Addis Ababa University

College of Business and Economics

School of Commerce

Department Of Logistics and Supply Chain Management

The Effect of Supply Chain Management Practices on Company Performance. The case of Technostyle PLC.

A Thesis Submitted to School of Graduate Studies for Partial Fulfillment of the Requirements for the Award of Degree of Master in Logistics and Supply Chain Management

By: - Masresha Assefa

Advisor: - Teklegiorgis Assefa (Asst. Prof)

June, 2018

Addis Ababa, Ethiopia

Approved by Board of Examiners:

Advisor	**Signature**	**date**
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Internal Examiner	**Signature**	**date**
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External Examiner	**Signature**	**date**
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DECLARATION

This research under the title "effect of Supply Chain Management practice on Company Performance in the case of Technostyle plc" is my original work and has never been presented in any other University or College for the award of Degree of Masters.

Declared by: - Masresha Assefa Yelma

Signature: _______________ Date: June, 2018

Acknowledgement

First of all, I pay my whole hearted gratitude to the Almighty God and the mother St. Marry for being with me in all endeavors of my life. Without the help of them, I won’t be hear where I am now and obviously this work can’t be accomplished successfully.

After that I would like to extend my heartfelt gratitude to my thesis advisor Teklegiorgis Assefa (Asst. Prof) for his goodwill, support and guidance throughout the research.

Next, I have a great thank to the Technostyle PLC and the employees for their willingness to help me kindly.

Above all, I am greatly indebted to my wife, Agegnehu Desta for her constant support, encouragement and prayers during my study. And I would like to thank Mr. Melku Mengistie for his invaluable advices and helping me in editing work of my project.`

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Acronyms and Abbreviations

CLM - Council of Logistics Management

CP - Company Performance

EFA - Exploratory Factor Analysis

ICT - Information Communication Technology

JIT - Just in Time

OC - Organizational Culture

OMS - Outsourcing and Multi-Suppliers

OP - Organizational Performance

PLC - Private Limited Company

ROI - Return on Investment

SC - Supply Chain

SCLP - Strategic Collaboration and Lean Practices

SCM - Supply Chain Management

SME - Small Manufacturing Enterprises

SPSS - Statistical Package for the Social Sciences

SSP - Strategic Supplier Partnership

TS - Techno-style

Abstract

The purpose of this study is to assess the effect of supply chain management practices on the Company performance. For this study the supply chain management practices; strategic supplier partnership, customer relationship, the level of information sharing, quality of information sharing, and lean practices. The researcher applied a descriptive research type and used a mixed research approach both quantitative and qualitative. The data were collected through a questionnaire by distributing on employees and by conducting a face to face interview with two managers. The researcher followed a census sampling technique to use all the target population of 118. The study showed that, Strategic supplier relationship, the level of information sharing, quality of information sharing and lean practices have medium whereas customer relationship has low relation to company performance with the statistical significant level. And the regression result shows that, strategic supplier relationship and lean practices have a positive and medium effect, the level of information sharing and quality of information sharing have positive and low effect, customer relationship has negative effect on Company performance. The study is limited on one furniture supplier company and on some issues of supply chain management practices and Company performance. Therefore, those above limitations are important for future studies. So, in the future, researchers may focus on the other aspects of this study and could stretch its scope as a country level regarding on furniture and foam factories

Keywords: supply chain management, strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, lean practices, and company performance

CHAPTER ONE: INTRODUCTION

1.1. Background of the study

Over the years, the nature of competition has changed to the extent that companies no longer compete against other companies on the bases of quality as traditionally practiced in the 1980s Fawcett et al. (2007).

However, the new source of competition lies outside the walls of organizations, and is determined by how effectively companies link their operations with their Supply Chain partners such as suppliers, distributors, wholesalers, retailers and end customers Mamun (2011).

A Supply Chain (SC) can be described as a network linking various entities, from the customer to the supplier, through manufacturing and services, so that the flow of materials, money and information can be effectively managed to meet the business requirements Zigiaris (2000).

SCM assists the business organization to compete in the dynamic international market. The objective of SCM is to incorporate activities across and within organizations for providing the customer value. SCM is needed for various reasons: improving operations, better outsourcing, increasing profits, enhancing customer satisfaction, generating quality outcomes, tackling competitive pressures, increasing globalization, increasing importance of E-commerce, and growing complexity of supply chains Mamun (2011).

Therefore, supply chain management is considered as a strategic factor for the better attainment of company goals such as enhanced competitiveness, improved customer service and increased profitability.

Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Yamin et al. (1999); Mustefa (2014).) The short-term objectives of SCM are primarily to enhance production performance, while long-term objectives are to increase market share and profits for all members of the supply chain Tan et al. (1998).

Mustefa (2014) the performance of the company is affected by different factors.

One of the most important factors influencing the performance of the SC is strategic supplier alliances Narahsiman and Jayaram (1998). Effective partnerships with suppliers can be a critical factor to guide supply chain management Li et al. (2006). The other factor is having good relationships with customers, which are needed for successful implementation of SCM programs

Moberg et al. (2002). Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers Magretta (1998).

Furthermore, Wang et al. (2008) stated that integration and coordination across the supply chain can be well provided through information sharing. Supply chain partners that exchange information regularly are effectively doing their day to day activities. They are better able to understand the needs of the final consumer and hence are able to respond quickly to changing market Li et al. (2006). Lean production is a production system that aims to optimize the production process by reducing waste and other inefficient factors.

This study has assessed the impact of supply chain management practices on the company performance in the case Company.

1.2. Statement of the problem

Christopher (1998) found out that current businesses no longer compete as solely autonomous entities, but rather as supply chain. Many organizations have begun to recognize that SCM is the key to building sustainable competitive edge for their products and/or services in an increasingly crowded marketplace and enhancing organizational and overall supply chain performance Li et al. (2006). Therefore, a well-designed supply chain management increases the competitive advantages for any of the business company.

SCM practices are expected to increase an organization's market share, return on investment and improve overall competitive positions. For instance, Tan et al. (1998) asserted that customer relations and purchasing practices impact the effectiveness of SCM strategy and lead to financial and market performance. Froehlich and Westbrook (2001) on the other hand suggested that companies with broader supply chain integrations with suppliers and customers showed the largest performance improvement in business achievements. However, in our country the trend of SC practice is may not be developed.

Due to the observation the case company's mission says that "strive to work hard to supply quality products at affordable prices for its customers' satisfaction through optimizing its entire value chain and by building long term relationships with its suppliers." However, in the recent times the company faced an interruption of raw materials because of the suppliers' low potential to supply enough amounts on time. Such weaknesses may have an effect on the company's performance.

Based on the above reviewed literatures and observation the researcher intended to assess the effect of supply chain management practices on the performance of Technostyle PLC.

1.3. *Research questions*

1. How does Technostyle Company practice the Supply chain management?
2. What is the effect of supply chain management practices on the company performance?
3. What are the difficulties to improve the Company's SCM practices in the case company?

1.4. Objectives of the Study

1.4.1. General Objective

The general objective of the study is to assess the effect of supply chain management practices on the Company performance in Technostyle PLC.

1.4.2. Specific Objectives

The specific objectives of the study are:-

- To investigate the current supply chain management practices of the case company.
- To assess the effect of supply chain management practices on the Company performance.
- To identify the difficulties to improve the Company's SCM practices.

1.5. *Significance of the Study*

As different literatures point out, the supply chain management concept and strategy have a significant role for any manufacturing company, provided that companies implement the supply chain management successfully. Effective and efficient supply chain management creates value to supply chain actors and enables companies to maintain or gain competitive advantages over their competitors.

Therefore, conducting research on supply chain management practices and identifying gaps enabled the company to plan improvement actions and to fill their gaps. The finding also gives an importance to other supply chain partners in the chain of the case company to scrutinize their own supply chain operational performance excellence.

The academic community benefits from the results of the study as a reference point on empirical data pertaining to SCM practices.

And other researchers can also use the scope limitation of this study for further studies on the different aspects of the supply chain management activities which have not been addressed in this study.

1.6. *Scope of the study*

Supply chain management encompasses vast areas of managerial practices. It is difficult and unmanageable to conduct the study in all areas of the SCM. Therefore, in terms of topic, the scope of this study is limited to some dimensions of SCM practices and company's performance indicators. The dimensions of the SCM practices constructed for this study are a strategic supplier partnership, customer relationship, the level of information sharing, quality of information sharing and internal lean practice. And the geographic scope of this study is limited to one selected company which is located in Legetafo Town, North East in Addis Ababa.

1.7. ***Limitation of the study***

The sample of the population is taken from this company and the respondents are taken purposely from designing and prototype, procurement, warehouse, workshop centers, marketing and sales, and finance because workers in those areas are assumed as having better knowledge of SCM activities. This limitation has to be considered to achieve the objective of the study.

1.8. *Definition of key terms*

Supply chain: -is a network linking various entities, from the customer to the supplier, through manufacturing and services, so that the flow of materials, money and information can be effectively managed to meet the business requirements Zigiaris (2000).

Supply chain management is a strategic factor for the better attainment of company goals such as enhanced competitiveness, improved customer service and increased profitability Mamun (2011).

SCM practices: - are a set of activities undertaken in an organization to promote effective management of its supply chain Li et al. (2006).

Strategic supplier relationship: - refers the long-term relationship between the organization and its suppliers for mutual benefits to resolve problem, eliminate useless time and effort Li et al. (2006).

Customer relationship: -The entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction Tan et al. (1998); Li et al. (2006).

Level of information sharing: -refers to the extent to which critical and proprietary information is communicated to one's supply chain partner Li et al. (2006).

Quality of information sharing: -refers to the sharing of Information among members of the SC from reliable source and updated, accurate, timely and credible exchange Li et al. (2006).

