selection practice influence the company supply chain management performance.
- To describe how external environment affect the SCMP of the company.
- To elaborate how internal company policy affects the company supply chain management performance.
- To explain how procurement practice affects the supply chain management performance company

1.4 Research hypothesis

Based on the existing theoretical and empirical literature, this study explores how the independent variable affect the supply chain management performance. The study is to prove or disprove the following research hypothesis.

Ho1: supplier selection practice has no significant effect on the supply chain management performance of the company.

Ho2: external environment has no significant effect on the supply chain management performance of the company..

Ho3: internal company policy has no significant effect on the supply chain management performance of the company.

Ho4: procurement practice has no significant effect on the supply chain management performance of the company.

1.5 Significance of the study

The study focused on the Supply chain management performance of indochine apparel manufacturing company in hawassa industrial park. This was background on the realization that supply chain management performance is very important to the sector even with the little attention is given by different researchers in the discipline.

- ✓ The finding of the study will support to generate new knowledge and comprehensive approaches to be used by the company to help them managing their supply chain management performance.

- ✓ The findings of this study will be valuable to diverse segments of employees of the company to see there gaps and to take a corrective action for the future.

- ✓ Governmental and non-governmental companies will be benefited from the findings of this study by getting to understand the area of improvement to promote efficient service. And which indicates the critical factors influencing SCMP and their impact on performance in the textile sector.

- ✓ It will also important for researcher used at a blueprint for further studies to show the uncovered factors of supply chain management performance.The findings of this study will be important for the companies to understand the gap and continue the existing good performance.

1.6 Scope of the study

The scope of the study comprises four different dimensions. The dimensions include conceptual, time, geographical and methodological scope. The conceptual scope of the study is limited in the concepts that are supplier selection practice, external environment, internal company policy and procedure, procurement activity key indicator of SCMP and performance measurements. The time scope of the study is as per the schedule set by the school of management and accounting from September 2023 to march 2024.The geographical scope of the study is delimited in indochin apparel manufacturing plc in Hawassa industrial park . Methodologically the scope of the study is limited to descriptive and explanatory research design, quantitative and qualitative approach was used. Furthermore, to analyse the data descriptive statistics, Pearson correlation and multiple linear regression (inferential statistics) was applied.

1.7 Limitations of the study

This particular study was also subjected to some limitation like other research work. The view of this thesis was limited only on a single company inside Hawassa industrial park and the study focused only on the supply chain management performance of the company. Since the study was focused only on the supply chain management performance the company it was difficult to the researcher to give generalization about the overall performance of the company, and the researcher faced unwillingness of respondents in order to gather enough data.

In addition to this the study was not examine all the factors that affect the SCM performance of the company was one of the main limitation of the study. On the other hand the researcher was faced to gate enough, relevant and accurate review of related literature due to the lack of conducted published materials in our country Ethiopia.

1.8. Organization of the paper

The study involves five chapters. The first chapter consists of introduction, background of the study, statement of the problem, significance of the study, objectives of the study, hypothesis of the study, scope of the study and organization of the paper, limitation of the study and operational definitions. The second chapter involves both theoretical and empirical literature's. The third chapter presents description of the study area, research design, types and sources of data, target population of the study, sample design and sampling procedures, data collection methods, data analysis and presentation, validity test, reliability test and ethical issues. Chapter four discussed data analysis and presents findings. Chapter five, on the other hand, consists of summary of major findings, conclusion and recommendations. Direction for further research presented in this chapter.

1.9. Operational definition of terms

Supply chain management (SCM) is the process of managing the flow of goods and services to and from a business, including every step involved in turning raw materials and components into final products and getting them to the ultimate customer.And it helps streamline a company's activities to eliminate waste, maximize customer value, and gain a competitive advantage in the marketplace(Agrawal, Smith & Tsay, 2021).

- ✓ **Supplier selection practice.** Supplier selection is the process of choosing which prospective vendor or supplier should an organization get into business with. One of the primary goals of supplier selection is to establish a mutually-beneficial business-to-business relationship with a reliable supplier that provides the most value for money (Rob,R,2018).
- ✓ **External environment.** External Environment refers to the part of the business environment which comprises all the outside elements or forces impact the business operations. (Kazmi,A,2017).
- ✓ **Internal policy.** Is the written policies and procedures of the company in any way related to the Services or it is a set of documented guidelines that establish standards in areas such as proper procedures and employee behaviour(Hargie, Dickson, 2017).
- ✓ **Procurement practice.** Procurement involves every activity involved in obtaining the goods and services a company needs to support its daily operations, including sourcing, negotiating terms, purchasing items, receiving and inspecting goods as necessary and keeping records of all the steps in the process (Edvardsson,B,2021).

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2. 1 INTRODUCTION

The literature review of this study is composed of basic theories which provides definition and explanation about supply chain management performance. In order to achieve the proposed objectives, Complete literature surveys were conducted regarding the concept of supply chain,supply chain performance, performance measurement systems, performance indicative factors and improvements, overview about Ethiopian textile manufacturing. Related works which present different scholars point of view with regard to supply chain performance on manufacturing industry.

2.2 Theories and concepts of Supply Chain Management

The concept of Supply Chain Management is inevitable for efficient resource utilization in the modern organization. Chopra et al. (2010) portend that supply chain management represent the confluence of at least three main streams of knowledge and practical experience of the business world spanning almost 60 years. The fusion of these streams into one powerful movement, supply chain management, that is sweeping across the present day individual world has brought about by intense competition characteristic of the contemporary markets. They identify three disciplines in supply chain management as: sourcing, procurement and supply management, materials management, and logistics and distribution. Competitive advantage remains a key focus among organizations yearning to enhance their performance relative to their competitors (Gibson, B. J., Mentzer, J. T. & Cook, R. L. 2014).

A plethora of studies point to the desire to understand how to sustain competitive advantage among competing organizations (Porter, K, 2007). It is argued that this desire among organizations informs strategic management decisions (Flint & Van Fleet, 2005; King, 2007). In such a scenario of sustaining competitive advantage, (Jain, Dangayach, Agarwal, Banerjee 2010). contend that supply chain management takes on, a more central role that requires keen interest. In essence, the argument then is that processes under the supply chain possess the key to unlock organization's competitive ability. Organizational performance is viewed from financial perspective outcome and operational efficiency of a firm.

The performance of the entire upstream and downstream plays a significant role in decision making in regard to the value chain.(Kumar&Kushwaha,2018). Most previous studies relating supply chain

practices to organizational performance have concentrated mainly on individual practices such as supply chain information systems and organizational performance (Arende, 2015).The direct link between supply chain management as a single construct measured through the various practices, and organizational performance might particularly be important to examine since the cumulative effect of each practice is expected to complement the effects of others and improve organizational performance (Amours, Ronnqvist & Weintraub, 2008).

It is apparent that much of the focus in the increasingly voluminous literature on supply strategy, operations strategy and supply chain management is directed at meaning making. Often this comprises assertions about what it essentially in the precepts of SCM as currently portrayed are a mixture of three elements: description, prescription and the identification of alleged trends. Description Debates here relate to scope and focus. Some academics openly declare that they use the terms supply chain management and purchasing "synonymously" (Lysons & Farrington, 2006). Giunipero, Handfield, Monczka, & Petterson (2009) hold that supply chain management endorses a supply chain orientation and involves proactively managing the two-way movement and coordination of goods, services, information, and funds (i.e, the various flows) from raw material through end user. The study looks at Supply Chain Management in two perspective including: resource-based view and operational excellence. The perspectives are discussed as follows:

2.2.1 Resource-Based View theory

Supply Chain Management (SCM) is an essential element to operational efficiency. SCM can be applied to customer satisfaction and organization's success. SCMP impacts on effective resource utilization and realization of organization goals and objectives. Supply chain management helps streamline everything from day-to-day product flows to unexpected natural disasters.

With the tools and techniques that SCM offers, you"ll have the ability to properly diagnose problems, work around disruptions and determine how to efficiently move products to those in a crisis situation. companies require properly instituted SCM with minimal bottlenecks. Proponents of Resource-based view see SCM as a basis for the competitive advantage of a firm, lying primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Mwailu & Mercer, 1983) p142, According to (Barney,1991). SCM effectively translates into valuable resources that are neither perfectly imitable nor sustainable without great effort. A broken supply chain can cripple the companies system and undermine positive outcomes. Most problems stem either from uncertainties or inability to coordinate several activities and partners.

2.2.2 Operational Excellence and Strategic orientation of SCM

Organizations strive to improve performance resulting in eliminating waste by improving cost efficiency, quality and reliability and compliance safety. As Wright, Jones & Hoyle (2015) portend, there is need for organizations to identify process inefficiencies by such tools as value streaming maps or calculating process capability. Operational excellence is banked on organization‟s ability to deliver unique, differentiated and outstanding values to their customers. Operational Excellence in Supply Chain Management implies excellence within each of the individual processes and in the way the supply chain operates as a whole. Customers expect high levels of quality, cost and service in all of their interactions that may be achieved through efficient supply chains Ambrose E, Lynch D.(2016).

Supply chain processes should work together, with seamless information flow and smooth material handoff ensuring that another group should not be the cause of a late delivery and lose credibility for the entire supply chain. Many firms have reduced their supply base so that they more effectively manage relationships with strategic suppliers Tully (1995). Mason (2009) indicates that buying firms are developing a mutually beneficial relationship with suppliers and viewing suppliers as virtual extensions of their firm.

2.3 Empirical Review of literature

A number of studies have been conducted on factors affecting supply chain management performance. John K. Osoro, March (2019) did a study on the ifluence of supply chain management on performance of textile firms in Kenya. The study found that inventory management remains central to the performance of textile firms in Nairobi City. Involvement of inventory management is paramount and has direct impacts on performance of textile firms. Relationship management is fundamental to the understanding of poor performance of the textile firms and has direct impacts on performance of textile firms in Kenya. The use of information flow has positive impact on performance of the textile firms in Kenya. However,the information flow of the textile firms is not elaborate enough to support firm's functions. Adherence to lead time is crucial for the understanding of firm performance and has direct impacts on performance of textile firms in Kenya. Lead time help in streamlining procurement processes in the of firms.

(Ngoto,A.N.&Kagiri,A.2016).The conduct a study on factors affecting supply chain management performance in international non-governmental organisations in Kenya.The study concludes that strategic supplier relationship with the international NGOs affect their supply chain management

performance significantly. The study also deduces that contract management systems and information sharing affects supply chain management performance in the international NGOs in Kenya and finally it also concluded that the international NGOs in Kenya have a satisfactory performance of supply chain management.

First the study recommends that not all INGOs have effective/satisfactory supply chain management and at the same time those which practice it have not embraced it fully due to the initial cost incurred in setting up the supply chain division of the firm. supply chain management have led to increase in costs to the organization due to inefficiency and that more need to be done to improve on supply chain management performance, while there was neutrality on that supply chain department meets its annual target and that the supply chain department adequately staffed with qualified staff.

Secondly study recommends that strategic supplier relationship and supply chain management efforts should reach across the entire supply chain to help streamline essential processes such as product development and pricing, as well as reduce costs and improve responsiveness to customer demand. This would be a cutting edge since non-governmental organizations that utilize sustainable supply chain management as a strategic tool in business management are likely to have a competitive edge over others.

Lastly study recommends that there is need for the supply chain actors to manage contracts. Executives should develop supply chain contract management in an attempt to reduce costs, improve service, organizational performance and to gain competitive advantage. The best supply chains have stakeholders' relationships that are based on value and consistent delivery of this value. A well management supply chain contract that encompasses relevant members of the value chain – from the organization to its most distant trading partners and suppliers – requires continuous and careful monitoring and evaluation.

Enawgaw Alemayehu (2021) did a study on factors Affecting Supply Chain Management performance of Major Building Materials in addis ababa.The study elicit four major independent variables which seem to affect performance SCM which includes, cost of materials,Quality of materials, Deliver ability time, Deliver ability time of materials.The findings further indicated that among the independent variables deliver ability time and deliver ability time were the major factors that significantly affected performance. Based on the findings it was recommended as follow:

Obtaining imported and local raw materials Imported and local raw materials have significant problem during the manufacturing process.So the government of Ethiopia shall improve the overall problem

during transportation, marine, and logistic process, in addition of this the imposed tax related costs shall be decrease to sustain the market of the materials.

Delivery time, the most determinant categories which affect the supply chain management For all factors of supply chain management, the main and permanent solution is balancing demand and supplies.

Lack of information/poor coordination of concerned parties. All the concerned parties must have information about the materials all the time. They shall get priority when they need materials from the manufacturer and the suppliers, and they shall get all support to import the necessaries materials to the construction sector from abroad.

2.4 Supply chain management in Ethiopian perspective

SCM practices and challenges in different industry of Ethiopia were studied in different dissertations. The results of different researches in the SCM performance in different commercial and non-commercial sectors of Ethiopia are concluded as poor. Admaw (2021) studied the practice of SCM for Ethiopian textile firms. It was found that SCM practices in Ethiopian textile firms are weak and not considering SCM as a strategic tool for competition. Business managers of the textile firms didn't give attention for SCM theories and practices. Also Dereje, (2022) studied the impact of SCM practices on the organizational performances in metal and engineering industries. The result of the study shows that the implementation of SCM in this industry is weak. These shows there is a gap on identifying all the factors that affect the textile company's supply chain performance which need to be assessed.

2.5 Supply chain management performance

Supply chain management performance (SCMP) is defined as the operational excellence to deliver leading customer experience (Simchi-Levi et al., 2015) and Supply Chain Performance refers to the extent to which a supply chain meets end-customer requirements, and contains operational efficiencies which can deliver that performance. This definition implies that supply chain performance measures effectiveness and efficiency by how well these two goals are met. Different studies conducted under SCM, measured supply chain performance by four dimensions:

Stevens (2016) states that to build up an integrated supply chain requires the management of material flow from three perspectives: strategic, tactical, and operational. From these perspectives, the use of systems, facilities, and people must be seen as a whole and work in a coordinated manner. He also mentions that a company can measure the supply chain performance by inventory level, service level,

throughput efficiency, supplier performance, and cost. Logistics play an important role in pursuing supply chain excellence which will lead to improved business performance and defined as the responsibility to design and administer systems to control movement and geographical positioning of raw materials, work-in process, and finished inventories at the lowest total cost (Bowersox et al., 2007). The research of Autry, Zacharia and Lamb (2018) establish that logistics must be focused on the coordination and collaboration of activities, logistics social responsibility, strategic distribution planning, and technology and information systems.

2.6 Factors Affecting Supply Chain Management performance

Good supplier management is not enough; there is an additional requirement for a wider more integrated all-encompassing perspective embracing all processes from sourcing through make and transportation and on to merchandising to final customers. (Henery, Quesada, Rado, 2015). assert that there are several problems in SCM that need to be resolved for efficient operation. Most of these problems stem either from uncertainties or inability to coordinate several activities and partner .

2.6.1 Environmental Uncertainty

These factors are playing important roles for organizational supply chain performance (Bergeron, 2004). Generally environment uncertainty involves three dimensions of supply chain such as supplier uncertainty, demand uncertainty and manufacturing uncertain Supplier uncertainty concern with supplier could not supply product to the customer. Another supplier uncertainty is that product cannot be delivered on time or the qualities problems Bheda, R. (2016). Demand uncertainty is uncertainty of customer demand for a product. Implied demand uncertainty is also referred to customer needs and product variability. Thus, customers‟ expect demand different than the implied demand uncertainty will be influenced (Melinda, 2003). Environmental uncertainties are related to how hard it is to precisely foresee the future (Lee et al., 2009). According to Sung and Hsu (2009)supply chain performance can be influenced by environmental uncertainties, which can allow deciding about significant aggressive factors to take into account and weigh in for the formulation of a successful competitive strategy.(Quesada, Meneses, 2010).

2.6.2 Company environment

This factor is related to the company's relationship with suppliers and their level of trust and commitment s in the supply chain in order to perform in a proficient manner.Company environment is also related to the company‟s expectations of quality and on time delivery. According to a study carried out by (Ambrose, 2015). uncertainty negatively affects company performance. But this can be

reduced if a strategic relationship with critical suppliers is established (Chen, 2016). Thus, companies need to implement new strategies that allow them to deal with environmental uncertainties in the supply chain in order to perform in a proficient manner.

2.6.3 Government support

The level of support that the organization receives from the government when importing materials products from overseas or using domestic materials. It includes the use of norms, regulations, policies, and advice for the sector (Humphreys, t, 2021).

2.6.4 Information Technology

Telecommunications and computer technology allow all the actors in the supply chain to communicate among each other. The use of information technology allows suppliers, manufacturers, distributors, retailers, and customers to reduce lead time, paperwork and other unnecessary activities.

It is also mentioned that managers will experience considerable advantages with its use such as the flow of information in a coordinated manner, access to information and data interchange, improved supplier relationships, and inventory management not only at the national level but also internationally . Also the advantages will include supply contracts via internet, distribution of strategies, and procurement Gilaninia, S., Mousavian, S.J.(2015). All companies are looking for cost and lead time reductions with the purpose of improving the level of service but also to enhance inter-organizational relationships

2.6.5 Quality Management

Quality is not a bonus for the customer it is expected. Quality is also important for the acceptance of a product. Quality is meeting or exceeding the expectations of your customer (Bishop, 2017).This could be achieved, for example, by the use of quality metrics, which improves the production system (Juran,2018). Achieving better efficiency, quality and productivity, and acquiring the highest value of a product at lower cost will improve the businessperformance of a company.

2.6.6 Supplier selection

When looking for successful supplier performance it is important to emphasize relationship quality. Researchers such as Walter, Kaufman and Palmier propose relationship quality as a multi-dimensional construct consisting of trust, satisfaction, and commitment. (Steward, Hartley. 2018). consider factors such as product quality responsiveness to requests for change sales service and/or technical support total value received and overall cost performance as a measurement of supply chain performance. They

also found that “supplier performance is higher when the supply manager perceives trust and satisfaction on the part of thesupplier‟s account executive.

2.6.7 procurement practices

procurement is the act of obtaining or buying goods and services. The process includes preparation and processing of a demand as well as the end receipt and approval of payment. It often involves purchase planning, standards determination, specifications development, supplier research and selection, value analysis, financing, price negotiation, making the purchase, supply contract administration, inventory control and stores and disposals and other related functions(Lim,M. 2021).

Procurement monitoring it includes direct observation that means personal,physical observation that delegates the responsible staff member is physically present at the work site during its performance to see how it is progressing whereas indirect observation describes testing progress reports from many observers ,technical reviews ,performance indicators and audits.it shows the work performed are unlikely, to reveal whether the work is ahead of schedule ,on schedule or behind schedule(Brown,Hyer. 2019).

Procurement controls it covers monitoring the vendors performance and ensuring that all contract requirements are being met. it includes the action of monitor the progress ,execute plans, approving the scope by accepting the results, track cost and ensure payments ,measure output ,approve change, take corrective actions and harmonizing contractual deliverable with the schedule.,(Waters,D.2020)

Procurement planning is the process of deciding what to buy, when and from what source. During the procurement planning process, the procurement method is assigned and the expectations for fulfillment of procurement requirements determined, (Chandra,P.2016).

2.7 Supply chain management performance measurements

Performance measurement is critical to the success of any organization because it creates understanding, moulds behaviour and improves competitiveness. (Cai, J, Liu, X. 2015). performance measurement describes the feedback or information on activities with respect to meeting customer expectations and strategic objectives. It reflects the need for improvement in areas with unsatisfactory performance. Thus efficiency and quality can be improved. Supply chain performance is the ability and capability of process, standardize, reasons, deliver product and services within customer expectations in terms of time, quality, cost, and supporting metrics.The sets of supply chain metrics used to quantify

both the efficiency and effectiveness of firm is measured by performance measurement (Gunasekaran, A., Patel, C., & Tirtiroglu, E, 2016).

2.7.1 Quality

Quality is not only a bonus for the customer; it is expected and is also important for the sale of a product. Poor quality means high costs, low productivity, and loss of market shares. Quality is meeting or exceeding the customer requirements (Bishop,1990). Textile is a sector where quality is one of the key competitive factors, and current competition does not only concern the individual firm but, rather, involves the entire supply chain. Indeed, the quality of the final product that reaches the customer is clearly the result of a chain of successive, inter-linked phases: spinning, weaving, apparel and distribution (Lin, Gibson, 2005).

Quality management is the system which leads to long term benefits by continuous improvements in processes through using different quality techniques. Due to globalization companies adopted those suppliers and partners who provide them good quality of raw material for final product. When the practices of SCM and quality management are integrated and communicated then it leads to continuous improvement and gain competitive advantage. Quality management activities like quality policy, objectives, responsibility and quality planning are important for efficient processes Quality control, quality assurance and quality improvements leads to effective supply chain and increases the value of products and systems (Abbasi, M.N. and M. Afzal,2018).

2.7.2 Cost

In manufacturing production cost mainly includes labor cost, material cost, overhead cost. Overhead costs include all the costs except material and labor costs (Gachora j.w,.Kibet,j& Museiga,d 2017). who made a remark that cost factor is a key determinant of the performance of a firm,in this regard, to excel, the manufacturing firms today are realigning their activities in way that maximizes revenue and minimizes cost. Different business firms are moving towards lowering operating costs, decreasing procurement costs, reducing marketing costs, and lower distribution costs Cost indicators help managers identify the supply chain cost drivers and help move toward a more efficiently managed supply chain. Some of the indicators are total supply cost, inventory holding cost, total transportation cost, warehousing cost, total manufacturing cost (Gachora ,2019).

2.7.3 Productivity

Productivity is defined as the effective and efficient utilization of all organizational resources, including capital, lobar, materials, machinery, energy, land, information and time. Productivity is an output generated and input provided ratio of a production system. Thus main indicator of improving

productivity is decreasing the ratio of output to input at constant or improved quality (Rahel,2010). Productivity implies a company's production ability.

There are many different examples of productivity measurements used in industries and organizations including single dimensional 15 and multidimensional measures. These measurements are both used for monitoring and development of the daily operation as well as for long-term strategic considerations of the business. Productivity indicators examine how well resources are used. For example, filling vehicles to their capacity, instead of sending out vehicles half-full, could reduce costs and improve efficiency some of the indicators are working capital productivity, labor productivity, capital productivity, inventory turnover rate and storage space utilization(Bheda,2018)and (Bheda,2017)

2.7.4 Time

In competitive industries, short lead time will differentiate a company from its competitors, leading to increase sales. Lead-time begins with the first receipt of a customer order and ends with customer receipt of the product or service. Total lead-time includes four main components; order lead times (i.e., the time it takes to process an order), supply lead times (i.e., the time it takes to purchase item), manufacturing lead time (i.e. this refers to the time span from material availability at the first processing operation to completion at the last operation) and delivery lead time (i.e. this refers to the time taken to final receipt to the customer (Balsmeier, W, Voisin ,J, 2018).

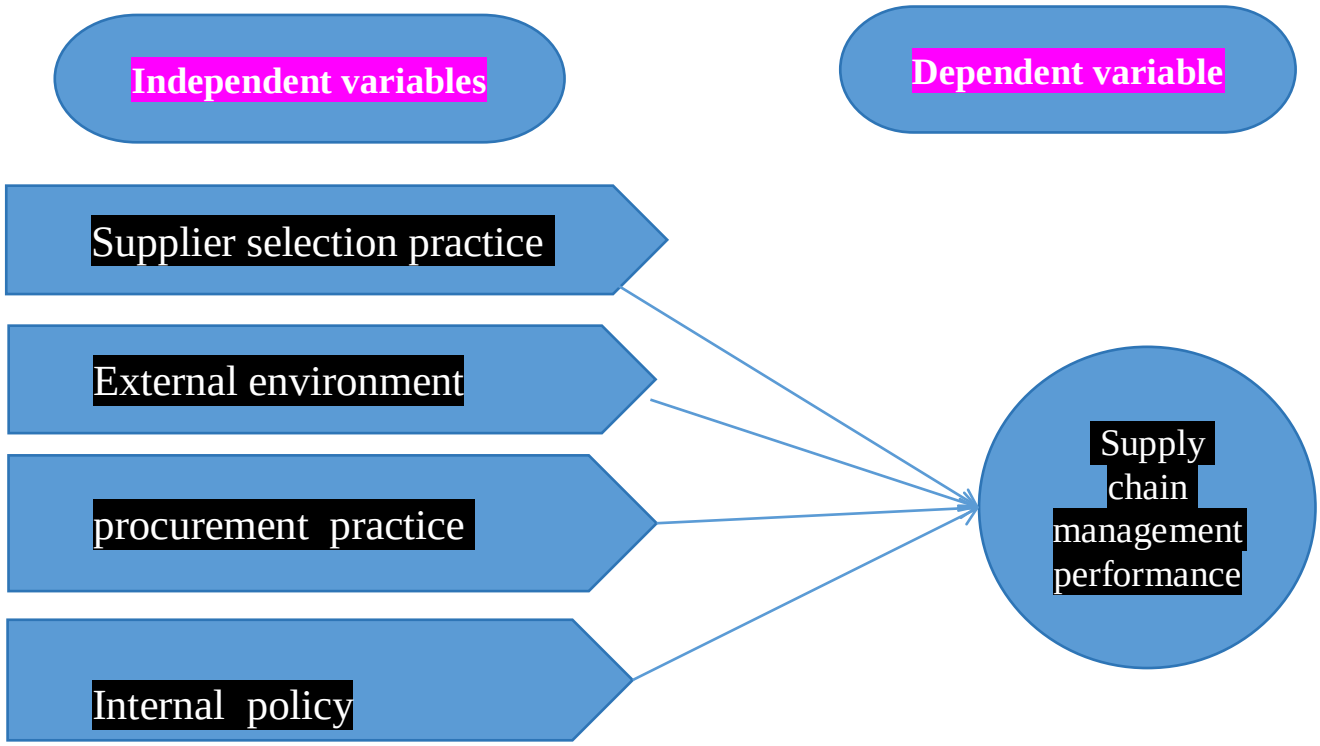
Time indicators focus on the time in takes to complete specific activities. They show where saving time during specific activities can improve the overall supply chain performance, besides the mentioned once customs clearance cycle is also included Time delivery is another factor influences on supply chain efficiency. Contacting ability of the retailers to respond is important, if they respond quickly then material will reach on time for activities and demand will be fulfilled easily.

2.8 Conceptual frame work of the study

Nowadays, making correct decisions in a dynamic business environment is a major challenge for textile firms allover the world (UNIDO, 2019). The challenge is more intensive for developing countries like Ethiopia because of their poor infrastructure,weak management, shortage of foreign exchange, lack of capital, limited research and development practice, and technological obsolescence (CSA, 2020). The business environment of textile is also characterized by short-term and long-term uncertainties in business processes, combined with a short-term focus on meeting customer requirements since the nature of textile products is more fashionable and their product life cycle is too short (UNIDO, 2019).In addition to short product lifecycle, business today has faced different challenges. The researcher

develop conceptual framework of the study depending on the academic background as well as experience on the area of supply chain management and have a chance to see the factors that affect the supply chain management performance of the company. The study guide by conceptual framework shown below. According to the conceptual framework factors affecting supply chain management performance include supplier selection practice, external environment,Internal policy and procurement practice.