Lean practice: - It is the process of removing all of the wasted time and resources in the production process Dennis (2007).

Company performance: - Company performance refers to how well an organization fulfilled its market and financial goals Yamin et al. (1999)

The case company: -Technostyle private limited company.

1.9. *Structure of the thesis*

The final paper has five chapters: Chapter one contained background of the study, a statement of the problem, basic research questions, objective of the study, the significance of the study, delimitation/scope of the study, limitation of the study, and definition of key terms. The second chapter deals with the literatures relevant to the study and conceptual framework adapted from previous studies. Under the third chapter, description of the study area, research approach, research design, population of the study, sampling technique, the sources of data and data collection instruments, the data analysis methods, measurement of variables, validity and reliability, and ethicality are discussed. Chapter four contained the analysis, the results, and discussion of the findings. Final chapter five comprised four sections, which includes a summary of findings, conclusions, recommendations and suggestions for future study.

CHAPTER TWO: LITERATURE REVIEW

The researcher referred theoretical and empirical literatures for the purpose of associating theories with the research questions, to provide readers with an understanding of the theoretical domain and to develop a framework for analysis. The literatures addressed relevant definitions and conceptual issues of supply chain management, SCM practices, and organizational performance and their relations.

2.1. *Theoretical literatures*

2.1.1. Concepts and Definitions of Supply Chain Management

One of the most relevant evolution's of modern business management is that companies compete as networks of partners, rather than as single autonomous companies. Traditionally composed of suppliers, manufacturers, wholesalers, and customers, these partners form a network of relationships that is known as a supply chain. The term supply chain management (SCM) was first used in the 1980s and as such is a relatively new discipline within management theory with tools and concepts still being developed. Supply Chain Management (SCM) was one of the most popular management concepts to impact the business and the logistics concept in the 1990s.

According to Tan *et al.* (2002) in the last few years the concept of SCM has received increasing attention from academicians, consultants, and business managers alike. Furthermore, Li et al. (2006) identify as many organizations have begun to recognize that SCM is the key to building sustainable competitive edge for their products and/or services in an increasingly crowded marketplace. However, the concept of SCM has been considered from different points of view in different bodies of literature such as purchasing and supply management, logistics and transportation, operations management, marketing, organizational theory, and management information systems Croomet al. (2000).

Even though different things contribute to differences in the concepts of SCM, different researchers tried to describe the concepts of SCM as follows. Robinson and Kalakota (2000) view the supply chain quite simply as a “process umbrella” under which products are developed and delivered to customers. As Li et al. (2006) described, SCM is a concept which its goal is to integrate both information and material flows seamlessly across the supply chain as an effective competitive weapon. In addition, according to Arawati (2011), SCM includes managing supply and demand, sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution across all channels, and delivery to the customer.

However, definitions and approaches to SCM vary substantially from organization to organization because it is influenced by many different fields and researchers in the area of SCM.

Council of Logistics Management (CLM) defines SCM as the systemic, strategic coordination of the traditional business functions and tactics across these business functions within a particular organization and across businesses within the supply chain for the purposes of improving the long-term performance of the individual organizations and the supply chain as a whole.

SCM has been defined to explicitly recognize the strategic nature of coordination between trading partners and to explain the dual purpose of SCM: to improve the performance of an individual organization, and to improve the performance of the whole supply chain Li *et al*. (2006).

Supply chain by Christopher (1998) defined as a network of various organizations involved both through upstream and downstream linkages in different kinds of activities and processes.

Meanwhile, Moslem et al. (2013) ‘the task of integrating organizational units along a supply chain and coordinating materials, information and financial flows in order to fulfill (ultimate) customer demands with the aim of improving competitiveness of the supply chain as a whole’.

The upstream parties, as being described by Handfield and Nichols (1999) consists of an organization’s function, processes and network of suppliers while the downstream function on the other hand concerns the distribution channels, processes and functions where the product passes through to the end customer.

Therefore, Supply chain management is a strategic factor for the better attainment of company goals such as enhanced competitiveness, improved customer service and increased profitability Mamun (2011).

Integration of internal process with external supply chain network could be improved through communication, partnerships, alliances and cooperation Tumaini M. K. (2011). The pillars of supply chain integration are cooperation, collaboration, information sharing, trust, partnership, shared technology, and a fundamental shift away from managing individual function processes, to managing an integrated chain of processes.

Tumaini M. K. (2011) also agreed on the efficiency and effectiveness of the supply chain practices among a company. In this case, efficient means to minimize resource use to accomplish specific outcomes, and effective in terms of designing distribution channels. Efficiency is measured by delivery performance, product quality, back orders and inventory levels. Whereas effects is measured by service quality and the service needs. Therefore, for the company/firm to survive competition, depends on how well it meets customer preferences in terms of service, cost, quality, and flexibility, by designing a supply chain which will be more effective and efficient than competitors.

2.1.2. Supply Chain Management Practices

SCM practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain.The practices of SCM are proposed to be a multi-dimensional concept, including the downstream and upstream sides of the supply chain Li et al. (2006). Tan et al. (2002) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, geographical proximity, and just in time capability.

Alvarado and Kotzab (2001) include in their list of SCM practices concentration on core competencies, use of inter-organizational systems such as elimination of excess inventory levels by postponing customization toward the end of the supply chain.

Chen and Paulraj (2004) presented SCM framework/practice that encompassed three dimensions: supply network structure, characterized by strong linkages between members, low levels of vertical integration, non-power based relationships; long-term relationships, managed with effective communication, cross-functional teams, and early supplier involvement in crucial projects, planning processes; and logistics integration.

Min and Mentzer (2004) identify the practices of SCM as including agreed vision and goals, information sharing, risk and reward sharing, cooperation, process integration, long-term relationship and agreed supply chain leadership.

Arawati (2011) identify SCM dimensions as it’s encompass: Strategic Supplier Partnership, developing trust and collaboration among supply chain partners as well as customers; Lean Production, is associated with continuous pursuit of improving the processes, a philosophy of eliminating all non-value adding activities and reducing waste within an organization;

Postponement Concept, Postponement involves the process of delaying final product configuration until the actual order requirement is specified by the customer: Keeping products in semi-finished would allow more flexibility and customization in completing the final products and also enables a company to respond more quickly to market demand and New Technology and Innovation.

Li et al. (2006) constructs upstream (strategic supplier partnership) and downstream (customer relationship) sides of a supply chain, information flow across a supply chain (level of information sharing and quality of information sharing), and internal lean practice (waste minimization). Therefore, in this research the SCM practice is conceptualized as a five dimensional constructs which are strategic supplier partnerships, customer relationship, the level of information sharing, quality of information sharing, and lean practices.

2.1.3. Strategic Supplier Partnership

Effective partnerships with suppliers can be a critical factor to guide supply chain management Li *et al.* (2006).

Strategic partnerships with suppliers are organized efforts to create and maintain a network of qualified suppliers. This effort includes all activities that are needed to improve the current performance of suppliers. Strategic partnership emphasizes direct relationship and long-term and encourages mutual planning and efforts to resolve problem. Supplier organizations can work together more closely and eliminate useless time and effort Moslem et al. (2013).

Such strategic partnerships are entered to promote shared benefits among the parties and ongoing participation in one or more key strategic areas such as core raw materials, technology, products, and markets Yoshino and Rangan (1995). Suppliers participating early in the product-design process can offer more cost effective design choices, help select the best components and technologies, and help in design assessment Tan et al. (2002).

The main objective of strategic partnerships with suppliers is increasing the functional capability desired supplier Rosenzweig (2003). In this study, the researcher is conceptualized quality base, long-term relationship, communication, cross-functional teams and supplier involvement to measure strategic supplier relationships.

2.1.4. Customer Relationship

Customer relationship consists of all the ways that are used for the purpose of controlling and managing customer complaints, creating long-term relationships with consumers and to improve consumer satisfaction Moslem et al. (2013).Close relationships with customer organizations enables to distinguish their products to competitors, Retain customer loyalty and this value is protected largely to consumers Li et.al(2006)

Good relationships with supply chain members, including customers, are needed for successful implementation of SCM programs Moberget al. (2002). Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers Magretta (1998).

As discussed in Niknia (2007) the main customer relationship goals are identifying new business opportunities, reduce missed opportunities, reducing customer defection, creating customer loyalty, improve customer service, improve organization appearance, reduce costs, and increase revenue.

For this research purpose, the customer relationship is conceptualized from the literature review and practicability in Ethiopia as the way of building long-term relationships with customers through creating customer loyalty, reducing defect products, improving customer services, reducing price/cost, managing customer complaints and working on improving customer satisfaction.

2.1.5. Level of Information Sharing

The level of information sharing refers the extent to which critical and proprietary information is communicated to one’s supply chain partner Li et al. (2006).

According to Stein and Sweat (1998), supply chain partners who exchange information regularly are able to work as a single entity. They could understand the needs of the end customers and enables quickly respond to market change.

Information sharing in interactive system of supply chain includes information between direct partners and all network of supply chain. For effective and efficient use by partners is needed sharing information Moslem et al. (2013). Furthermore, Alireza et al. (2011) stated integration and coordination across the supply chain can be well provided through information sharing.

The empirical findings of Childhouse and Towill (2003) reveal that simplified material flow, including streamlining and making highly visible all information flow throughout the chain, is the key to an integrated and effective supply chain.

In this study, supply chain information sharing is associated with the amount of information shared among supply chain partners in downstream and upstream side of the supply chain and also the information intensity. Therefore, information sharing in supply chain is conceptualized as the extent of sharing business knowledge formally or informally with supply chain partners. Also, it is associated with the amount of information shared among supply chain partners in downstream and upstream side of the supply chain and also the information intensity.

2.1.6. Quality of Information Sharing

Information sharing refers to the ability of enterprises to share knowledge and information with supply chain partners with effective and efficient manner. Information sharing is important; the significance of its impact on SCM depends on information by all functional elements within the supply chain as a key competitive and distinguishing factor.Determining production schedules, do raw material supply and the schedule of production, distribution of products are planned through sharing quality information Chin et al. (2010).

Information quality includes an aspect such as accuracy, timeliness, adequacy and information exchanged credibility Tan et al. (1998). Sharing Information between members of the supply chain should be from reliable sources and updated, accurate, timely and credible exchange Li et.al (2006).

Therefore, for the purpose of the study, information quality is conceptualized as accuracy, timeliness, adequacy, information exchanged reliability and completeness.

2.1.7. Internal Lean Practices

In today’s world of manufacturing competitiveness, every organization needs to adapt and practice systems that help it to deliver its products with higher efficiency, higher productivity and lower costs. The main goal of a lean manufacturing system is to produce products of the highest quality at the lowest possible cost and in the least time by eliminating wastes Dennis (2007).

A wide range of practices like JIT, TPM, Total Quality Control, etc. have been suggested to bring about the leanness required. Consequently, these practices aid to reap the benefits that lean proponents advocate; namely shorter cycle time, shorter lead times, faster response time, lower cost, greater production flexibility, higher quality, better customer service, higher revenue, higher throughput and increased profit S. Bhasin (2011).

The most famous of internal lean practices can be mentioned timely and lean produce. Production of lean and timely is a production system that its aims are to optimize processes and production process by reducing waste and other inefficient factors White et al. (1999).

Internal lean practice understanding of the study is waste elimination regarding to setup time, continuous improvement and just in time.

2.1.8. Company Performance

Company performance refers to how well a company achieves its market-oriented goals as well as its financial goals Li et al.(2006). The short-term objectives of SCM are primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the supply chain Tan et al.(1998).

Different stakeholders require different performance indicators to enable them make informed decisions Manyuru (2005). A number of prior studies have measured organizational performance using both financial and market criteria.

According to Richard et al. (2009) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.).

According to Li et al.(2006) company performance indicators are including return on investment (ROI), market share, profit margin on sales, the growth of ROI, growth of sales, the growth of market share, and overall competitive position.

In line with the above literature market share, return on investment (ROI), profit margin on sales, growth of sales, and overall competitive position are adopted to measure organizational performance in this study.

2.2. *Theories/ perspectives related to this study*

There are many theories and perspectives related to the concept of supply chain management. This study is more consistent with the two perspectives such as Network Perspective Theory and Relationship Marketing Theory. They are discussed as follows:

2.2.1. Network Perspective Theory

The performance of a firm depends not only on how efficiently it cooperates with its direct partners, but also on how well these partners cooperate with their own business partners. Network relations create information sharing that enables buyers and sellers to have access to resources and knowledge beyond their abilities, leading to long-term relationships Mikkola (2008).

NT is descriptive in nature and has primarily been applied in SCM to map activities, actors, and resources in a supply chain. The focus has been on developing long-term, trust based relationships between the supply chain members. Examples of issues include buyer-supplier relationships Gadde and Haakansson (2001). Relationships combine the resources of two organizations to achieve more advantages than through individual efforts.

2.2.2. **Relationship Marketing Theory**

A relationship marketing theory is a useful perspective, offering explanations of several processes or dimensions (e.g. commitment and cooperation) that are significant in studying the interrelationships between certain phenomena of the buyer-seller relationship Wilson (1995), such as information sharing in supply chain management Toften and Olsen (2003). This theory can explain the exporter-producer relationship and its information sharing, offering explanations for the several streams in relationships, the dimensions in relationships, such as the rationale for, process of and structure of relationships. These dimensions include trust, commitment, communication, cooperation, collaboration, and information sharing.

2.3. *Empirical Review of Studies*

According to Shah et al. (2002), much of the current theoretical/ empirical research in SCM focuses on only the upstream or downstream side of the supply chain, or certain aspects/perspectives of SCM. However, there are certain previous researchers have devoted deal of attention to the relationship of supply chain management practice (s) and certain aspects of organizational performance from different perspective/dimensions or overall supply chain. Some of this research finding is discussed as follows:

Alirezaet al. (2011) conducted studies on Malaysia Electronic Industry to present a model for supply chain performance by employing supply chain design, supply chain information sharing, and flexibility and delivery components as independent variables influencing supply chain performance. The results from this study depicted that supply chain design influences supply chain performance through delivery and information sharing. Furthermore, information sharing and delivery have a direct influence on supply chain performance. The findings also showed that flexibility influences supply chain performance through delivery. Information sharing affects supply chain performance directly and has also an indirect impact on supply chain performance through flexibility.

Moslem (2013) conducted research on impact of supply chain management practices on competitive advantage in manufacturing companies of Khuzestan province (Iran) by using strategic partnerships with supplier, customer relationship, information sharing , Quality of information sharing and internal lean practices as independent variables affecting the competitive advantage. The result from this study was indicates as there is relationships between SCM practices and competitive advantage.

Lenny et al. (2007) conducted studies on the impact of supply chain management practices on the performance of SMEs in Turkey. Based on exploratory factor analysis (EFA), researchers were grouped SCM practices in two factors: outsourcing and multi-suppliers (OMS), and strategic collaboration and lean practices (SCLP). The results indicate that both factors of SCLP and OMS have direct positive and significant impact on operational performance. In contrast, both SCLP and OMS do not have a significant and direct impact on SCM-related organizational performance. Also, as the direct relationship between the two performances constructs were found significantly, both factors of SCM practices have indirect and significant positive effects on organizational performance through operational.

On the research topic Supply Chain Management measurement and its influence on Operational Performance conducted by Priscila and Luiz (2011), SCM measurements were considered as consisting of information sharing, long term relations, cooperation and process integration as independent variables influences operational performance in the case of Brazilian companies. The empirical results of this study provided evidence of a positive impact of SCM measurements of operational performance.

Supply Chain Management, Product Quality and Business Performance in case of Malaysian manufacturing companies conducted by Arawati (2011) and the study specifically investigates relationships between SCM, product quality and business performance and these associations are analyzed and the result demonstrates that SCM dimensions namely ‘lean production’, ‘new-technology and innovation’, ‘strategic supplier partnership’ and ‘postponement concept’ appear to be of primary importance and exhibit significant effects on product quality and business performance.

Mahbubul (2013) conducted research on Effects of Supply Chain Management Practices on Customer Satisfaction in the pharmaceutical industry of Bangladesh: Evidence from Pharmaceutical Industry of Bangladesh. The results of the study indicate that SCM practices as observed in the industry comprise three dimensions, namely, collaboration and information sharing, logistics design and IT infrastructure, and organizational culture (OC). However, while the first two exert their impact on customer satisfaction, OC does not have any influence on it.

A thesis which is unpublished conducted by Mustefa (2014) is focused on the supply chain management practices and firm performance in case of Awash Tannery P.L.C. in Ethiopia. According to this research the data was collected from employees of awash tannery company and the research conceptualizes and develops five dimensions of SCM practice (strategic supplier partnership, customer relationship, level of information sharing quality ,quality of information sharing and internal lean practice) and it test the relationship between SCM practices operational performance and organizational performance. The research found out that there is strong relationship between SCM practices operational performance and organizational performance and shows that SCM practice have an influence both on operational performance and organizational performance and it finds out that operational performance has also an influence on organizational performance.

Generally, from above literature reviews it can be easily understandable that the work on supply chain management measurements/ practices and its influences on different perspectives of the organization and overall supply chain partners increasing and yields good backgrounds.

2.4. *Impact of Supply Chain Management Practices on company Performance*

Previous studies suggest that effective SCM practices have a direct impact on the overall financial and marketing performance of an organization. Indeed, SCM practices are expected to increase an organization's market share, return on investment and improve overall competitive positions. For instance, Tan et al. (1998) asserted that customer relations and purchasing practices impact the effectiveness of SCM strategy and lead to financial and market performance.

Froehlich and Westbrook (2001) based on a survey of 322 global manufacturers strongly supported the hypothesis that "companies with the greatest extent of supplier and customer integration have the largest rates of performance improvement in business achievements". This is significant given the centrality of integration in SCM philosophy. According to Vonderembs e et al. (2006), "a lean supply chain employs continuous improvement efforts that focus on eliminating waste or non-value steps along the chain. It is supported by the reduction of setup times to allow for the economic production of small quantities; thereby achieving cost reduction, flexibility and internal responsiveness.

There is significant evidence that the effective implementation of SCM can result in improvements in the performance of organizations. For example, on the basis of a study of 196 firms, Li et al. (2006) concluded that "higher levels of SCM practice can lead to an enhanced competitive advantage and improved organizational performance".

2.5. *Difficulties to improve the company's supply chain management* practices

Tumaini M. K. (2011) Silo mentality, lack of trust, lack of SC visibility (information visibility among the SC), activities causing bullwhip effect (Demand updating, Order Batching, Price Fluctuations, Rationing and Shortage Gaming)and lack of knowledge are some of the difficulties to make SCM integration among the firms.

A recent research by S. Al Zaabi, Al Dhaheri & Diabat (2013), they identify both the internal and external obstacles to develop sustainable SCM practices in the firms.

Internal obstacles are cost, lack of knowledge, lack of training, Lack of Integration of IT system and Poor Organizational Structure. External obstacles are Government regulations, Customers' unawareness of sustainable green products, Competition and Uncertainty, Poor Supplier Commitment, Lack of Green Practitioners, society and international standards.

For this study, the researcher conceptualizes some of the following internal and external obstacles that makes difficult to improve the company's SCM practices. Those are management commitment, deploying the right person, government policy encouragement, performance improvement training to employees, and clear organizational structure.