Figure. 2.1 Conceptual frame work of the study



Source: Researchers own models 2024.

2.9 Identified Research gap

Many researchers have investigated different aspects supply chain management performance. Some of them are Monk (2016), Vorster (2017), Henry et. al (2015), Ambrose et.al (2016) did a study on factors affecting supply chain management performance of textile companies in Kenya. (Tesfaye, 2019) studies on the determinants of supply chain management performance (Adem 2023) was conducted a study on factors affecting cold chain logistics performance (kedir, 2023) studies on factors affecting supply chain management performance a case of shints garment plc. However, The issue like supplier selection practice, external environment, internal policy and procedure and procurement practice was not seen as a factors affecting the supply chain management performance in the study area so that the researcher seen this variable gap to conduct this study.

CHAPTER THREE

3. RESEARCH METHDEOLOGY

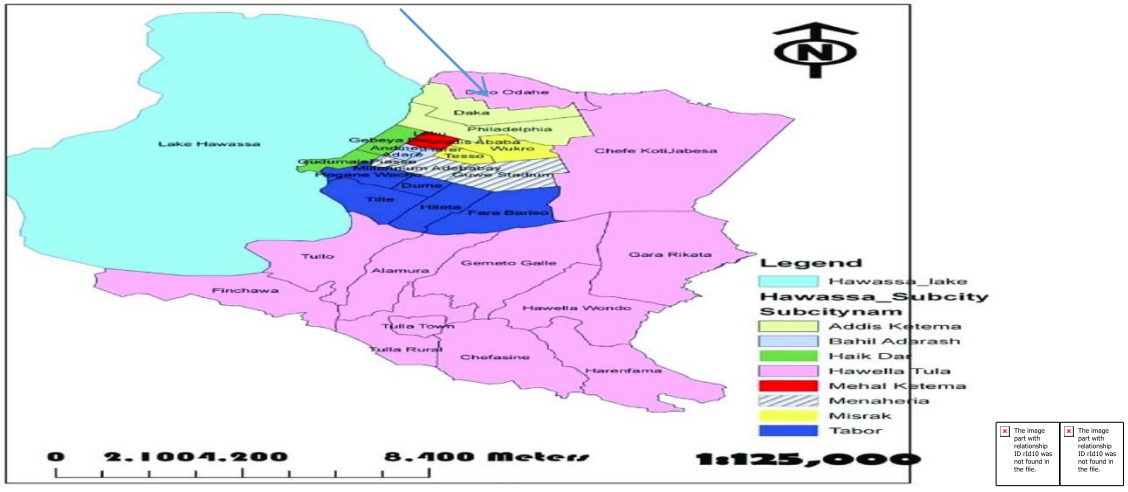
3. 1 INTRODUCTION

The main purpose of the research methodology is to explain how the research will be carried out, what knowledge and information is required and how data is collected. This is important to ensure what the study will adders, set objectives and answer the research questions .This section consist of study area, research approach; sample design-sampling technique, sample size, source and instruments of data collection, methods of data analysis, validity, reliability and ethical issues.

3.2 Description of the study area

Hawassa city is one of agglomerating urban centers in the Sidama Regional State established on the shore of Lake Hawassa. It is located in the Great Rift Valley region; 275 km south of Addis Ababa via Debre Zeit and 1125 km north of Nairobi. The city serves as the capital of the Sidama region. Geographically it lays between 7 03’ latitude North and 380 28’ longitudes east. It is bounded by the lake in the West,Oromia Region in the North, Wondogenet woreda in the East and ShebedinoWoreda in the south. Hawassa has a total area of 157.2 sq.km divided into Eight (8) sub cities divided into 32 Kebeles. These Eight sub cities are Hayek Dare, Menehariya, Tabore, Misrak, Bahile Adarash, Addis Ketema, Hawela Tula and Mehalketema sub city. The researcher was conducted the study only on one of the biggest company Indochine apparel manufacturing plc. The company headquarter is Colombo srilanka engaged in manufacturing of textile products and and extend their business in Ethiopia since 2016 G.C.

Figure 3.1 Map of the study area



3.3 Research Design

Research design is the master plan for collection and analysis of data which aids in answering the research questions. It specifies the sources from which the researcher intends to collect data, measurement, and analysis of data (Saunders, Lewis and Thornhill, 2016). Various authors recommended that the use of descriptive design. Orodho (2013) contends that to produce information that is interest to policy makers even in business research descriptive design is helpful. This involved collection of information by administering questionnaires and interviewing a sampleof individuals.

Both qualitative and quantitative approaches are used in this study. The study also adopted both descriptive and explanatory research designs.

A descriptive study is undertaken in order to describe the characteristics of the variables of interest in a situation (Kothari, 2009). Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection. This research design was used because it often uses visual aids such as graphs and charts to aid the reader in understanding the data distribution. And it's important in reducing the data to manageable form. Explanatory research design is also used to explain the effect of independent variables, (supplier selection practice, external environment, internal policy and procedure and procurement practice) on dependent variable (supply chain management performance).

3.4 Types and sources of data

The researcher was employed both the primary and secondary data sources. Primary Source of data is source of data which provided first-hand information for the use of immediate purpose. Data collected from primary sources are new data which had not existed before and for which the researcher received full credit. Primary data was collected from employees of the company through structured interviews and questionnaires. Secondary data was obtained from published and unpublished sources.As Carrie and Kothari (2004), stated secondary sources are sources of data which are not originated by the investigator itself but which we get from some one's records. Secondary sources exist as storage of previously collected information.

For the sake of achieving the objectives of the study, the researcher was employed questionnaire as a data collection instrument or tool. The questionnaire consists of three parts the parts includes as follows: The first part of the questionnaire is the demographic information of the respondents. Queries about personal information of the sample such as gender, age, education and profession,work experience were included. The second part of the questionnaire is five point Likert scale questions related to factors affecting SCMP and interview question were included.

3.5 Target population of the study

Creswell (2009) point out that, "Population is the group of interest to the researcher, the group to whom the researcher would like to generalize the results of the study. For this study, employees who are working at indochin apparel manufacturing plc was taken as the target population of this study. The target population of the study has a total of 3,152 employees who are currently working in the company and sampling size for this study consisted of 295.

3.6 Sample design and sampling procedures

3.6.1 Sample Design

Sampling is a technique of selecting individual members or a subset of the population to make statistical inferences from them and estimate the characteristics of the whole population. Sampling design is a mathematical function that gives you the probability of any given sample being drawn. And it is a working plan or structure, which specifies the population frame, sample size and sample selection and how the sample size is estimated. The aim of the sampling design is to identify the characteristic of the population.

3.6.2 Sampling Frame

A sample frame is an objective list of the population from which the researcher can make his or her selection. The sampling frame for this study was obtained from the human Resource Department of the company.

3.6.3 Sampling Technique

Sampling technique is the procedure a researcher was used to gather people, places or things to study. The researcher was used stratified sampling technique to select the respondents from each strata and the sample from each strata was selected through lottery method. The Researcher used stratified sampling technique to ensure specific subgroups are present in their sample. It also helps them to obtain precise estimates of each group's characteristics. And the researcher applied purposive sampling technique to select a specific group of individual to obtain in depth response. The researcher selected 10 respondents for interview purposefully.

3.6.4 Sample Size

Sample size is defined as the number of elements to be included in the study. The total population of the company is 3,152 . Therefore, in order to determine the representative sample form the target population, the following sample size determination method by Kothari, C.R. (2004) was employed. The sample is drawn from maximum variability of the population (P=0.7) obtained from pilot study with 95% Level of confidence with 5% precision level. The sample error is 0.05. The sample was selected from the study population using the formula presented by Kothari, C.R (2004). The formula is:

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

where, n= sample size

N = Population size,

Z = Critical value of the normal distribution at the required confidence level,

p = Sample proportion,

e = Margin of error

$$\boldsymbol{n = \frac{(1.96)2(0.7)(1-0.7)(3152)}{0.0025(3152-1)+(1.96)2\ (0.7)(1-0.7)}}$$

$$\boldsymbol{\frac{(3.8416)\ (0.21)\ (3152)}{(7.8775) + (3.4816)(0.21)}}$$

$$\boldsymbol{\frac{2542}{(8.608636)} = 295}$$

To show the number of sample population will be selected from each strata the researcher will use proportionality formula as follows:

Table 3.1 Framework of the sample size

No	Functional departments	Number of population in each department (Ni)	ni = n .Ni/N	ni
1	Shipping (export)	16	$\frac{16}{3152} x\ 295$	2
2	Merchandise	12	$\frac{12}{3152} x\ 295$	1
3	production	2,880	$\frac{2880}{3152} x\ 295$	269
4	finance	20	$\frac{20}{3152} x\ 295$	2
5	planing	8	$\frac{8}{3152} x\ 295$	1
6	FGS and RMS store	176	$\frac{176}{3152} x\ 295$	16
7	purchasing	10	$\frac{10}{3152} x\ 295$	1
8	Human resource	20	$\frac{20}{3152} x\ 295$	2
9	Information technology (IT)	10	$\frac{10}{3152} x\ 295$	1
	Total	3,152		295

Source: Indochin apparel manufacturing plc human resource department, 2024

3.7 Methods of Data collection

Data was collected by both primary and secondary data collection methods. The primary data were

collected using methods such as structured questionnaires and interview. The secondary data on the other hand was collected from the recorded file of the company, related books, journals and other necessary material.The data collection method that was used is a structured questionnaire by using likert scale and Both close and open-ended questions was prepared and distributed to collect the necessary information from the participants.

3.8 Methods of Data Analysis

The collected data from questionnaires was analysed using descriptive and inferential statistics.While descriptive statistics include frequencies, percentages, mean and standard deviations and inferential statistics include correlation and regression analysis. Product moment correlation coefficient was used to ascertain whether a statistically significant relationship exists between the predictor variable and the company supply chain management performance performance. The multiple linear regression analysis was used to predict the value of the dependent variable using the values of the independent variables and to test all hypotheses in the regression model. Furthermore, Analysis of Variance (ANOVA) was used to test the significance of the regression model. All the analysis methods was assisted by the SPSS (Statistical Package for Social Science) software Version 26. SPSS preferred because of its ability to cover a wide range of the most common statistical and graphical data analysis.

3.8.1 Multiple regression and model specification

Multivariate regression models were applied to analyse the relationship between a single dependent variable with the independent variables. objective of multiple regression analysis is to determine the relative importance of each of the four variables. Multiple regressions were a flexible method of data analysis that was appropriate whenever the dependent needed to be examined in relationship to any other factors (expressed as independent or predictor variable). And one could examine the effects of a single variable or multiple variables with or without the effects of other variables taken into account (Cohen, Aiken, 2003).

3.8.2 Model Specification

Model specification can be explained as the exercise of formally asserting a model i.e. the obvious translation of theory into mathematical equations and contains using all the available relevant theory research evidence and developing a theoretical model. The following model was proposed for the purpose of running multiple linear regressions that is necessary to examine the factors affecting supply chain management performance of the company.

$$\mathbf{Y= \beta o + \beta 1X1+ \beta 2\ X2 + \beta 3X3 + \beta 4X4 + e}$$

Where, Y = Dependent Variable (supply chain management performance)

βCo = a constant

X1, x2, x3, x4 = independent variables

β1= unstandardized regression coefficient of supplier selection practice

β2= unstandardized regression coefficient of external environment

β3= unstandardized regression coefficient of internal policy

β4= unstandardized regression coefficient of procurement practice

e = error term

3.9 Validity Analysis

Content validity was determined by per-testing. This determined whether the items were correctly worded in order to avoid misinterpretation when they are finally administered to the samples in the main study. After per-testing the instruments were adjusted. Validity in general can be achieved if the collected data and methods are accurate and whether if it reflects the truth and reality and if it covers the decisive questions.

To increase the construct validity of this study, researcher used triangulation in order to obtain evidence from multiple sources. That is, from questionnaire and documentation. Moreover, researcher was also show the questionnaire to other people to make sure that it will understandable. The researcher explains the subject when first contacts the respondents. Internal Validity only concerns causal or explanatory studies, where an investigator is trying to determine whether an event lead to another event. To improve the reliability of this thesis researcher informed the respondents in advance about the main content of the questionnaire to give them the opportunity to prepare themselves, in order to provide the researcher with accurate answers.

The study instrument was content-validated. According to Donald and Pamela (2001), content validity is determined by an expert judgement. The university supervisors examined the instruments to find out whether they addressed all the specific objectives of the study that they intend to measure and ensure its appropriateness, completeness, and accuracy. They were relied upon to determine whether items in the instrument were adequate representation of all the areas that are under investigation.

3.10 Reliability Analysis

Reliability indicates the dependability of the research findings that they can be repeated either by the researcher or by other researchers using similar research method or procedures. And it is the ability to produce consistent and stable results. One of the most common reliability coefficient is the Cronbach's alpha which estimates internal consistency by determining how all items on a test relate to all other items and to the total test -internal coherence of data. The reliability is expressed as a coefficient between 0 and 1. The higher the coefficient, the more reliable is the test. According to Malhotra (2004),a standard Minimum value of alpha of 0.7 is recommended. The resulting Cronbach's alpha values of the dimensions are presented in the subsequent table.