2.6. Conceptual Framework

Making a strategic relationship with the suppliers and customers enables company to have honesty and cooperative relationship, to provide quality of goods and constructive business ideas from external business environment. This is good especially for long run business. In its supply strategy the company strives to procure the required goods with a minimum cost. The following conceptual frame work is developed to show the effect of the current SCM practices on the Company Performance based on the literature review of the previous similar studies.

Independent variables Dependent variable

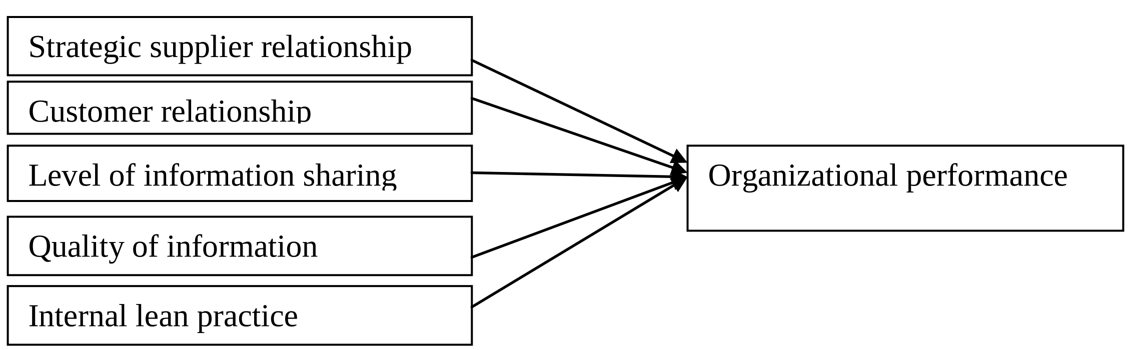


Figure 2.1 conceptual framework

Source: Based on overall review of related literatures, and particularly the work of Li et al. (2006); Lenny et al. (2007); and Moslem et al. (2013).

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter is mainly focused on the research methodology that adopted in this study. Therefore, the researcher described the following things in this part: Such as a description of the study area, the research approach, research design, population and sampling technique, sources of data and data collection instruments, methods of data analysis, measurement of variables, validity and reliability, ethical considerations.

3.1. Description of the company

The researcher is intended to study the impact of supply chain management practices on company performance in case of Technostyle private limited company. The company is located in Legetafo Town, North East in Addis Ababa. Its head office is existed in Kasanchis (in front of yordanos hotel), Addis Ababa. It has another workshop center in kality, showing centers in Bole, kasanchis and Gurd shola areas in Addis Ababa.

Technostyle PLC. was established in the year 1988 with an initial capital of 80,000 Birr which is progressively grown its existing paid up capital of more than 43 million Birr.

The company has made a structural shift by joining the manufacturing sector despite its long history where it was limited to import and trading of furniture. In response to the ever growing market in the capital and all over the country and with the aim of consolidating its activities, it has changed its company formation with the revised memorandum of association signed in July 8th 2007 EC by its five new shareholders.

Nowadays, the Company produces furniture and foam products; different size foams, standardized hotel and office furniture, conference tables and different kind chairs, sofa, beds, cabinets and etc.

There are 285 employees engaged in the company as a whole and those employees have varied resumes with technical and managerial skills and capabilities. The company has the following core values; sprite of services, respect, integrity, team work and collaboration, accountability, commitments to safety, customer focus, leadership, excellence, professionalism, and continuous improvement.

Supply chain consists of the whole activities associated with products and services movement from raw material stage to final products which are consumable by customers. This movement includes financial and information flow as well as material flow.

The case company has a relationship with the upper stream (suppliers) particularly for getting raw materials like Wood, metal, plastics, glasses, paints, glues, cane, garments, and different chemicals which helps in the process of the production. And the company supplies its products like as different home and office furniture for customers (e.g. for organizations, hotels, and home purposes). The company follows a pull production system and it produces what it has ordered.

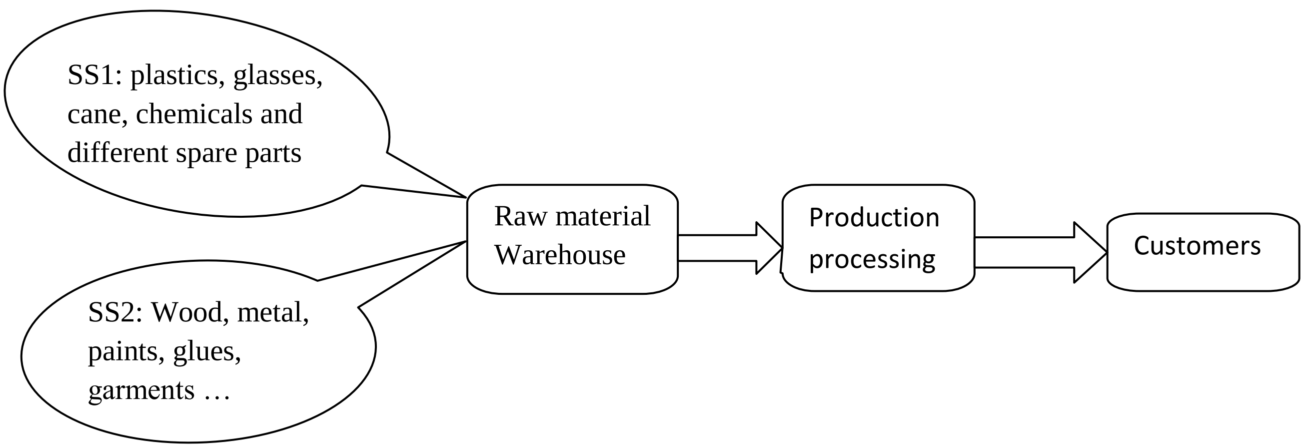


Figure 3.1. The current supply chain structure of Technostyle PLC.

3.2. Research Approach

These are qualitative, quantitative and mixed research approaches in the social study. Thus, for this study the researcher used a mixed research approach which is both quantitative and qualitative. Creswell (2014) the researcher used a mixed approach to get more relevant data and to keep the validity of data (for triangulation). The distinction between qualitative research and quantitative research is framed in terms of using words (qualitative) rather than numbers (quantitative), or using closed-ended questions (quantitative) rather than open-ended questions (qualitative interview questions).

3.3. Research Design

The study is assessing the effect of supply chain management practices on the company performances in case of Technostyle PLC. So, for this study the researcher prefer a descriptive research type. Creswell (2014), a descriptive study deals with the what, how and who of a phenomenon study. And also when the purpose of a study is accurate description of a situation the study is descriptive Kothari (2004).

To address the study, the researcher used primary data. These data are collected throw distributing questionnaires to the employees of the company from selected departments and educational level. And also the researcher conducted a face to face interview with two managers in the Company.

The researcher used a 5 point likert scale on close ended questionnaire to collect data from the respondents and to measure variations. And the researcher also used a semi-structured interview to crosscheck the reliability of the response.

Due to small number of target population, the researcher preferred to use a census method. The study is cross sectional because it is one time study on a selected company. The quantitative data are analyzed by using SPSS software and the qualitative data is described in words.

3.4. Study population

The researcher studied the impact of SCM practices on the Technostyle private limited company. There are 285 employees on the company. From this number the target population is 118 employees who have diploma and above education level, and those who work on designing and Prototype, warehouse, workshop centers, marketing and sales, finance and supply management work areas. This is because they have better understanding on SCM activities.

3.5. Sampling techniques

Census sampling technique is applied in this study due to the small number of population. So, the data is collected from the entire population. According to Kothari (2004) Census method is a method of examining the entire population that have a particular set of characteristics.

The method has an advantage over sample in that the data obtained is more reliable and accurate. And using the entire population is reducing risk of missing potential insights from members that are not included.

Therefore, the researcher collected the data from the total target population of 118 employees through questionnaires. The respondents are taken from designing and prototype, warehouse, workshop centers, marketing and sales, finance and procurement work areas because those working areas are more related to SCM practices.

And also the researcher conducted an interview with two managers whose are working in SCM areas.

3.6. Sources of Data and data collection instrument

The researcher used both the primary and secondary data sources for this study. Therefore, the primary data are collected through questionnaires designed by Mustefa (2014) on his unpublished thesis and Interview questions are developed by the researcher. The questionnaires contained close ended questions. These questionnaires are distributed to the targeted population (company employees). The researcher also collected data through interview with top management. Yin (2003) indicated three types of interviews: 1) open-ended 2) focused and 3) structured. In a focused interview, respondent is interviewed for a short period of time, and is asked a specific set of questions raised from the study protocol. The type of interview carried out for this study is focused. The conducted interviews are face-to-face and in depth; the study was performed in Technostyle plc in Ethiopia. The interviewees have an aware of the aims of the interview.

Secondary data are collected from the company's reports, different work related documents, websites, books, publications, research studies and articles.

3.7. Data analysis

The data that collected through questionnaire is analyzed by using Statistical Package for Social Sciences (SPSS). Both descriptive and inferential systems are applied in order to come up with a better result. Descriptive statistics are used to describe the result of frequency of occurrence, means, and standard deviations scores of each items whereas the inferential statistics is used to find the correlation and regression analysis of the variables.

Correlation analysis is used to find the level of relationships among the independent variables and the dependent variable. Regression reflects the impact of the unit change in the independent variable on the dependent variable.

The information gathered through the interview is described qualitatively in words.

3.8. Measurement of Variables

Likert scale is one of the ordinal scale measurements that allow the subject to be placed in accordingly Kothari (2004). The researcher used a Likert scale to measure variations within the items. The scale had a five range responses.

For SCM practices the scale responses are 'Strongly Disagree', 'Disagree', 'Neutral', 'Agree', and 'Strongly Agree', with a numeric value representation of 1-5, respectively.

And also for company performance also used the five-point Likert scale with response to ranging from: 1 = significantly decrease, 2 = decrease, 3=same as before, 4=increase, 5=significantly increase.