Table 3.2 Cronbach's alph

Variables	No of Items	Cronbach's Alpha
Supplier Selection	5	0.865
External Environment	5	0.838
Internal policy and procedure	5	0.894
Procurement Activities	5	0.877
Quality	4	0.812
Cost	4	0.791
Time	4	0.762
Productivity	4	0.712

Source: Survey Result, 2024

3.11 Ethical consideration

The researcher maintained confidentiality at all time during the research work and obtained informed consent in the study and ensured that the subjects participated voluntarily. The researcher not disclose what have responded through questionnaires and or interviews. The responses obtained from the study was used for academic purpose only.

All participants was well informed about the purpose of data collection and then asked for a given consent before any data collection taken place. The commitment of confidentiality was apply not only during the research project but also after the project work is concluded. During the fieldwork a clear openness attitude was the basis of the interaction with the participants. The liability of the research project was created the saturation of trust in the relations with the participants in order to gain a successful and efficient collaboration. Furthermore, since the research project might collected relevant data, risk assessments was performed before the fieldwork. The research project during all the activities was exclusively based on trusted data and produced objective outputs.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents the analysis of study findings on factors that affect supply chain management performance: a case of indochine apparel manufacturing plc in Hawassa industrial park sidama Ethiopia. The findings were analysed and presented in the form of frequency tables, mean and standard deviation. The analysis and interpretation of data was guided by the research objectives from which a discussion of findings has been made.

The researcher handed out 295 questionnaires to the target population. Out of which 290 questionnaires were completely filled. This gave the study a response rate of 98.3 % which was above the required threshold, since Cooper and Schindler (2011) state that a study response of 65% and above is significant in facilitating the analysis of a study. The study further sought to determine the general characteristics of the respondents who participated in the study. The findings are presented in this section. The demographic information was sought in order to assist the researcher in determining whether the respondents of the study were a representative sample of the target population for generalization purposes.

4.2 Demographic Characteristics

4.2.1 Gender of the respondents

Results of the study on table 4.1 below show the gender of the respondents. The majority of the respondents 62.1% were female and 37.9 % were male.This indicates that majority of the respondents were female and higher relative to male.

Table 4.1 Gender of the respondents

Gender of the respondents		
	Frequency	Percent
Male	110	37.9%
Female	180	62.1%
Total	290	100%

Source: Primary Data (2024)

4.2.2 Age of the respondents

Result of the study on table 4.1 below show the age of the respondents. the majority of the respondents

(42.8 %) were aged between 28 to 40 years followed by the age categories of 18 to 27 years, 41 to 50 years and above 51 years respectively with percentage scores of 40.7%,15.5 %,and 1% respectively. Such productive work force is often believed to be an engine for the overall development of country. This doesn´t mean that active labor or human capital alone will make the sector an important instrument for the economic development of the country. In order for the sector to play a significant role in the economy, other issues such as capital, land, skill, natural resources have a valuable role. From this, it can be concluded that the majority of the company employees age group has better energy that would help to produce more.

Table 4.2 Age of the respondents

Age of the respondents		
	Frequency	Percent
18-27	118	40.7%
28-40	124	42.8%
41-50	45	15.5%
Above 51	3	1.0%
Total	290	100%

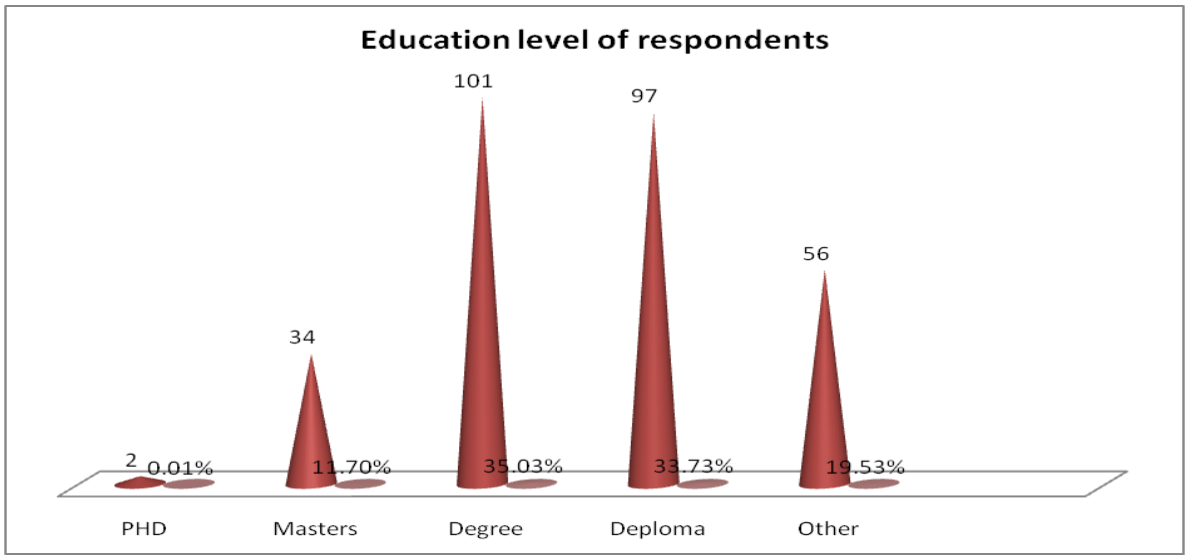
Source: Primary Data (2024)

4.3.3 Education level of respondents

Education can be linked to the process of information flow that enables the company to be creative and imitate different designs to compete within the market. This can further enable them to increase production and productivity of the enterprises. Educational background are expected to have the a better skill of managing the company strategically compared with those academically less qualified. And world is growing very fast and education helps in building good relations with the clients which is very important aspect of any business. According to Figure 4.1 represents level of education. 35.03% of the respondents have first degree holders, 33.73% were diploma holders,11.7% were masters degree holders, 1% of respondents holding PHD while 19.53% were other academic backgrounds.

These results indicates that majority of the respondents were good educational qualification. but they did not support themselves only by employment in organization. We can also infer that the educational status of the given individuals has a great value to do with efficiency and effectiveness. It helped to understand the study topic the gave their response for the given questioner.

Figure 4.1 Education level of respondents



Source: Primary Data (2024)

4.2.4 Position of respondents in the organization

The findings of the study indicates 0.7% of the respondents were directors, 1.4% ware managers, 10.3 % were coordinators, 71.7% officers and the remaining 15.9% of the respondents were other positions and these results indicate that the respondents were the majority of in the officers position.

Table 4.3 Position of respondents in the organization

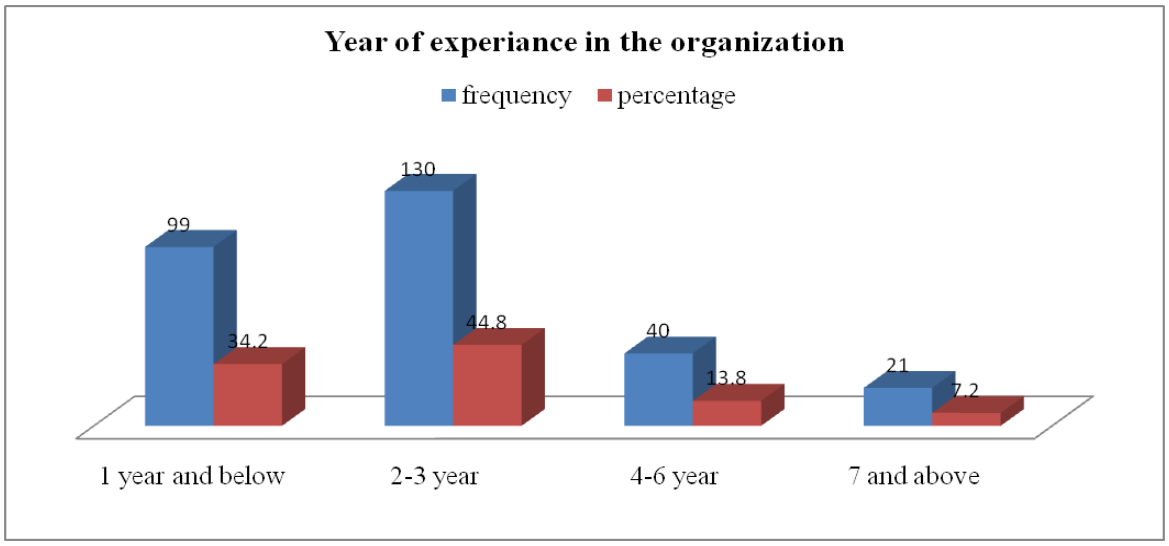
Position of respondents in the organization		
	Frequency	Percent
Director	2	0.7%
Manager	4	1.4%
Coordinator	30	10.3%
Officer	208	71.7%
Other	46	15.9%
Total	290	100%

Source: Primary Data (2024)

4.3.5 Year of experience In the Organization

Results on table 4.3 indicate the number of years that the respondents have working at indochine apparel manufacturing plc. Majority of the respondents have between 2-3 years represented by 44.8%, 34.2% of respondents have 1 years and below, 13.8 % of respondents have 4-6 years experience and the last 7.2% have seven and above years experience. It can be concluded that most of the respondents were familiar with the organization.

Feger 4.2 Respondents Year of experience in the Organization



Source: Primary Data (2024)

4.3 Descriptive statistics

Respondents were asked to rate the factors affecting the supply chain management performance through a five-point likert type scale ranging from 1 being strongly disagree to 5 strongly agree. Accordingly, the mean scores have been computed for all components of the independent variables and the dependent variable by equally weighting the mean scores of all the items under each dimension. The average mean results together with their respective variables was separately presented, analysed and interpreted as follows.

This section discusses factors affecting supply chain management performance. Respondents were given questionnaire with some variables to look at supply chain management performance in the organization those affect supply chain management performance, and told to rate how they perceived application of the given variables in the management of supply chain in the company. The variables were Procurement Activities, Supplier Selection practice, Internal Policy and Procedure and External Environment. According to

4.3.1 Supplier Selection practice

Supplier selection is the process by which the buyer identifies, evaluates and contracts with the suppliers. Suppliers are considered the best tangible assets of any organizations that have varied strength and weaknesses that require careful assessment before order placed (de Boer, 2001). Selection of appropriate suppliers is one of the fundamental strategies for enhancing the quality of output of any organization, which has a direct influence on the company‟s reputation since they can have a very positive or a very adverse impact on the overall performance of the organization (Weber et al. 1991).

Table 4.5 supplier selection practice of the company

No		Frequency					Mean	Std.de
		1	2	3	4	5		
1	The company follow planned and critically assessed supplier selection practice.	80 27.6%	90 31%	20 6.9%	60 20.7%	40 13.8%	2.62	1.427
2	Your company selecting trustworthy and competent supplier affects the organization supply chain management performance.	90 31%	95 32.8%	5 1.7%	70 24.1%	30 10.3%	2.50	1.407
3	Supplier Geographical location from the organization affects the Organization supply chain management performance.	83 28.6%	110 37.9%	4 1.4%	62 21.4%	31 10.7%	2.48	1.377
4	Training aid and repair service availability after sale could be one of good criteria to select suppliers in your company.	68 23.4%	99 34.1%	10 34%	65 22.4%	48 16.6%	2.74	1.452
5	The supplier are meet quality product and services on just in time delivery.	73 25.2%	89 30.7%	15 5.2%	81 27.9%	32 11%	2.89	1.395
	Average mean						2.65	

Source: Primary data ((2024))

Table 4.5 indicates how supplier selection affects supply chain performance of the organization. The results show that supplier meet quality product and services on just in time delivery strongly affect the SCMP with the mean score of 2.89.and standard deviation of 1.427 followed by training aid and repair service availability after sale with the mean score 2.74 and standard deviation 1.452.and the third planned and critically assessed supplier selection practice affect the SCMP with mean of 2.62,1.427.while the problem of selecting trustworthy and competent supplier and Supplier Geographical location affects the SCMP with the mean score of 2.50,2.48 respectively. which implies

that all the above mentioned variables are significantly affect the supply chain management performance of the company.

4.3.2 External Environment

Table 4.6 External Environment

No		Frequency					Mean	Std.de
		1	2	3	4	5		
1	Your company manage the market price fluctuation	88 30.3%	113 39%	9 3.1%	51 17.6%	29 10%	2.38	1.342
2	The company use advanced technology to increase supply chain management performance.	70 24.1%	86 29.7%	4 1.4%	80 27.6%	50 17.2%	2.84	1.487
3	Absence of good infrastructure affect the supply chain management performance of the company.	66 22.8%	71 24.5%	8 2.8%	91 31.4%	54 18.6%	2.99	1.490
4	your company supply chain management performance dose not affected by insecurity problem.	77 26.6%	98 33.8%	20 6.9%	60 20.7%	35 12.1%	2.67	1.446
5	Unstable business environment affect the supply chain management performance of the company.	74 25.5%	101 34.8%	3 1%	70 24.1%	42 14.5%	2.58	1.385
	Average mean						2.69	

Source: Primary data (2024)

The results revealed that the performance of supply chain was dependent on external environment. Table 4.6 shows almost all respondents agreed on supply chain performance of the organization was affected by external environment specially absence of good infrastructure it has high negative impact on supply chain performance with a sample mean of 2.99 with standard deviation of 1.490. followed by use of advanced technology ,absence of security, Unstable business environment,market price fluctuation with the mean score of 2.84,2.67,2.58,2.38 respectively. According to Sung and Hsu (2009) supply chain performance can be influenced by lack good infrastructure which can allow deciding about significant aggressive factors to take

into account and the finding indicates that all the variables have strongly affect the supply chain management performance.

4.3.3 Internal Policy and Procedure

Table 4.7 Internal Policy and Procedure

No		Frequency					Mean	Std.de
		1	2	3	4	5		
1	The company provide frequent staff training and development to improves supply chain management performance.	71 24.5%	99 34.1%	2 0.7%	88 30.4%	30 10.3%	2.68	1.393
2	The organization workforce has a good Sentiment towards Policy and procedures.	82 28.3%	94 32.4%	17 5.9%	61 21%	36 12.4%	2.57	1.408
3	The organization internal procurement policy by itself limits the quality of service being delivered.	68 23.4%	110 37.9%	2 0.7%	75 25.9%	35 12.1%	2.65	1.394
4	Quality is the working culture of the organization to enhance the SCMP.	41 14.1%	68 23.4%	18 6.2%	99 34.1%	64 22.1%	3.27	1.400
5	The company Policy and procedure have a detrimental Effect on supply chain management performance.	58 20%	91 31.4%	4 1.4%	79 27.2%	58 20%	2.96	1.481
	Average mean						2.82	

Source: Primary data (2024)

According to the summary on Table 4.7 Quality is the working culture of the organization affect the performance of supply chain management with the mean of 3.27.and secondly The company Policy and procedure affect the SCMP with the mean score 2.96. followed by frequent staff training and development, internal procurement policy by itself limits the quality of service being delivered, organization workforce has a good sentiment towards the company policy and procedures with mean of 2.68,2.65,2.57, respectively.

According to the study, quality practices and culture significantly affect the supply chain management performance and quality is critical for companies in their relationship between suppliers and customers. Quality management improvements in reducing process variation directly impact on the company supply chain performance performance. Proper implementation of quality culture and the company policy also has a significant effect on the supply chain management performance.

4.3.4 Procurement Activities

Table 4.8 Procurement Activities

		Frequency						
NO		1	2	3	4	5	Mean	Std.de
1	Your company follow appropriate procurement plan which match with the existing budget.	68 23.4%	91 31.4%	26 9%	62 21.4%	43 14.8%	2.73	1.411
2	There is mutual understanding of the requesting entity and the procurement unit to provide a better service that should be delivered.	71 24.5%	93 32.1%	21 7.2%	64 22.1%	41 14.1%	2.69	1.414
3	The company have established procedures for managing procurement risks, such as supply chain disruptions.	67 23.1%	87 30%	19 6.6%	69 23.8%	48 16.6%	2.81	1.447
4	Your company have a clear specification of technical support and proper approval to facilitate the entire procurement process	64 23.1%	96 33.1%	30 10.3%	68 23.4%	32 11%	2.68	1.340
5	The company have a competitive pricing strategy to buy their products.	68 23.4%	78 26.9%	34 11.7%	61 21%	49 16.9%	2.81	1.437
	Average mean						2.74	

Source: Primary data (2024)

Table 4.8 shows that established procedures for managing procurement risks and competitive pricing strategy to buy their products was affect in a large extent with mean score of 2.81,and standard deviation of 1.447,1.437 respectively. Absence of appropriate procurement plan which fails to match with the existing budget affect in the third place with mean score of 2.73 and Lack of mutual understanding of

the requesting entity and the procurement unit with mean of 2.69. followed by clear specification,technical support and proper approval affect the entire procurement process with mean score 2.68.

The result revealed that procurement department has a poor policies and procedures and inefficient in its procurement activities which affects all the other departments and it has a great impact on the organizations supply chain as a whole.

4.4. Measurements (indicators) of supply chain management performance

In order to interpret the the supply chain management performance of the company by the performance indicators like quality, cost, time and productivity the researcher used (zaki, ahmed 2017). interpretation of mean when the mean score is between 1.00 and 1.89 indicating very low, 1.90-2.69 sows low 2.70-3.49 is moderate and the last 3.50-4.29 is indicated high and 4.30-5:00 very high.

4.4.1 Quality indicator

Table 1.10 Quality indicator

		Frequency						
No	**Quality**	1	2	3	4	5	Mean	Std.de
1	Your company rate the average percentage of the defects and scrap in the production process	71 24.5%	83 28.6%	20 6.9%	63 21.7%	53 18.3%	2.81	1.478
2	The company measures order fill rates to determine how effective a distributing facility is in satisfying customer orders	78 26.9%	100 34.5%	18 6.2%	53 18.3%	41 14.1%	2.58	1.415
3	Your company measures the accuracy of shipments in terms of the products and quantities shipped	68 23.4%	90 31%	16 5.5%	68 23.4%	48 16.6%	2.79	1.451
4	In your warehouse, items are placed in the correct location	74 25.5%	87 30%	22 7.6%	70 24.1%	37 12.8%	2.79	1.407
	Average mean						2.74	

Source: primary data 2024

Table 4.10 The group mean of quality indicator is 2.74 which is moderate performance with respect to the overall measures taken into consideration. And the mean values of each of the measurement items of quality indicator were calculated between 2.58 and 2.81 with almost comparable standard deviations that range between 1.407 and 1.478. Rate the average percentage of the defects and scrap in the production process with the men score 2.81. Followed by measures the accuracy of shipments in terms of the products and quantities shipped, items are placed in the correct location of warehouse, measures order fill rates to determine how effective a distributing facility is in satisfying customer orders with the mean score of 2.79,and 2.58 respectively.

The represented mean scores of the measurement items of quality indicator suggest that respondents in the company believe that moderate efforts have been made by company to enhance supply chain management performance and it implies that the company have moderate in terms of quality and the company should focus more on the effectiveness of these factors to enhance SCM performance.This findings are consistent with the literature that states improving the quality of all supply chain processes leads to cost reductions, improved resource utilization, and improved process efficiency, generally quality has a significant influence on the performance of the supply chain management(Lin and Gibson et al.,2005).

4.4.2 Cost indicator

Table 4.11 Quality indicator

		Frequency						
No	**Cost**	1	2	3	4	5	Mean	Std.de
1	Total supply cost is measured per purchase order executed, during a defined period of time	67 23.1%	98 33.8%	27 9.3%	58 20%	40 13.8%	2.68	1.384
2	Your company is successful in minimizing total carrying/holding cost?	70 24.1%	100 34.5%	31 10.7%	64 22.1%	25 8.6%	2.57	1.301
3	Your company measures all transportation costs	77 26.6%	94 32.4%	17 5.9%	65 22.4%	37 12.8%	2.62	1.409
4	Your company rates the ratio of all transportation costs to the value of the products.	71 24.5%	97 33.4%	33 11.4%	62 21.4%	27 9.3%	2.58	1.314
	Average mean						2.61	

Source: Primary data (2024)

According to table 4.11 The group mean of cost indicator is 2.61 which is low performance with respect to the overall measures taken into consideration. The mean values of each of the measurement

items of Cost indicator were calculated between 2.57 and 2.68 with the standard deviations of 1.301 and 1.409.Total supply cost is measured per purchase order executed during a defined period of time is relatively high mean value registered in the case of cost indicator with mean value of 2.68.

All the represented mean scores of the measurement items of cost indicator suggest and the respondents in the company believe that the mentioned factors strongly affect the supply chain management performance and the company has a low performance in cost management.The literature review by Gachora *et al.*(2014) who made a remark that cost factor is a key determinant of the performance of SCM. In this regard, to excel the manufacturing firms today are realigning their activities in way that maximizes revenue and minimizes cost.

4.4.3 Time indicator

Table 4.12 Time indicator

		Frequency						
No	**Time**	1	2	3	4	5	Mean	Std.de
1	your company rate measures to reduce manufacturing lead time	77 26.6%	90 31%	30 10.3%	66 22.8%	27 9.3%	2.57	1.340
2	The company measures order entry time	78 26.9%	93 32.1%	23 7.9%	63 21.7%	33 11.4%	2.59	1.380
3	Warehouse personnel serve your customer on the reasonable time	68 23.4%	109 37.6%	11 3.8%	60 20.7%	42 14.5%	2.65	1.409
4	Your company rates all orders delivered by the requested delivery date,i.e there is a proper monitoring of supplier response time on shipments over a specified period of time	76 26.2%	97 33.4%	23 7.9%	61 21%	33 11.4%	2.58	1.370
	Average mean						2.59	

Source: primary data (2024)

Table 4.12 above findings shows the cost indicator of the supply chain management performance of the company. The group means of response time indicators is 2.59 which is below moderate performance with

respect to the overall measures taken into consideration. The mean values of each of the measurement items of time indicators were calculated between 2.58 and 2.65. The relatively high mean value is registered in the case of warehouse personnel serve your customer on the reasonable time with mean value of 3.65 which is strongly affect the company SCMP.The result depicts that time is significantly affects the supply chain management performance.

4.4.4 Productivity indicator

Table 4.13 productivity indicator

		Frequency						
No	**Productivity**	1	2	3	4	5	Mean	Std.de
1	Your company rate the productivity of the workforce	73 25.2%	101 34.8%	31 10.7%	59 20.3%	26 9%	2.53	1.305
2	Your company measure its machine utilization rate	78 26.9%	88 30.3%	37 12.8%	60 20.7%	27 9.3%	2.55	1.328
3	Your company measure its labor utilization rate	66 22.8%	111 38.3%	18 6.2%	63 21.7%	32 11%	2.60	1.341
4	Your company measures the ability of the supplier to fill purchase orders correctly	64 22.1%	102 35.2%	28 9.7%	66 22.8%	30 10.3%	2.64	1.324
	Average mean						2.58	

Source: Primary data (2024)

Table 4.13 above indicates the productivity measurement of supply chain performance of the company.Accordingly, the average means of productivity indicators is 2.58 which is low performance. The mean values of each of the measurement items of productivity indicators were calculated between 2.53 and 2.64 with almost comparable standard deviations that range between 1.305 and 1.341.

The highest mean value from those indicators are the company measure its labor utilization rate with mean value of 2.64 the lowest mean value from those indicators are rate the productivity of the workforce with mean score 2.53.

Overall the findings reveal that most of the productivity indicators are low performance . This result related to a literature stating In certain highly developing countries, such as India, performance improvement efforts are being concentrated on improving productivity (Bheda,2018)and (Bheda,2017). However, instead of

simply improving productivity,companies should understand the basis of performance measurement in their supply chain and improve their operations to meet the terms of performance of their suppliers and customers.

4.5 Inferential statistics

According to Chanoknath Sutanapong (2015) Inferential statistics is the drawing of inferences or conclusion based on a set of observations, inferential statistics is defined as using the sample descriptive statistics to make an inference (estimation) of the population. The sample is the observation; the estimated population is the inferred value without observation.

4.5.1 Correlation analysis

According to Sekaran (2003), in research project that included several variables, beyond knowing the means and standard deviation of the dependent and independent variable, the researcher would often to know how one variable related to another. Correlation analysis indicate the nature, direction and significant of the bi-variate relationship of the variables used in the study.

4.5.2 Pearson's Product Moment Correlation Coefficient

In the study Pearson's product Moment correlation Coefficient was used to determine whether there is significant relationship between supplier selection practice, external environment, internal policy and procurement practice.

The researcher uses Karl Pearson's coefficient of correlation (or simple correlation), because it is the most widely used method of measuring the degree of relationship between two variables. This coefficient assumes that there is linear relationship between the two variables. Moreover, the two variables are casually related which means that one of the variables is independent and the other one is dependent; and a large number of independent causes are operating in both variables so as to produce a normal distribution (Kothari, 2004). Stating only the relationship is not enough as it may involve both dimensions from zero (negative, zero itself, or positive). Therefore, to know the strength and type of correlation between variables, the following table is set as a rule of thumb for discussion of this thesis.

Table 4.14 Rule of thumb

Range of coefficient	Descriptive of strength
+0.81 to + 1.00	Very strong
+0.61 to + 08	Strong
+0.41 to + 0.60	Moderate
+0.21 to + 0.40	Weak
+00 to + 0.20	No relation

Source: (Bhattacherjee, 2012).

Pearson's correlation coefficient (r) is a measure of the strength of the association between the two variables. According to Sekaran, U. (2003), in research studies that include several variables, beyond knowing the means and standard deviations of the dependent and independent variables, the researcher would often like to know how one variable is related to another.

Theoretically, there could be a perfect positive correlation between two variables, which is represented by +1.0, or a perfect negative correlation that would -1.0. While correlation could range between -1.0 and +1.0, the researcher need to know if any correlation found between two variables is significant or not (i.e.; if it has occurred solely by chance or if there is a high probability of its actual existence). As for the information, a significance of p=0.05 is the generally accepted conventional level in social sciences research. This indicates that 95 times out of 100, the researcher can be sure that there is a true or significant correlation between the two variables, and there is only a 5% chance that the relationship does not truly exist.

The correlation matrix between dependent variable and independent variables are exhibited in table 4.15 below.

Table 4.15 Result of Correlation analysis between variable

Correlations					
		Supplier Selection	External Environment	Internal Policy and Procedure	Procurement Activities
Supplier Selection	Pearson Correlation	1	.610**	.708**	.797**
	Sig. (2-tailed)		.000	.000	.000
	N	290	290	290	290
External Environment	Pearson Correlation	.610**	1	.608**	.723**
	Sig. (2-tailed)	.000		.000	.000
	N	290	290	290	290
Internal Policy and Procedure	Pearson Correlation	.708**	.608**	1	.725**
	Sig. (2-tailed)	.000	.000		.000
	N	290	290	290	290
Procurement Activities	Pearson Correlation	.797**	.723**	.725**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	290	290	290	290
**Correlation is significant at the 0.01 level (2-tailed).					

Source*:* Survey Result, 202

Based on the correlation matrix, the highest correlation variables is between Procurement Activities and Supplier Selection (r=.797).This indicates there is a strong correlation between supplier selection

practice the procurement activity. The second highest correlation is between Internal Policy and Procedure and Procurement Activities (r=.725). The third highest correlation is between External Environment and Procurement Activities (r=.723). The fourth highest correlation is between Supplier Selection and Internal Policy and Procedure(r=.708).