3.9. Validity and Reliability

3.9.1. **Validity**

According to Mugenda et al (2003) validity of research, the researcher developed the questionnaires based on the specific objectives. And to ensure internal validity of the questionnaire; the researcher gave the draft questionnaire to the advisor for review and recommendations which are made part of the final questionnaire.

In addition, face to face interviews with the company managers carried out to crosscheck the information collected through questionnaires, validated the outcome of the analysis. Creswell (2014) Qualitative data collected using semi-structured interview is a valuable way of triangulating quantitative data collected by other means such as a questionnaire.

3.9.2. **Reliability**

The reliability of the questionnaire is tested by using Cronbach's alpha or called the alpha coefficient to show the internal consistency of questionnaires as stated by Masdia Masri (2009). The closer the reliability coefficient of 1.00 is the better. In general reliabilities less than 0.60 are considered as poor, those in the range of 0.60 to 0.80 are considered good and acceptable. Pilot test is carried out on 15 respondents to test the reliability of data from questionnaires. As the result showed below, the researcher got the average Cronbach's alpha coefficient that was considered as an acceptable level.

Table 3.1.Cronbach's Alpha reliability test

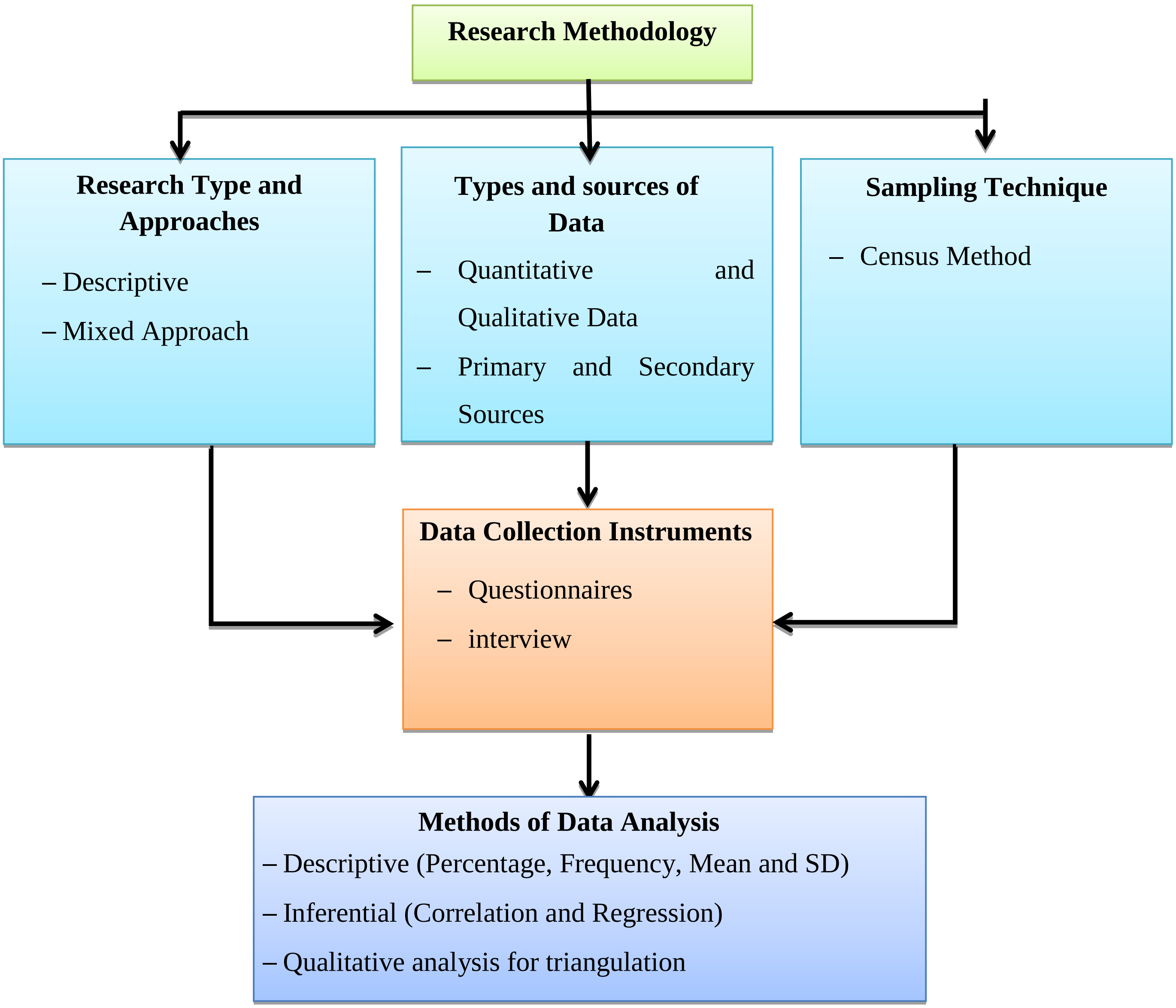
Variable	Cronbach's Alpha reliability test
Strategic Suppliers Relationship	.809
Customer Relationship	.766
Level of information sharing	.761
Quality of information sharing	.746
Lean practices	.746
Company performance	.816
Difficulties to improve SCM	.791

Source: own pilot test result 2018

3.10. Ethical issue

According to Leedy and Ormrod (2010), most ethical issues have fallen into one of the following four categories; informed consent, confidentiality, security and honesty. Therefore, the researcher is considered all these issues in the questionnaire guidelines in the following manner:- Informed consent: all participants are briefly informed about the reason of conducting such study, therefore, enabled them to join with full consent. Right to privacy (confidentiality): the researcher kept the nature and quality of participants' performance strictly confidential. No information is recorded about respondents. Security: the researcher did not expose the participants to unusual stress, embarrassment, or loss of self-esteem. Honesty: the researcher reported the findings in complete honesty.

Figure 3.2. Summary of Overall Research Design and Methods



Source: Adapted from Creswell (2014)

CHAPTER FOUR: DATA ANALYSIS, RESULT AND DISCUSSION

4.1. Data Analysis

As discussed the previous chapter, this study attempted to examine the relationship between supply chain management practices and company performance in case of Technostyle PLC. To assess the relationship between supply chain management practices and Company performance, Correlation and regression analysis were conducted for scale typed questionnaire. The questionnaire was developed in five scales ranging from one to five; where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 =agree, 5 = strongly agree.

A total of 118 questionnaires were distributed to employees and interview questions were presented for two participants in the company's top management. The collected data were presented and analyzed using SPSS (version 21) statistical software. The study used descriptive statistics and inferential statistics.

Objective one which is to establish the supply chain practices adopted by the company and objective three which is about the difficulties to improve the company SCM practices were analyzed using descriptive statistics where the mean and standard deviation were used.

Inferential statistics were used to analyze objective two which is the impact of SCM practices on Company performance. Correlation analysis is used to examine the relationships of the dependent variable and the independent variables. It indicates the strength of association between variables whereas the regression analysis is used to indicate whether the independent variables (SCM practices) significantly predict the dependent variable (the organization performance). Regression model- **Y= a+b1x1+b2x2+b3x3+b4x4+b5x5+e** where Y = Organization performance; a= the y intercept when x is zero; b1, b2, b3, b4, b5, b6, b7 are regression coefficients of the following variables respectively; x1- strategic supplier management; x2- customer relationship management; x3-level of information sharing; x4- quality of information sharing; x5- lean practices.

4.1.1. **Demographic characteristics**

Observing the demographic trend or characteristics of our sample population before starting the data analysis is useful to make the analysis more meaningful for the reader.

This part of the questionnaire requested limited amount of information related to personal and demographic status of respondents.

The purpose of demographic analysis of this research is to describe the characteristics of the sample such as position of respondents, academic qualification of respondents and experience of respondents. Accordingly, these variables are summarized and described in the tables shown below.

Table 4.1. Analysis of the respondents' educational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	65	61.3	61.3	61.3
	1st degree	37	34.9	34.9	96.2
	Masters and above	4	3.8	3.8	100.0
	Total	106	100.0	100.0	

Source: own survey result 2018

The result of educational Level: from the total number, 65 respondents (61.3%) have Diploma, 37 respondents (34.9 %) have 1st degrees (BA/BSC Degree) and the remaining 4 respondents (3.8%) are 2nd Degree (MSC/MA Degree) holders.

Table 4.2. Analysis of the respondent poison in the organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Department manager	5	4.7	4.7	4.7
	Supervisor	11	10.4	10.4	15.1
	Officer	49	46.2	46.2	61.3
	Others	41	38.7	38.7	100.0
	Total	106	100.0	100.0	

Source: own survey result 2018

The result of Job Title: from the total number, 5 respondents (4.7%) of them are Department Manager of the company, 11 respondents (10.4 %) are supervisors in the company, 49 respondents (46.2%) are officers and 41 respondents (38.7%) are other workers in the areas of supply chain management activities. All the respondents are directly and indirectly involved in the supply chain practices of their firm and hence, their information can be considered as reliable and relevant for the study.

Table 4.3. Length of service in analysis of employees the organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1	17	16.0	16.0	16.0
	1-2	32	30.2	30.2	46.2
	3-4	38	35.8	35.8	82.1
	5 and above	19	17.9	17.9	100.0
	Total	106	100.0	100.0	

Source: own survey result 2018

The result of Work Experience: as the table shows from the total respondents, 17 respondents (16%) have less than 1 year work experience, 32 respondents (30.2 %) have 1-2 year work experience, 38respondents (35.8%) have 3-4 year work experience and the rest 19 respondents (17.9 %) have 5 and above year work experience. This implies half of the respondents have sufficient knowledge and experience about their organization and the subject matter of the study.