The fifth highest correlation is between External Environment and Supplier Selection(r=.610) and finally The sixth highest correlation is between External Environment and Internal Policy and Procedure(r=.608) In summary, by looking at the bi-variate correlation of the four independent variables, there is evidently significant multidisciplinary and very strong relationships between variables.

In this research the correlation coefficients were in the range of 0.608 to 0.797 between four supply chain management performance factors. This reflects the variables have strong and significant positive relationship to affect the supply chain management performance of the the company. The model summary of the multiple regression analysis in this thesis has an important contribution to analysis the relationship between independent and dependent variables.

4.5.3 Multi col-linearity assumption

According to (Akinkunmi,W,B, 2019), Multi col-linearity is a statistical phenomenon in which there exists a strong or perfect relationship between the predictor variables. As the scholar`s suggested that when there is a strong correlation between two or more predictors in a regression model, Multi col-linearity problems can be exists. In addition to this as the scholar`s indicated that the presence of multi col-linearity can cause serious problems with the estimation of and the interpretation. Most of the works on regression model did not check if there is presence of multi col-linearity on the predictors and that led to poor estimation of the regression coefficient.

When a correlation result of the study within the range of 0.9 to 1 implies a very large col-linearity but in this study the result indicates that range between 0.608 to 0.797 which is workable col-linearity, so the Multi col-linearity problem doesn’t exist in this study. The multi co-linearity test indicated that Variance Inflation Factor (VIF) value above 10 and a tolerance (1/VIF) value below 0.10 pose a Multi col-linearity problem. According to the result of table 4.16 below indicates that Tolerance Value ranges from 0.255 to 0.462 which is greater than 10%, VIF value ranges within the value of 2.166 to 3.914 which is less than 10. In this study, the values of both VIF and tolerance level shows that in this analysis, there is no serious multi col-linearity problem.

Table 4.16 shows Collinearity statistics

Model		Collinearity statistics	
		Tolerance	VIF
1	Constant		
	Supplier selection	.329	3.038
	External environment	.462	2.166
	Company policy and procedure	.417	2.399
	Procurement practice	.255	3.914
a dependant variable: supply chain management performance			

Source: Survey Result, 2023

4.5.4 Normality assumption

Variables of normal distributions are assumed in multiple regression models. This means that errors are typically distributed, and a plot of residual values will look like a regular curve. In this study to test its normality the researcher was applied the two common approaches for verifying the normality assumptions such as; histogram (with overlay normal curve) and a Normal P-P Plot. The histogram generated below was normal, and the P-P plot below followed the diagonal reference line, meaning that the following values were normal.

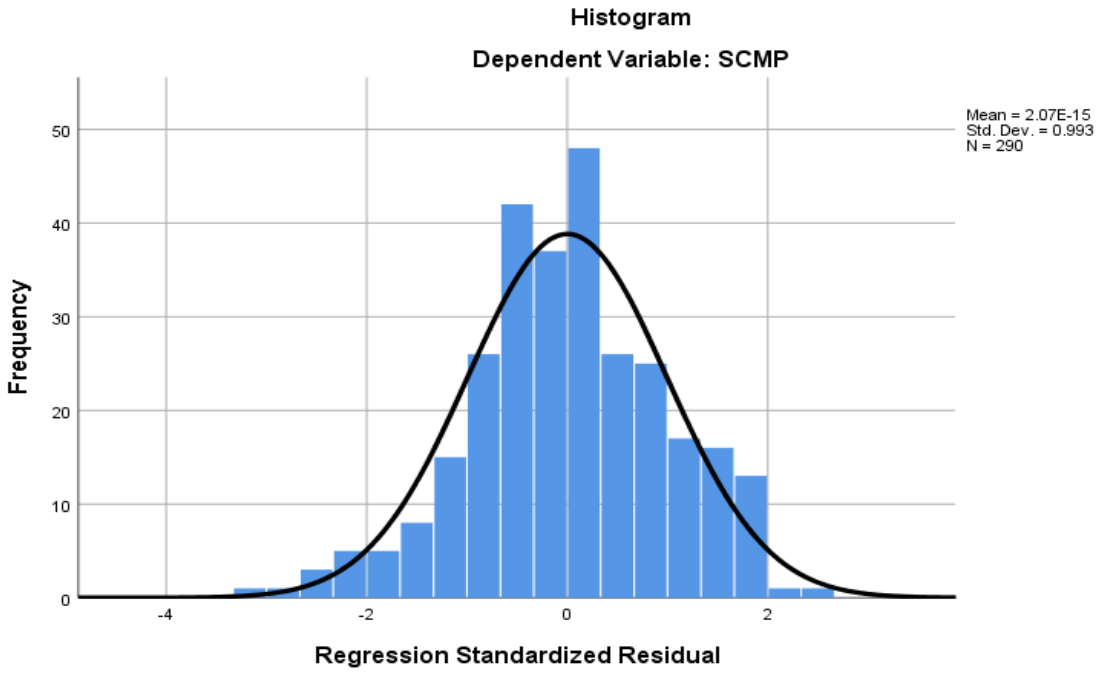


Figure 4.3 **Normality assumption**

4.5.5 Linearity Assumption

The degree to which changes in the dependent variable are related to changes in the independent variables is referred to as linearity. Scatter plots of the regression residuals for each model using SPSS version 26 software were used to decide whether the relationship between the dependent variables and the independent variables are linear. The plot indicates that the points fall very close to the normal line As the result shows that the linearity assumption not violated as it is seen in the figure below.

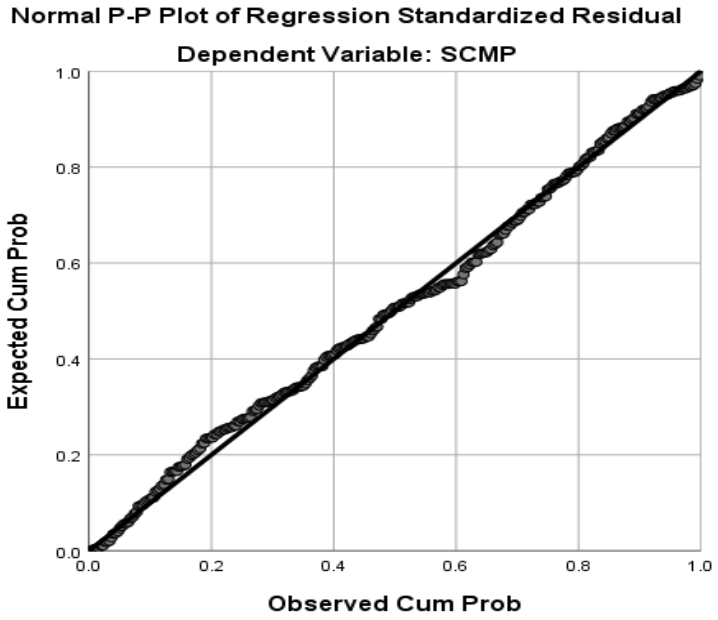


Figure 4.4 Normal P-Plot of regression standardized residuals

4.5.6 Multiple regression analysis

According to Akinkunmi, W. B. (2019), multiple regression analysis is a technique that allows additional factors to enter the analysis separately so that the effect of each can be estimated. It is valuable for quantifying the impact of various concurrent influences upon a single dependent variable. Further, because of omitted variables bias with simple regression, multiple regression analysis is often essential even when the investigator is only interested in the effects of one of the independent variables. The attractive statistical properties of regression all concern the relationship between the probability distribution of the parameter estimates and the true values of those parameters. Each parameter estimate that an estimator produces, as noted, can be viewed as a random variable drawn from some probability distribution is equal to the true value of the parameter that we are trying to estimate, then the estimator is unbiased.

The multiple regression analysis was conducted by using the regular regression method. It is conducted to investigate the influence of independent variable on the dependent variable and identify the relative significant influence; i.e., independent variables (supplier selection practice, external environment,

company policy and procedure, procurement activity) on the dependent variable; supply chain management performance.

4.5.6.1 Assumptions of Multiple regression analysis

4.5.6.2 Preliminary Test

Testing of assumptions is an important task for the researcher utilizing multiple regressions or indeed any statistical technique. Serious assumption violations can result in biased estimates of relationships, over or under-confident estimates of the precision of regression coefficients (i.e., biased standard errors), and untrustworthy confidence intervals and significance tests (Chatterjee & Hadi, 2012; Cohen, Cohen, West, & Aiken, 2003). In this study a preliminary analysis was performed to validate the assumptions of regressions such as multi-col-linearity, linearity, normality, before using regression analysis to test the study hypothesis.

In this case the results of R square can explain the variance contribution on the dependent variable In order to obtain the variance result the researcher multiply R square with 100, then the outcome obtained in percentage (Pallant, 2007)

4.5.6.1 Model Summary

Table 4.17 Model Summary

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.847[a]	.763	.759	0.237	1.720
a predictors:(constant) supplier selection, external environment,company policy and procedure b supply chain management performance					

Source: Survey Result, 2024

The "R" column represents the value of R, the multiple correlation coefficients, as seen in the previous model summary of the above table with R value of 0.847, as the out come implies that there is very strong correlation between supply chain management performance and the four independent variables,The larger its value is the stronger the relationship in addition to this as the results indicating that both the dependent and independent variables have a high level of predictability.

According to the out come as shown in the "R Square" column, the R2 value (also known as the coefficient of determination) indicates the proportion of variance in the dependent variable that can be explained by

the independent variables. As the result shown in the table, the R2 value of .763 suggests that the predictor variable account for 76.3 % of the variation in the company supply chain management performance. Basically this is an acceptable result as according to (Pallant, 2007). And the adjusted R square 0.759 indicates 75.9% of the variance in supply chain management performance is attributed by the 4 independent variables entered into the regression and the remaining 24.1 % of variance in the supply chain management performance may be explained by other factors.

4.5.6.2 ANOVA Test results

Table 4.18 ANOVA Model Test results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	309.71	4	77.428	229.412	.000[b]
	Residual	96.2	285	0.3375		
	Total	405.91	289			

A. predictors:(constant) supplier selection, external environment,company policy and procedure, procurement practice

B. supply chain management performance

Source: Survey Result, 2023

In regression analysis the variance arises from two sources; from the regression itself and from variance unaccounted for after the regression analysis. The total sum of squares (405.91) is the sum of squared deviations about the regression line. It is the sum of both regression sum of squares (309.71) and the residual sum of squares (96.2). Degree of freedom is a concept associated with the number of variables and the number of subjects, in this study examine factors affecting the supply chain management performance has a total 5 dimensions of variable, one dependent and 4 predictor variables. The regression degree of freedom (4) equals total number of variables minus one (5-1). The residual degree of freedom (285) equals the number of subjects (289) minus the total number of variables minus one (285=289-5-1). The mean square terms of regression (77.428) and residual (0.3375) represent variances.

The F-ratio (229.412) which is the ratio of the mean square regression to the mean square residual and it is used to determine whether the variance due to regression is enough greater than the variance due to residual to make the model significant or viable. The last column in the table shows the probability of the divided F-ratio is significant, whether the p value is less than 0.05, in the analysis of variance, a significant model is confirmed. In this study, as table 4.18 shows that the p value is .000 this p value is

very small that is less than 0.05.The result explains that researcher‘s model touched statistical significance (Pallant, 2007). So, this model is confirmed to be achievable or significant.

4.6 Regression Coefficients

Table 4.19 Regression Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.302	.290		4.486	.000
	Supplier selection practice	0.138	0.045	0.128	3.042	.003
	External environment	0.093	0.039	0.085	2.384	.019
	Company policy and procedure	0.602	0.043	0.609	14.028	.000
	Procurement practice	0.376	0.037	0.347	10.208	.000
a Dependent Variable: scmp						

Source: Survey 2024

4.6.1 Standardized coefficients

The standardized coefficients is used to compare the effects of different independent variables on the dependent variable. Company policy and procedure (.609), followed by procurement practice with standardized coefficient of (.347), as shown in regression coefficients table 4.19 Supplier selection practice has the third highest standardized coefficient independent variable which is 0.128. According to the results as shown in the above regression coefficients table the final lowest scored independent variables is external environment with standardized coefficients of (0.085).

The predictor variables of company policy and procedure, procurement practice,supplier selection practice and external environment are statistically and significantly predicting the supply chain management performance of the organization respectively .As the results shown in the above regression coefficient table all independent variables which their p-values are smaller than the 0.05 alpha levels accepted.

4.6.2 Unstandardized coefficients

The unstandardized coefficient is the change in the dependent variable caused by a unit change in the independent variable. However, they are not similar in terms of impact on the dependent variable. As indicated in chapter three, the research used the following multiple regression model to establish the statistical significance of the independent variables on the dependent variable.

$Y = \alpha + \beta 1X1 + \beta 2X\ 2 + \beta 3X3 + \beta 4X\ 4 + \varepsilon$

Where; Y = (supply Chain management performance)

α = constant

β= (beta value) slop coefficient of the model of reintegration

X1 = supplier selection practice

X2 = external environment

X3 = company policy and procedure

X4 = procurement practice

E = Error term

In the model, α = constant , β1 to β4 =The mean change in the dependent variable for one unit of change in the independent variable while retaining other constants is represented by regression coefficients. The model's independent variables are stable and ε = error term that captures the model's unknown variance.

$Y = \alpha + \beta 1X1 + \beta 2X\ 2 + \beta 3X3 + \beta 4X\ 4 + \varepsilon$

$Y = (1.302) + .138X1 + .093X2 + .602X3 + .376X4 + \varepsilon i.$

The constant value (α= 1.302) indicates that if all other variables in the model were zero, the organizational performance would equal 1.302. Similarly, A beta value of .602 shows that a unit change of a company policy and procedure the supply chain management performance of the organization increase by .602. (60.2%) And followed A beta value of .376 shows that a unit change in Procurement practice the supply chain management performance of the organization increase by .376 (37.6%).

a beta value of .138 suggests that a single change in supplier selection practice results in a change in organization's supply chain management performance by .138 (13.8%). and the last beta coefficient of 0.093 indicates that a unit change in external supply chain management performance of the organization decreased by 0.093 (9.3%).Depending on the regression coefficients all independent variables are predictive of organization's supply chain management performance.

So the predictor variables as indicated by their P-values less than the alpha level (P<0.05), have significant impact on the supply chain management performance.

4.7 Hypothesis Testing

Hypothesis testing is the method of testing whether claims or hypotheses regarding a population are likely to be true. The goal of hypothesis testing is to determine the likelihood that a population parameter, such as the mean, is likely to be true. Here there are two hypotheses: null (H0), and alternative (Ha). The null hypothesis (H0), stated as the null, is a statement about a population parameter, such as the population mean, that is assumed to be true. The null hypothesis is a starting point. The researcher tests whether the value stated in the null hypothesis is likely to be true. The only reason of testing the null hypothesis is that the researcher thinks that it is wrong. An alternative hypothesis (Ha) is a statement that directly contradicts a null hypothesis by stating that the actual value of a population parameter is less than, greater than, or not equal to the value stated in the null hypothesis.

The significance (sig.) value expresses a value to accept or reject the (null) hypotheses. It is also called the p-value. The p-value is the probability that the correlation is one just by chance. Therefore, the smaller the p-value, the better will be. The general rule is: reject H0 if $p < .05$ and accept H0 if $p \geq .05$ (Pallant, 2007).

In this section, proof of the null hypothesis is made based on Table 4.19 above for the variables supplier selection practice, external environment, internal policy and procedure and procurement practice either to accept or reject. Because, to test the research hypotheses already set in chapter 1, it is possible to find out if the independent variables are significant predictors of the dependent variables. For these test of relationships and in that way our hypotheses, the regression analysis was applied for this thesis.

4.7.1 Hypothesis 1

Ha1: supplier selection practice has significant effect on the supply chain management performance of the company.

Ho1: supplier selection practice has no significant effect on the supply chain management performance of the company.

As it is indicated in table 4.19, the p value is less than 0.05 (at p= 0.003), the value is highly significant. Thus, we reject the null hypothesis (Ho1) and, accept the alternative hypothesis (Ha1).Hence, the null hypothesis is rejected. This implies that supplier selection practice has a significant effect on the supply chain management performance of the company.

4.7.2 Hypothesis 2

Ha2: external environment has significant effect on the supply chain management performance of the company.

Ho2: external environment has no significant effect on the supply chain management performance of the company.

Reject the null hypothesis if p- value is < 0.05. As it is indicated in table 4.19, the p value is less than 0.05 (at p= .019), the value is highly significant. Thus, we reject the null hypothesis (Ho2) and, instead, accept the alternative hypothesis (Ha2) that says external environment has significant effect on the supply chain management performance of the company. Hence, the null hypothesis is rejected. This implies that external environment has significant effect on the supply chain management performance of the company.

4.7.3 Hypothesis 3

Ha3: internal policy and procedure has significant effect on the supply chain management performance of the company.

Ho3: internal policy and procedure has no significant effect on the supply chain management performance of the company.

Reject the null hypothesis if p- value is < 0.05. As it is indicated in table 4.19, above the p value is less than 0.05 (at p= .000), the value is highly significant. Thus, we reject the null hypothesis (Ho3) and, instead, accept the alternative hypothesis (Ha3) internal policy and procedure has significant effect on the supply chain management performance of the company.

Hence, the null hypothesis is rejected. internal policy and procedure has significant effect on the supply chain management performance in the study area.

4.7.3 Hypothesis 4

Ha4: procurement practice has significant effect on the supply chain management performance in the company.

Ho4: procurement practice has no significant effect on the supply chain management performance in the company.

Reject the null hypothesis if p- value is < 0.05. As it is indicated in table 4.19, the p value is less than 0.05 (at p= .000), the value is highly significant. Thus, we reject the null hypothesis (Ho4) and, instead, accept the alternative hypothesis (Ha4) it shows procurement practice has significant effect on the supply chain management performance in the company. P-value is 0.000 that is absolutely less the cut-off point 0.05. Hence, the null hypothesis is rejected; this implies that procurement practice has significant effect on the supply chain management performance in the study area.

Table 4.20 Summary of hypothesis testing

No	Variables	Tool	Result
1	Supplier selection practice no significant effect on the supply chain management performance of the company.	Regression	Rejected
2	External environment no significant effect on the supply chain management performance of the company.	Regression	Rejected
3	Internal policy has no significant effect on the supply chain management performance of the company.	Regression	Rejected
4	Procurement practice has no significant effect on the supply chain management performance of the company.	Regression	Rejected

Source: survey result 2024

4.7 Results of interview questions

It's not secret that supply chain management has paved an effective way for timely deliveries, improved financial performances, greater customer satisfaction, building trust among suppliers etc, all of which improve organizational performance in the long run. But as much as a supply chain helps in achieving a positive result for our business, it is important to work on the factors that can direct your company's results in other ways than usual. The researcher approached higher level mangers purposefully to obtain the detailed response about the current challenges face in the company that affect the supply chain management performance. The researcher obtains common responses on the most issues that affect the SCMP of the company. The following illustration is drawn from the respondent's rationalization.

According to the response obtained from all the selected respondents there are so many factors have the tendency to affect the supply chain management performance.For instance, warehouse management, coast management, quality, low employee salary, government policy, customer satisfaction, supply chain structure, inventory control policy, information sharing, customer demand, forecasting method, lead time and review period length, insecurity, shortage of foreign exchange for import of capital goods and inputs, shortage of infrastructure such as frequent power interruption, water and road, Fierce competition from China, India, middle east and western countries, Low productivity, quality and technology compared to international standard, Low production efficiency and high cost etc. The response implies that the company has faced serious of factors affecting the SCMP and it is challenging to the company to achieve the competitive advantage in the international market.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this chapter is to discuss and draw conclusions and recommendations on the findings of the main objective of the study which was to examine the factors affecting supply chain management performance of indochine apparel manufacturing plc based on the specific objectives and answers to research questions. The variables under consideration through the study were procurement activities, supplier selection practice, internal policy and procedure and external environment and describing about the indicator of supply chain management performance (quality, cost , time and productivity).

5.2 Summary of Findings

The study was carried out to examine factors affecting supply chain performance of indochine apparel manufacturing plc. The study was guided by four basic objectives as follows; how procurement activities influence the performance of the organizations supply chain, how supplier selection practice in the organization affects SCM performance, how internal policy and procedure of the company affects supply chain performance and how external environment affects the performance of supply chain management. The study adopted a descriptive research design this study relied on primary and secondary data as the preferred source of research data and was collected through questionnaires,interview and from office manual. Collected data was coded before entry into Statistical Package for the Social Sciences (SPSS version 26) for analysis. Descriptive statistics was computed where by frequencies, percentages, means and standard deviations and presented in the form of both tables and figures.

The finding shows that internal policy and procedure has greater influence on organizations supply chain management performance with the mean score of 2.82 this shows due to this factor and from the result that analyzed SCM performance of the organization is highly affected and hindered by internal company policies and its components like staff training and development, workforce has a good Sentiment towards Policy and procedures, internal procurement policy,Quality culture. The results are in agreement with findings of Matook et al. (2015) the operational success of organizations policies will often depend on the development of a network of reliable and trustworthy suppliers and consequently, making the right supplier selection decisions are important.

In the second place the study shows that procurement activities and its components are affect the supply chain management performance of the organizations in the average men score of 2.74. This

implies that procurement activities need to be improved, Procurement function has been one of the vital departments in any organization. It contributes tremendously to the organizational efficiency and effectiveness when a procurement department is inefficient in its procurement activities it affects all the other departments and it has a great impact on the organization‟s Supply Chain management performance next to company policy and procedure. This finding is in line with Moncska et al (2016) who held that the procurement function has a significant impact on SC performance.because it is necessary to improve supply chain management performance, quality of products, improved ability to meet demand, leads to reduced costs improved ability to meet demand and helps in customer satisfaction and confidence.

In the third place the study shows that external environment affect the supply chain management performance with the average mean score of 2.69. this shows due to this factor and from the result obtained SCM performance of the organization affected and hindered by external environment and its components like market price fluctuation, absence of good infrastructure, absence of security and unstable business environment this goes in lines with (Chakravarty, 2011)the existence of a well-developed road infrastructure facilitate and logistical operations, while a poor road network tends to disrupt and slow down the SCM activities.

Finally supplier selection practice influence the organizations supply chain management performance (mean 2.65) and this shows suppliers have to be selected carefully, as they can have a very positive or a very adverse impact on the overall performance of the organization . Selection of appropriate suppliers is one of the fundamental strategies for enhancing the quality of output of any organization, which has direct influence on the company reputation since they can have a very positive or a very adverse impact on the overall performance of the organization.Since the overall objective of supplier selection is to have a risk reduction in purchasing,maximizing total purchase value, and building long-term relationships between buyers and suppliers. Effective supplier selection decisions require good processes to evaluate many factors related to how to find the supplier locations that align best with future plans.

The composite mean scores of the scales of the dimensions, namely quality, cost, productivity and time indicators,based on the findings of the study a very low efforts have been exerted by company to enhance their performance. The company has low supply chain management performance . Looking at the bi variate correlation of the four independent variables, there is evidently significant multicollinearity and very strong relationships between variables. In this research the correlation coefficients were in the range of .608 to 0.797 between four supply chain performance determinant

elements. This reflects, The variables have strong and significant positive relationship to affect the supply chain performance of the company.

Model summary of the multiple regression analysis in this thesis has an important contribution to analysis the relationship between independent and dependent variables. In this case the results of R square can explain the variance contribution on the dependent variable. This study model had a very strong coefficient of determination R-square=0.763 which means about 76.3% of the variation in supply chain performance is explained by the model.

According to the response obtained from all the selected respondents there are so many factors currently challenge the supply chain management performance. For instance, warehouse management, coast management, quality, low employee salary, government policy, customer satisfaction, supply chain structure, inventory control policy, information sharing,

The response implies that the company has faced serious of factors affecting the SCMP and it is challenging to the company to achieve the competitive advantage in the international market.

5.3 Conclusion

Using mean score methods of interpreting data that collected from respondents the study established that company policy and procedure, procurement practice of the organization affects supply chain management performance at higher level so the company needs a critical assessment in those areas. Adoption of formalized and systematic supplier selection strategies has played a critical role and has become an important enabler to improve organizations supply chain performance thus suppliers have to be selected carefully, as they can have a negative or a very adverse impact on the overall performance of the organization.

The study also established that procurement activities (absence of appropriate procurement plan,lack of mutual understanding and absence of clear specification, technical support and proper approval),and internal policy related to procurement, training and development, quality culture and Organizations ability to enhance internal processes by ensuring flexible enough to respond to market changes facilitated the adoption of supply chain performance .

These results are in line with Lambert and Cooper (2015) who state that, in order for firms to obtain superior supply chain management performance, it must be able to enhance its internal firm processes by making sure that they are flexible enough to respond to market changes. finally external environment those assessed in the study affects and have negative impact on the organizations supply chain performance and preventing the organization to achieve timeliness, decreased

efficiency,increased the risk of the firm`s ability to match demand and supply and lead to lack of reliability from donors, and beneficiaries whom the organization serves.

The study findings have suggested that the levels of supply chain management performance is low. The four key performance indicators as the perceived evaluation of the respondents show that there is low performance of supply chain management performance. They have the potential to affect the organization performance and competitive advantage. The company requires to focus on those supply chain management performance based on the four key performance indicators. Make the necessary actions strategically in order to benefit from the performance improvements through the achievement of minimum total supply chain cost, improved quality, improved response and cycle time and improved efficiency or productivity.

5.4 Recommendation

Based on the findings of the study, the following recommendations are proposed: supply chain management performance have led to increase in costs to the organization due to inefficiency and that more focus needs to improve supply chain management performance and the management of the organization remains committed to offer appropriate support for supply chain department. Management of the external environment and selection of appropriate suppliers are the fundamental strategies for enhancing the quality of output of any organization, which has a direct influence on the company"s reputation. Therefore during the supplier selection process, the managers should take into consideration strategic and operational factors as well as tangible and intangible factors which may enhance the performance of the organization and the criterion to use in selecting suppliers has to be examined extensively.

The recommendations given by the researcher to boost the supply chain management performance of the company are as follows.

- Management of the procurement and supplies process should be administered by qualified, competent and experienced procurement professionals. This will not only help maintain good procurement standards but also will help achieve high levels of efficiency and effectiveness.
- Provide frequent training to the employee on the best practices of supply chain management, it is regarded as a means of engaging the commitment of the employees to the organization,
- The company should follow flexible procurement policy related to market fluctuation this reduces the time it takes for procurement process to be completed and timely delivery of the requirements for user departments.