4.1.2. Descriptive Analysis

4.1.2.1. Extent of SCM practices implements in the case organization

The mean or average is a measure of central tendency that offers a general picture of the data without unnecessarily covering one with each of the observations in the data set. The mean of respondents in each variable shows the average amount responses of the respondents on each variable.

The questionnaires of this study are designed using a 5 point Likert scale to collect appropriate responses by choosing: 5-Strongly Agree, 4-Agree, 3-Neutral, 2-Disagree and 1-Strongly Disagree.

Therefore, the researcher illustrated the results through the following assumptions: A mean (M) score of 0-1.5 means that the respondents strongly disagreed, between 1.50 to 2.50 means they disagreed, 2.50 to 3.50 means the respondents were neutral, 3.50-4.50 means they agreed and a mean above 4.50 means the respondents strongly agreed.

Table 4.4. Mean and St. Deviation of Responses on SCM practices of the company

Five Supply Chain Management practices	N	Min	Max	Mean	Std. D
Strategic supplier partnership:					
Your company thinks quality is the best criterion in selecting the suppliers.	106	1	4	3.05	.970
Your Suppliers have participated in the preparation of specifications	106	1	4	2.78	.986
Your Suppliers provide goods prior to payment	106	1	5	3.04	.995
Your company continuously solves problems by joint effort with the suppliers.	106	1	5	2.82	.964
Your company has provided information to the suppliers for improving their product quality	106	1	4	2.83	.920
There is an honesty relationships when exceptions exist to normal operations	106	1	5	2.82	.903

Customer relationship:	N	Min	Max	Mean	Std. D
Your company frequently interacts with customers to achieve reliability & to improve some basic standards	106	1	5	3.44	.977
Your company frequently measure and evaluate customer satisfaction.	105	1	5	3.47	.981
Your company frequently determines future customer expectations.	106	1	5	3.43	.873

Your company periodically evaluates the level of relationships with customers.	106	2	5	3.32	.900
Your company develops metrics that are related to the customers' impact on the company's profitability	106	1	5	2.97	.899

Level of information sharing:	N	Min	Max	Mean	Std. D
Your company regularly inform to the trading partners before changing needs and demand.	106	1	4	3.27	.941
Your company share continuous (uninterrupted) information with trading partners.	106	1	4	3.03	.951
Your company's trading partners informed about the issues which affect the operations of your business.	106	1	5	2.99	1.000
Your company facilitates business knowledge/ experience sharing program with Your Trade partners.	106	1	4	3.12	1.039
Your company exchange information with trading partners to establish a business plan.	106	1	5	2.71	1.004
Your company shares business knowledge of core business processes with trading partners	106	1	5	2.71	.976

Quality of information sharing:	N	Min	Max	Mean	Std. D
Information exchange between your Company and trading partners is timely (no information delay).	106	1	5	3.40	.943
Information exchange between your Company and trading partners is accurate (targeted to do something).	106	1	5	3.47	.875
Information exchange between your Company and trading partners is complete.	106	1	5	3.21	.933
Information exchange between your Company and trading partners is adequate (enough in quantity and quality)	106	1	5	3.14	.980
Information exchange between your Company and trading partners is reliable(trusted to do something well)	106	1	5	3.05	.940

Internal lean practice:	N	Min	Max	Mean	Std. D
Your Company strives to reduce time wastage in operation	106	1	5	3.70	.968
Your Company has continuous quality improvement programs.	106	1	5	3.32	1.126
Your Company produces only what has been ordered by customers (pull production system).	106	1	5	3.79	1.067
Your Company pushes suppliers for shorter lead times.	106	1	5	3.61	1.010
The company streamlines (simplifies) ways to provide better services for the customer	106	1	5	3.61	.952
Your company has changed paper works in to ICT system	106	1	5	3.25	.924

Source: own survey result 2018

Based on the analysis, the result of the mean value of internal lean practice scores is greater than 3.5, which imply the respondents agreed to the fact that lean practices are highly applied in the Company. However, the mean value of strategic supplier relationship, Customer relationship, the level of information sharing and quality of information sharing are between 2.50 and 3.5 this implies that those the above four practices are moderately applied.

And also the company has a weakness on specific activities of strategic suppliers relationship (Suppliers participation in preparation of specifications, continuously solves problems by joint effort with the suppliers, providing information to the suppliers for improving their products quality and honesty relationships when exceptions exist to normal operations), and on specific activities of level of information sharing (exchange information with trading partners to establish a business plan and shares business knowledge of core business processes with trading partners) because their mean value is less than 3.00.

4.1.2.2. Extent of Company Performance in the case organization

Table 4.5. Mean and St. Deviation of Responses on Company performance

Company Performance Measures	N	Min	Max	Mean	Std. D
The company's market share	103	1	5	2.76	.880
The company's return on investment	103	1	5	2.88	.832
The company's volume of sales	105	1	5	3.05	.836
The company's profit margin on sales	104	1	5	3.04	.812
Overall competitive position related to the company's product	105	1	5	2.87	.910

Source: own survey result 2018

Based on the result of table 4.5, the mean values of company performance measurements are between 2.50 and 3.50 which imply that the Company's business performance is moderate or the same to before.

4.1.2.3. Extent of difficulties to improve the implementation of SCM practices in the case organization

Table 4.6. The Mean and St. Deviation results of difficulties to improve the Company's SCM

Difficulties to improve the Company's SCM practices	N	Mini	Maxi	Mean	Std. D
There is a management commitment to improve the SCM activities	106	1	5	2.56	1.070
The right person (skilled man power) is assigned in the area of SCM activities in the Company	106	1	5	2.54	1.071
The government policies encourage to develop a long-range relationship with suppliers and customers	106	1	5	2.42	.816
The company facilitates performance improvement training to the employees	106	1	5	2.16	.927
The company has the clear Organizational Structure	106	1	5	2.62	.961

Source: own survey result 2018

Based on the result of the table 4.6, the mean values of the three difficulties to improve the company's SCM practices (management commitment, the right person (skilled man power) and Organizational Structure) are between 2.50 and 3.50. This indicates that those points have a moderate effect on the improvement of the Company's SCM practices. However, from those mentioned difficulties the mean values of encouragement of government policies and performance improvement training to the employees are less than 2.50. This implies that these points have less effect on the improvement of the company's SCM practices.

4.1.3. Inferential Statistics for SCM practices and Company Performance

4.1.3.1. Correlation Analysis

Correlations are the measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicates that there is little or no linear relationship. As described by Pallant (2010) the correlation is a commonly used measure of the size of an effect: values of ± 0.1 represent a small effect, ± 0.3 is a medium effect and ± 0.5 is a large effect.

The relationship between supply chain management practices and the Company Performance was investigated using correlation analysis. This provided correlation Coefficients which indicated the strength and direction of the relationship.

4.1.3.2. Correlation Analysis between SCM practices and Company Performance

As the correlation matrix table 4.7 shows, the correlation coefficient values of company performance among SCM practices (strategic supplier relationship, the level of information sharing, quality of information sharing and lean practices) are 0.350**, .382**, .371** and 0.480** respectively. Their significant level is 0.000.

Therefore, those above four predictor variables have positive and medium relation to company performance. That means they have a medium effect on company performance. However, the correlation coefficient value of company performance with customer relationship is 0.287** with the significant level of 0.003. This shows customer relationship has a low effect on company performance and the correlation is statistically significant at the 5% level.

Table 4.7. Correlation matrix between SCM practices and Company Performance

		SSR	CR	LEVEL	QUALITY	LEAN	COMP_PER
SSR	Pearson Correlation						
	Sig. (2-tailed)						
	N	106					
CR	Pearson Correlation	.536**					
	Sig. (2-tailed)	.000					
	N	106	106				
LEVEL	Pearson Correlation	.567**	.664**				
	Sig. (2-tailed)	.000	.000				
	N	106	106	106			
QUALITY	Pearson Correlation	.532**	.677**	.689**			
	Sig. (2-tailed)	.000	.000	.000			
	N	106	106	106	106		
LEAN	Pearson Correlation	.446**	.671**	.668**	.661**		
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	106	106	106	106	106	
COMP_PER	Pearson Correlation	.350**	.287**	.382**	.371**	.480**	
	Sig. (2-tailed)	.000	.003	.000	.000	.000	
	N	106	106	106	106	106	106

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

Source: own survey result 2018

4.1.3.3. Correlation between SCM practice and Company performance

Table 4.8. Pearson Correlation between the sum of SCM practices and Comp. Perf.

		Sum of SCM practices	COMP_PER
SCM p	Pearson Correlation	1	.459**
	Sig. (2-tailed)		.000
	N	106	106
COMP_PER	Pearson Correlation	.459**	1
	Sig. (2-tailed)	.000	
	N	106	106

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

Source: own survey result 2018

As table 4.8 shows, the correlation coefficient (r) between supply chain management and organizational performance is 0.459** with the significant level of 0.000. This correlation coefficient value is near to high. So, company performance and supply chain management have almost a strong relationship. The correlation has significant levels of 0.000.

4.1.4. **Regression Analysis**

Multiple linear regression analysis was conducted to determine how the dimensions of the independent variable predict the dependent variable, Regression analysis is a statistical method to deal with the formulation of mathematical model showing relationship amongst variables for the purpose of prediction of the value of dependent variable on the value of the independent Kothari (2004).

4.1.4.1. Model Summery

Table 4.9. Model summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.520[a]	.270	.234	3.17963

a. Predictors: (Constant), LEAN, SSR, QUALITY, CR, LEVEL

Source: own survey result 2018

As table 4.9 shows, R = 0.520 indicates that the sum of SCM practices (which are suppliers relationship, customer relationship, the level of information sharing, quality of information sharing and lean practices) and company performance have a linear relationship with Company performance. But the linear relationship is medium.