- The organization should make sure that supply chain department is staffed with qualified people and in the right numbers, to ensure that work assignment is manageable and supply chain management performance is improved.
- Staff skills and backgrounds should be systematically assessed before placement in the supply chain management function.
- It is advisable to the company give special emphasis in the improvement of Supply chain management performance in line with its corporate and functional strategies and objectives in order to operate according to international best practices and consistently offering quality products at affordable prices to the community.
- Quality should be the working culture of the organization since the company is computing in the international market.
- The study advocated that a lot of emphasis need to be directed to SCMP measurement based on key performance indicators and the company should maintain the effort made on productivity in enhancing performance of their organization which is still need to be improved and also the company managers should know the level of efficiency in the industry and makes sufficient amount of effort in utilizing of key performance indicators to measure SCMP by placing efficiency(performance) level targets.
- The study advocated that a lot of emphasis need to be directed to quality and cost indicator in order to achieve significant minimization total supply chain cost and improved quality. Since the company is participating in the competitive market they should assure quality aspects through each and every activities of the SC like placing products in their designated place, picking or loading accurately and reducing risk.
- The company should exert a tangible effort in reducing total cost (carrying or holding cost) includes cost of product damage, cost of obsolescence, rental costs, insurance costs etc.
- The company certify their production to the relevant standards of their target markets. To support these changes key regulations must be adjusted so as to streamline the sector's functioning. The enabling environment objectives that has to be performed with the collaboration of textile industries and stakeholders should increase the capacity of the customs service to regulate imports and exports of textile products, improve the efficiency and cost competitiveness of transportation and logistics.
- Finally even though these are the major issues where each one is needed be resolved in order to be efficient, responsive and competitive in the market; These issues will be resolved if the company adopt the appropriate supply chain strategy according to their size, operational needs and customer focus. The supply chain strategy needs to be according to type of the offerings and the target

customer group. Companies need to work on the zone of strategic fit between their product strategy and their supply chain strategy.

5.5 Area for further Study

It would also be interesting to expand this study to other manufacturing companies, governmental and non-governmental organizations. Since all the factors are not include in this study farther study should be conducted to diagnose all the factors in such kind of organization. Generally there is a need for similar studies to be conducted in the sector to facilitate a better improvement and perception about the factors affecting supply chain management performance.

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APPENDICES

HAWASSA UNIVERSTY

SCHOLL OF MANAGEMENT AND ACCOUNTING

DEPARTMNET OF MARKETING MANAGEMENT (MBA)

Dear Sir/ Madam,

I am a student at Hawassa university school of management and accounting a Master of business administration (MBA) in marketing management. I am undertaking a research project in partial fulfillment of the academic requirements. The objective of this questionnaires is to assess the factors that affect supply chain management performance of indochine apparel manufacturing plc and your response to this questionnaires will serve as a source of information to the researcher which is to be done for the disciplinary research work undertaken at Hawassa university. I would appreciate it if you just spare a few minutes of time to complete the questionnaire. your response is anonymous and will form part of analysis that will be treated confidentially. And your honesty in responding the correct answer is very important for the research outcome to be trustworthy. I kindly request your co-operation in responding the following questions for the successful completion of the study. The overall purpose of this questionnaire is exclusively academic. Your response will not be used for any other purpose it is confidential. I thank you in advance for your willingness to participate in filling the questionnaire.

Your assistance and co-operation will be highly appreciated.

General instructions

1. You are not required to write your name.
2. Before attempting to answer the questions, please read the instructions carefully.
3. After that read each question which requires responses from you and give your answer according to the instruction provided.

N.B. If you have any additional comments,clarifications,information and suggestion you can contact the researcher in the following addresses.

Name: Mengistu Alem **Mobile**: 0991329098 **E-mail**: mengistualem2021@gmail.com

APPENDIX A

PART I: Demographic Information

1. Gender

1. Male ( ) 2. Female ( )

2. Age of respondent

1. below 18 2. 18-27 3. 28- 40 4. 41-55 5. 56 above

3. Educational level?

1. Diploma ( ) 2. Degree ( ) 3. Masters ( ) 4. PhD ( ) Other ( )

4. Position in the organization?

1. Director ( ) 2. Manager ( ) 3. coordinator ( ) 4. Officer ( ) 5. Other ( )

5 Year of experience in the organization?

1. 1 year and below ( ) 2. 2-3 ( ) 3. 4-6 ( ) 4. 7 and above ( )

APPENDIX B

Part II: General Questions

Indicate your level of agreement on the statements for each close ended questions by putting "**X**"

Key: 1= strongly disagree, 2= disagree, 3=neutral, 4= agree, and 5= strongly agree.

No		1	2	3	4	5
	A: Supplier Selection					
1	The company follow planned and critically assessed supplier selection practice.					
2	Your company select trustworthy and competent supplier to improve the supply chain management performance.					
3	Supplier Geographical location from the organization affects the supply chain management performance.					
4	Training aid and repair service availability after sale could be one of the criteria to select suppliers in your company.					
5	The supplier are meet quality product and services on just in time delivery.					
	B: External Environment					
1	Your company manage the market price fluctuation					

2	The company use advanced technology to crate smooth supply chain management.					
3	Absence of good infrastructure affect the supply chain management performance of the company.					
4	your company supply chain management performance dose not affected by insecurity problem.					
5	Your company business environment is conducive to achieve good supply chain management performance					
	C: Internal Policy and Procedure					
1	your company provide frequent staff training and development to improves supply chain management performance.					
2	The organization workforce has a good Sentiment towards Policy and procedures.					
3	The organization's internal procurement policy by itself improve the quality of service being delivered.					
4	Quality is the working culture of the company to enhance the supply chain management performance					
5	The organization Policy and procedure have a detrimental effect on supply chain management performance.					
	D: Procurement Activities					
1	Your company follow appropriate procurement plan which match with the existing budget.					
2	There is mutual understanding of the requesting entity and the procurement unit to provide a better service that should be delivered.					
3	The company have established procedures for managing procurement risks, such as supply chain disruptions.					
4	Your company have a clear specification of technical support and proper approval to facilitate the entire procurement process					
5	The company have a competitive pricing strategy to buy their products.					

APPENDIX C

Questions for the measurements (key detectors) of supply chain management performance.

Key: 1= strongly disagree, 2= disagree, 3=neutral, 4= agree, and 5= strongly agree.

No	Quality	1	2	3	4	5
1	Your company rate the average percentage of the defects and scrap in the production process					
2	The company measures order fill rates to determine how effective a distributing facility is in satisfying customer orders					
3	Your company measures the accuracy of shipments in terms of the products and quantities shipped					
4	In your warehouse, items are placed in the correct location					
	Cost					
1	Total supply cost is measured per purchase order executed, during a defined period of time					
2	Your company is successful in minimizing total carrying/holding cost?					
3	Your company measures all transportation costs					
4	Your company rates the ratio of all transportation costs to the value of the products					
	Time					
1	your company rate measures to reduce manufacturing lead time					
2	The company measures order entry time					
3	Warehouse personnel serve your customer on the reasonable time					
4	Your company rates all orders delivered by the requested					

	delivery date,i.e there is a proper monitoring of supplier response time on shipments over a specified period of time					
	Productivity					
1	Your company rate the productivity of the workforce					
2	Your company measure its machine utilization rate					
3	Your company measure its labor utilization rate					
4	Your company measures the ability of the supplier to fill purchase orders correctly					

Part III: Interview questions.

1. What are the challenges currently face in the company that affect the supply chain management performance?

APPENDIX E

Reliability Statistics

Variables	No of Items	Cronbach's Alpha
Supplier Selection	5	0.865
External Environment	5	0.838
Internal policy and procedure	5	0.894
Procurement Activities	5	0.877
Quality	4	0.812
Cost	4	0.791
Time	4	0.762
Productivity	4	0.712

Table 4.15 Result of Correlation analysis between variables

Correlations					
		Supplier Selection	External Environment	Internal Policy and Procedure	Procurement Activities
Supplier Selection	Pearson Correlation	1	.610**	.708**	.797**
	Sig. (2-tailed)		.000	.000	.000
	N	290	290	290	290
External Environment	Pearson Correlation	.610**	1	.608**	.723**
	Sig. (2-tailed)	.000		.000	.000
	N	290	290	290	290
Internal Policy and	Pearson Correlation	.708**	.608**	1	.725**

Procedure					
	Sig. (2-tailed)	.000	.000		.000
	N	290	290	290	290
Procurement Activities	Pearson Correlation	.797**	.723**	.725**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	290	290	290	290
**Correlation is significant at the 0.01 level (2-tailed).					

Figure 4.3 Histogram of regression standardize residual

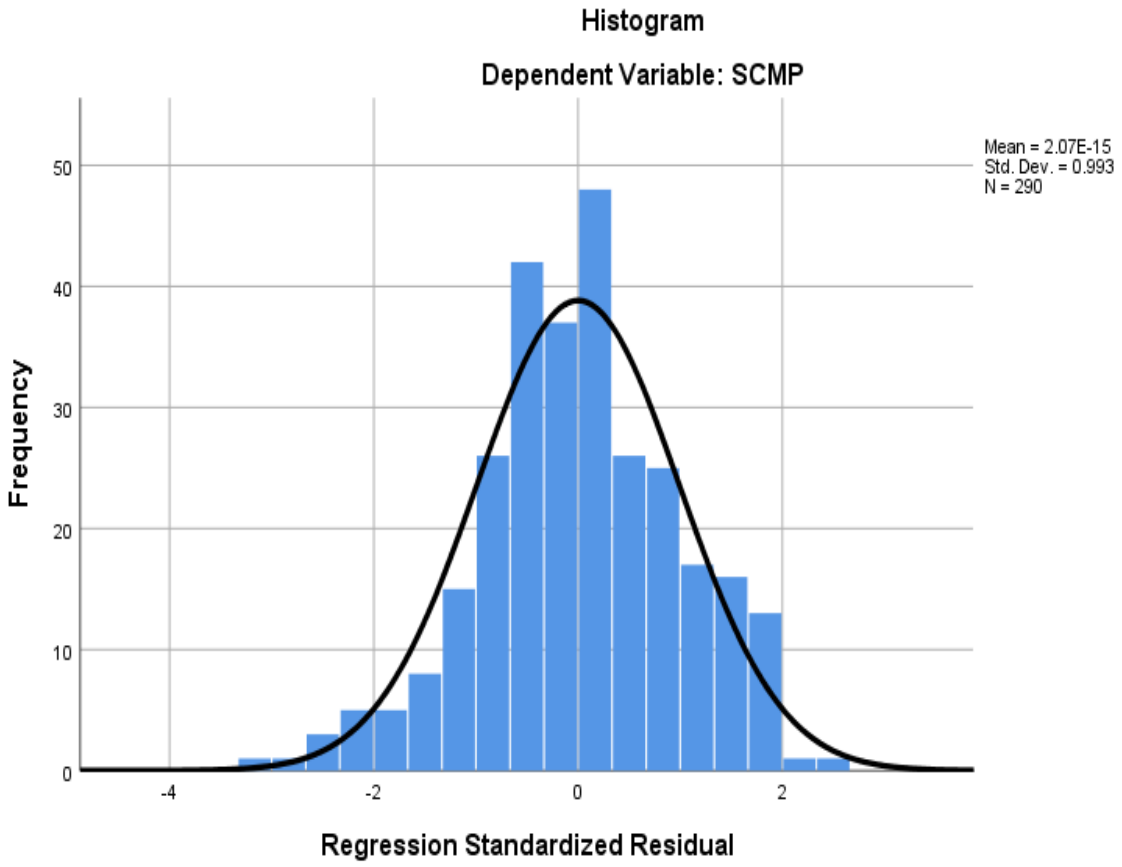
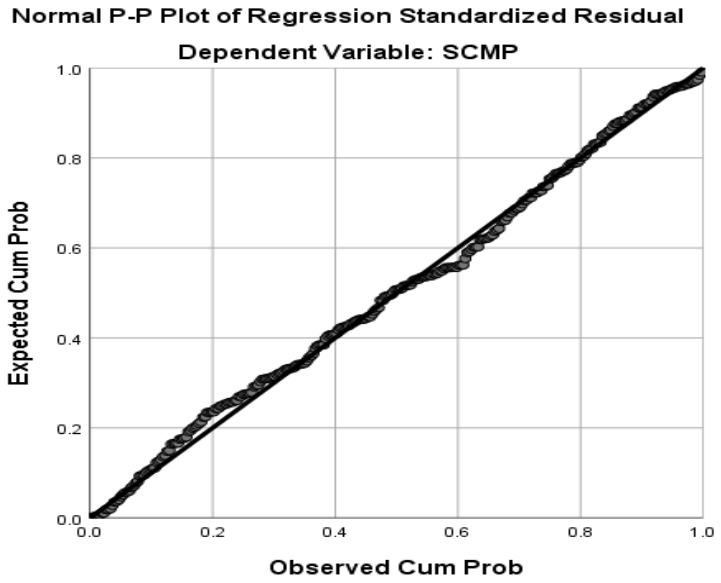


Figure 4.4 Normal P-Plot of regression standardized residuals



Regression Coefficients

Model		Collinearity statistics	
		Tolerance	VIF
1	Constant		
	Supplier selection	.329	3.038
	External environment	.462	2.166
	Company policy and procedure	.417	2.399
	Procurement practice	.255	3.914
a dependant variable: supply chain management performance			

Table 4.17 Model Summary

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.847[a]	.763	.759	0.237	1.720
a predictors:(constant) supplier selection, external environment,company policy and procedure b supply chain management performance					

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	309.71	4	77.428	229.412	.000[b]
	Residual	96.2	285	0.3375		
	Total	405.91	289			

A. predictors:(constant) supplier selection, external environment,company policy and procedure, procurement practice

B. supply chain management performance

Table 4.19 Regression Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.302	.290		4.486	.000
	Supplier selection practice	0.138	0.045	0.128	3.042	.003
	External environment	0.093	0.039	0.085	2.384	.019
	internal policy and procedure	0.602	0.043	0.609	14.028	.000
	Procurement practice	0.376	0.037	0.347	10.208	.000
a Dependent Variable: scmp						