The value of R^2 = 0.270 states that 27 % of the total variation in company performance is described by those predictor variables. The value of R^2 indicates that there may have other variables that contribute to the determination of company performance and such things are also happening due to low performance on SCM practices.

Consequently, the company performance is a dependent variable and supply chain management practices are independent variables in the regression model.

4.1.4.2. **ANOVA**

Table 4.10. ANOVA Analysis

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	374.091	5	74.818	7.400	.000[b]
	Residual	1011.003	100	10.110		
	Total	1385.094	105			

a. Dependent Variable: COMP_PER

b. Predictors: (Constant), LEAN, SSR, QUALITY, CR, LEVEL

Source: own survey result 2018

As the above table showed, The F Value is the Mean Square Regression (74.818) divided by the Mean Square Residual (10.110), yielding F=7.400. The p value associated with this F value is very small (0.000). The significance value of 0.000 indicates that the regression relationship is significant in predicting the impact of supply chain management practices on company performance.

4.1.4.3. **Coefficients**

Table 4.11. Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.328	1.763		3.023	.003
	SSR	.171	.101	.185	1.700	.092
	CR	-.213	.143	-.199	-1.491	.139
	LEVEL	.062	.124	.068	.497	.620
	QUALITY	.073	.140	.070	.520	.604
	LEAN	.342	.101	.439	3.381	.001

a. Dependent Variable: COMP_PER

Source: own survey result 2018

The coefficient table is used to test each predictor variables at alpha= 0.05. Therefore, the sig. (p-value) of each predictor variable is .092, .139, .620, .604 and .001 respectively. The value of lean practice is 0.001 which is statistically significant with 0.01 levels. However, others are not statistically significant on Company performance. In other word they have a low effect on the company performance.

The positive B- values indicates that, one unit of Company performance is increase when the value of each independent variables increased by .171 (SSR), .062 (level of IS), .073 (quality of IS) and .342 (lean practices). And the negative B- value indicates unit of Company performance is increase when the value of -.213 (CR) is decrease. It has an indirect effect. The highest value of Beta shows the highest influenced variable or the dominant factor due to that lean practice is the dominant factor variable in this study.

$Y = a + \beta1*X1+ \beta2*X2+ \beta3*X3+ \beta4*X4+ \beta5*X5+ e$

Which is Y = 5.328 + .171x1 - .213x2 +.062x3 +.073x4+.342x5

The value of $\boldsymbol{\beta}0$ is 5.328 which mean the expected value of company performance is 5.328 when all the five variables assume zero value.

4.2. *Result Discussion*

4.2.1. Result of Interview Questions

The researcher has conducted an interview with two managers by developing 12 interrelated questions to get more relevant data concerning the study. The researcher presented the same questions to the two interviewees even though the responses were mostly similar to each other. So, for the time being the result is summarized as follows:

Respondent (M1) noted that the Company has a supply manager. However, its main responsibility is focused on the activities of procurement and warehouse management activities only. Customer related tasks are accomplished by another department manager called sales and marketing manager. There is a weak supply chain management structure to administer the entire buyer - seller activities in the case Company.

> *"Our company procures most of the raw materials from internal market. We invite suppliers who have registered to the supplier list website only. This is a mandate because the procurement and property regulation is ordered. Therefore, it is difficult to know who participate and win the bid. In the next transaction period the other suppliers may win a bid. The above situations are unable to make strategic relationship with suppliers."*--Interviewee M1

Respondent (M2) noted that the company follows pull production system (we produced what we have ordered). The company did not have cooperation with 3^{d} party trade partners (intermediates) to distribute products to customers. Due to the above reasons, the company has no long term (strategic) relationships and does not make a joint plan with suppliers and customers.

> *"Our Customers are direct consumers and they made a onetime interaction with us."*--Interviewee M2

As the Respondents (M1 and M2) noted that, it is obvious that quality information is needed for any of the success, but our Company does not settle any evaluation method to know the quality of the information that provided by our trade partners. However, even if we have a short period interaction with suppliers and customers, we use all our best mechanisms to exchange the reliable, adequate and timely information with our clients. This is important for better service delivery and to increase the Company good well

The Respondents (M1 and M2) noted that our Company uses an electronic means to record and disseminates Information within the company. And we use computerized software to share information with all parts of the Company (to receive orders, to know the remaining materials in the warehouse, etc.)

> *"The company does not have a formal lean practice section; however, all work sections are done all tasks based on the generated conceptual ideas of top managements."* --Interviewee M2

Respondents (M1 and M2) noted that the Company strives to supply quality products with affordable price by minimizing time wastages in production process and customer response.

All work sections are responsible to department managers and department managers are responsible to the general manager and the owner of the business.

> *"The company's performance is measured by its annual sales volume and marginal profit."*--Interviewee M2

Respondents (M1 and M2) noted that there is low initiation to make a strategic change on an internal operation because the management are busy themselves on routine tasks and focusing on the current order fulfillment. So, they have no management commitment to improve the performance. Low achievement on internal operations would affect the overall the Company performance.

4.2.2. Result of the questionnaires (closed ended questions)

As we have seen the descriptive analysis, based on the analysis, the result of the mean value of internal lean practice scores is greater than 3.5, which imply the respondents agreed to the fact that lean practices are highly applied in the Company. However, the mean value of strategic supplier relationship, Customer relationship, the level of information sharing and quality of information sharing are between 2.50 and 3.5 this implies that those the above four practices are moderately applied.

And also the company has a weakness on specific activities of strategic suppliers relationship (Suppliers participation in preparation of specifications, continuously solves problems by joint effort with the suppliers, providing information to the suppliers for improving their products quality and honesty relationships when exceptions exist to normal operations), and on specific activities of level of information sharing (exchange information with trading partners to establish a business plan and shares business knowledge of core business processes with trading partners) because their mean value is less than 3.00.

The mean values of company performance measurements are between 2.50 and 3.50 which imply that the Company's business performance is moderate or the same to before.

The mean values of the three difficulties to improve the company's SCM practices are between 2.50 and 3.50. This indicates that those points have a moderate effect on the improvement of the Company's SCM practices. However, from those mentioned difficulties the mean values of encouragement of government policies and performance improvement training to the employees are less than 2.50. This implies that these points have less effect on the improvement of the SCM practices of the case company.

As we have seen the correlation matrix result, the correlation coefficient value of company performance among SCM practices (strategic supplier relationship, the level of information sharing, quality of information sharing and lean practices) are 0.350**, .382**, .371** and .480** respectively. Their significant level is 0.000.

Therefore, those above four independent variables have positive and medium relation to company performance. However, the correlation coefficient value of company performance with customer relationship is .287** with the significant level of .003. This shows customer relationship has a low but positive relationship with company performance and the correlation is statistically significant at the 5% level..

The correlation coefficient between the sum of supply chain management practices and the company performance is .459** with the significant level of .000. This correlation coefficient value is near to high. So, company performance and supply chain management have almost a strong and positive relationship. The correlation has significant levels of 0.000.

As we have seen the regression analysis result, R = 0.520 indicates that the sum of SCM practices (which are suppliers relationship, customer relationship, the level of information sharing, quality of information sharing and lean practices) and company performance are positively related. But the linear relationship is medium.

The value of R^2 = .270 states that 27 % of the total variation in company performance is described by those predictor variables. The low value of R^2 indicates that there may have other variables that contribute to the determination of company performance.

The significant value is F (5, 100) = 7.400, P= 0.000. The significance value of 0.000 indicates that the regression relationship is significant in predicting the effect of supply chain management practices on company performance.

As the coefficient table shows, the sig. (p-value) of each predictor variable is .092, .139, .620, .604 and .001. The value of lean practice is 0.001 which is statistically significant with 0.01 levels. However, others are not statistically significant on Company performance.

The positive B- values indicates that, one unit of Company performance is increase when the value of each independent variables increased by .171 (SSR), .062 (level of IS), .073 (quality of IS) and .342 (lean practices). And the negative B- value indicates unit of Company performance is increase when the value of -.213 (CR) is decrease. It has an indirect effect on Company performance. Negative relation is supported by the finding of Tan (2002).

Generally the study showed that, Strategic supplier relationship, the level of information sharing, quality of information sharing and lean practices have medium whereas customer relationship has low relation to company performance with the statistical significant level. And the regression result shows that, strategic supplier relationship and lean practices have a positive and medium effect, the level of information sharing and quality of information sharing have positive and low effect, customer relationship has negative effect on Company performance.

CHAPTER FIVE: SUMMARY OF FINDING, CONCLUSSION AND RECOMMENDATIONS

5.1. Summary of Findings

Of the 118 questionnaires given to respondents, 106 questionnaires were valid and the responses used for data analysis. This was a response rate of 89.8 %.

Responses on internal lean practice are greater than 3.5, which imply the respondents agreed to the fact that lean practices are highly applied in the Company. However, the mean value of strategic supplier relationship, Customer relationship, the level of information sharing and quality of information sharing are between 2.50 and 3.5 this implies that those the above four practices are moderately applied.

From all SCM practices, specific activities on strategic suppliers relationship (Suppliers participation in preparation of specifications, continuously solves problems by joint effort with the suppliers, providing information to the suppliers for improving their product quality and honesty relationships when exceptions exist to normal operations), and on specific activities of level of information sharing (exchange information with trading partners to establish a business plan and share business knowledge of core business processes with trading partners) because their mean value is less than 3.00.

Based on the mean value of difficulties to improve the Company's SCM practices; management commitment, assigning the right person (skilled manpower) and the absence of clear Organizational Structure have a moderate effect on the implementation of effective SCM practices whereas the government policies and facilitating performance improvement training to the employees have a low effect on the improvement of the SCM performance.

The correlation coefficient value of Strategic supplier relationship, the level of information sharing, quality of information sharing and lean practices are .350**, .382**, .371** and .480** respectively. Their significant level is 0.000. This implies that those above variables have medium relation to company performance.

However, in this level customer relationship has low relation to company performance due to the coefficient value of 287** with the significant level of .003.

R = 0.520 indicates that the sum of SCM practices (supplier relationship, customer relationship, the level of information sharing, quality of information sharing and lean practices) have a linear relationship with Company performance. But the relationship is medium.

The value of R^2 = .270 states that 27 % of the total variation in company performance is described by those predictor variables. The low value of R^2 shows as there may have other variables that contribute to the determination of company performance.

The sig. (p-value) of lean practice is 0.001 which is statistically significant with 0.01 levels. However, other predictor variables are not statistically significant on Company performance with the value of .092, .139, .620, and .604

The positive B- values indicates that, one unit of Company performance is increase when the value of each independent variables increased by .171 (SSR), .062 (level of IS), .073 (quality of IS) and .342 (lean practices). And the negative B- value indicates unit of Company performance is increase when the value of -.213 (CR) is decrease. It has an indirect effect.

Generally the result shows that, strategic supplier relationship and lean practices have a positive and medium effect, the level of information sharing and quality of information sharing have positive and low effect, customer relationship has negative effect on Company performance.

Findings from interviews are more consistent with the result of questionnaires; summary of the result is as follows:

There is a weak supply chain management structure to administer all buyer- seller activities in the case Company. They invite suppliers who are registered in supplier list website only. The company is interacting with suppliers for one time transaction. In the next period the other suppliers may win a bid. Due to that it is difficult to makes strategic relationship with suppliers.

The company follows pull production system (produce what they have ordered). Customers are direct consumers and the company's products are long life goods. Therefore, the relation with customers is a onetime interaction.

Internally, there is a better information sharing experience but not effective within external partners

The company does not have formal lean practice work section however tasks are doing based on the generated conceptual ideas of top managements.

The Company strives to supply quality products with affordable price by minimizing time wastages in production process and customer response. All work sections are responsible to department managers and department managers are responsible to the general manager and the owner of the business.

The company's performance is measured by its annual sales volume and marginal profit.

Low achievement on internal operations would affect the overall the Company performance.

The company has low initiation to make an improvement on SCM practices because the management are busy themselves on routine tasks and they are focusing on the current orders fulfillment. So, they have no management commitment to improve the performance.

5.2. *Conclusion*

In conclusion, as the research sought to study the impact of supply chain management practices on the company performance, it was observed that some respondents disagreed with implementation of specific activities of strategic supplier relationship and on specific activities of level of information sharing.

In fact, SCM practice is expected to increase an organization's market share, return on investment, and the profit. And as some researchers concluded, effectively applying supply chain management has a strong direct effect on company performance.

Li et al. (2006) concluded that "higher levels of SCM practice can lead to enhanced competitive advantage and improved organizational performance". Froehlich and Westbrook (2001) "companies with the greatest extent of supplier and customer integration have the largest rates of performance improvement in business achievements". Moslem (2013) concluded that when the SCM practices are good, the operational performance of supply chain will also become good.

However in this study the study showed that, Strategic supplier relationship, the level of information sharing, quality of information sharing and lean practices have medium whereas customer relationship has low relation to company performance with the statistical significant level. And the regression result shows that, strategic supplier relationship and lean practices have a positive and medium effect, the level of information sharing and quality of information sharing have positive and low effect, customer relationship has negative effect on Company performance. As the same time the performance of the company is also moderate or the same to before. This shows as the case company does not effectively apply the SCM practices.

5.3. *Recommendations*

Based on research findings, the researcher recommended that managers should take a serious attention on the relationship with suppliers. The company needs the reformation of organizational structure regarding on Supply chain management to develop a good buyer-seller relationship. The company shall give necessary training to employees to create awareness regarding to the concept of supply chain management.

If there is no strategic relationship with the suppliers and customers could not think about quality of goods, quality of information, honesty and cooperative relationship with suppliers, and also difficult to get new and constructive business ideas from external business environment. This is not good especially for long run business.

In other way, implementing supply chain management effectively, would increases the effective utilization of resources, increase productivity and increases management quality in the company.

For an organization to achieve a competitive advantage in the global environment, it shall better to update time to time its supply chain management practices.

So as to criticize the government procurement policy it needs additional formal study on it however, as this time to minimize obstacles and interruptions on the accessibility of raw materials the company shall better to make a preliminary assessment about the winner suppliers' capability before making further agreement processes. This minimizes time wastage and costs.

5.4. *Suggestions for future research*

The study is limited on one furniture supplier company and on some issues of supply chain management practices and Company performance. The findings may not be applied directly to other organizations. And also other SCM actors and SCM issues are not included in this study. Therefore, those above limitations are important for future studies. So, in the future, researchers may focus on the other aspects of this study and could stretch its scope as a country level regarding on furniture and foam factories

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Addis Ababa University

College of Business and Economics

School of Commerce

Department Of Logistics and Supply Chain Management

Appendix -1: Questionnaires

You are requested to answer all questions in this research study questionnaire. The information provided shall be treated with confidentiality and will be used purposely for thesis study of partial fulfillment of Degree of Masters at Addis Ababa University. This study aims at investigating the effect of supply chain management practices on company performance within the Technostyle PLC.

NB:

- Do not write your name on this questionnaire.
- Where answer options are available please tick (√) in the appropriate box for all **PART I,PART II** and **PARTIII**
- Please answer all questions in the context of your company.
- Base your answers on your own thoughts & experiences.

PART I: Demographic Information of the respondents

1. Educational Qualification

 1. Diploma ☐ 2. 1st Degree ☐

 3. Masters and above ☐

2. Your position in the organization

 1. Department manager ☐ 2. Supervisor ☐

 3. Officer ☐ 4. Other ☐

3. How many years have you work in Technostyle plc?

 1. Less than 1 year ☐ 2. 1- 2 years ☐

 3. 3 - 4 years ☐ 4. 5 years and above ☐

PART II: Questions relates to Supply chain management practices of Technostyle plc. Please tick (√) to indicate the extent to which you agree or disagree with each statement.

I Strategic supplier partnership:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. Your company thinks quality is the best criterion in selecting the suppliers.					
2. Your Suppliers have participation in preparation of specifications					
3. Your Suppliers provide goods prior to payment					
4. Your company continuously solves problems by joint effort with the suppliers.					
5. Your company have provided information to the suppliers for improving their products quality.					
6. There is a honesty relationships when exceptions exist to normal operations					
II Customer relationship:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. Your company frequently interact with customers to achieve reliability and to improve some basic standards for the company					
2. Your company frequently measure and evaluate customer satisfaction.					
3. Your company frequently determines future customer expectations.					
4. Your company periodically evaluates the level of relationships with customers.					
5. Your company develops metrics that are related to the customers' impact on the company's profitability					
III Level of information sharing:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. Your company regularly inform to the trading partners before changing needs and demand.					
2. Your company share continuous (uninterrupted) information with trading partners.					
3. Your company's trading partners informed about the issues which affect the operations of your business.					

4. Your company facilitates business knowledge/ experience sharing program with Your Trade partners.					
5. Your company exchange information with trading partners to establish a business plan.					
6. Your company shares business knowledge of core business processes with trading partners					
IV. Quality of information sharing:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. Information exchange between your Company and trading partners is timely (not delayed).					
2. Information exchange between your Company and trading partners is accurate (targeted to do something).					
3. Information exchange between your Company and trading partners is complete.					
4. Information exchange between your Company and trading partners is adequate (enough in quantity and quality for a particular purpose)					
5. Information exchange between your Company and trading partners is reliable					
V. Internal lean practice	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. Your Company strives to reduce time wastage in operation					
2. Your Company has continuous quality improvement programs.					
3. Your Company produces only what has been ordered by customers (pull production system).					
4. Your Company pushes suppliers for shorter lead times.					
5. The company streamlines (simplifies) ways to provide better services for the customer					
6. Your company has changed paper works in to ICT system					

PART III. Questions related to the level of Company performance

Regarding level of organizational performance, please tick (√) to which best indicate your company's performance.

Company performance: how well the company achieves its performance in the past five years.	**Significantly decrease**	**Decrease**	**Same as Before**	**Increase**	**Significantly increase**
1. The company's market share					
2. The company's return on investment					
3. The company's volume of sales					
4. The company's profit margin on sales					
5. Overall competitive position related to the company's product					

PART IV: Questions related to Challenges of improving SCM practices

Regarding level of Challenges of improving SCM practices, please tick (√) to which best indicate your company's performance.

Difficulties of improving SCM practices in the case Company	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. There is a management commitment to improve the SCM activities					
2. The right person (skilled manpower) is assign on the area of SCM activities in the Company					
3. The government policies encourages to develop long-range relationship with suppliers and customers					
4. The company facilitates performance improvement training to the employees					
5. The company has clear Organizational Structure					

If any comment you well come:…………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………….

THANK YOU!!

Appendix -2

Interview Questions to the Technostyle PLC Top Management

1) How do you look your company's Supply chain management practices?
2) Do you have a long term (strategic) relationship with suppliers and customers?
3) How do you evaluate the level of relationships with suppliers and customers in terms of quality of information and material, level of intimacy, strategically supporting and etc.?
4) How is the level of involvement of your suppliers and customers in joint planning, forecasting and sharing supply chain information?
5) Do you have exchange information honestly with your trade partners?
6) How do you evaluate the quality of information that you exchange with your trade partners?
7) Does your company have waste minimization mechanisms? Please explain in terms of product process minimization, smooth infrastructure, clear information communication, fast response to the customers and etc.
8) How does your company manage the performance of all the above SCM practices?
9) How do you measure the performance of your Company?
   Please explain briefly company performance indicators
10) Do you think that SCM practices have an effect on the company performance?
11) What difficulties are faced in the improvement of the company's SCM practices?
12) If you have anything to say.

Thank You!!!