WOLKITE UNIVERSITY
SCHOOL OF GRADUATE STUDIES

SUPPLY CHAIN MANAGEMENT PRACTICES OF K.O.J.J FOOD PROCESSING COMPLEX PLC

BY

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A THESIS SUBMITTED TO THE DEPARTMENT OF MANAGEMENT, COLLEGE OF BUSINESS AND ECONOMICS, SCHOOL OF GRADUATE STUDIES WOLKITE UNIVERSITY IN PARTIALS FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA)

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JUNE, 2018

WOLKITE, ETHIOPIA

Declaration

I, Tefera Zerga, declare that this thesis entitled: **Supply Chain Management Practices of K.O.J.J food processing complex plc** is outcome of my own effort and study and that all sources of materials used for the study have been duly acknowledged.

To the best of my knowledge, this study has not been submitted for any degree in this University or any other University. It is offered for the partial fulfillment of the degree of Masters of Business Administration.

By: Tefera Zerga

Signature……..

Date……..

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We, the undersigned, members of the Board of Examiners of the final open defense by Tefera Zerga have read and evaluated his thesis entitled "Supply Chain Management practices of K.O.J.J food processing complex plc", and examined the candidate. This is, therefore, to certify that the thesis has been accepted in partial fulfillment of the requirements for the degree of Masters of Business Administration.

Name of the Chairperson …… Signature……. Date……..

Name of Major Advisor ……Signature……..Date……..

Name of Internal Examiner ……Signature…… Date……..

Name of External examiner ……Signature ……Date…….

SGS Approval

Final approval and acceptance of the thesis is contingent upon the submission of the final copy of the thesis to the School of Graduate Studies (SGS) through the Department/School Graduate Committee (DGC/SGC) of the candidate's department.

Stamp of SGS

Date……..

Acknowledgment

I am using this opportunity to express my gratitude to everyone who supported me throughout the research work. First and foremost my gratitude directly goes to the God Almighty, the creator and sustainer of all, for in Him I live and move and have my being.

I would like to give my grateful appreciation to my Advisor, Shiferaw Mitiku (PhD) and my co-advisor Sintayehu Fiseha (MBA) for their constructive idea especially, their vital and prompt advices, comments, suggestions and encouragements throughout this study. I appreciate also all my instructors, in one way or the other you brought a lasting impact in my life and future career.

I am also thankful to those staff of the K.O.J.J food processing complex plc who welcomed me into their organizations and working environments to undertake the data gathering necessary for this thesis. These participants were not only exceptionally helpful and receptive to this research, but gave of their valuable time willingly; I would like to say thank you so much.

I am very thankful to my best friends Kebede Demissie, Bereket Asfir and my families for their continuous encouragement and always stood beside me for the success of this study.

I would like to thank my colleagues from Wolkite University procurement and property administration directorate who provided insight and expertise that greatly assisted the data input for the research work.

At the end my most sincere thanks are addressed to my lovely wife Meseret Abza, my son Yohanis. To name a few: Amdemichael Birhanu, Yared Alemu , Mifta Abdela, Simret Tesfaye, Tariku Tewaju, Semeru Mohamed and my sister Tsehay Zerga, thank you for believing in me, supporting me, and reminding me of what is really important in life.

The Researcher

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Acronyms and Abbreviation

CLM: - Council of Logistics Management

CSCMP: - Council of Supply Chain Management Professionals

CPFR: - Collaborative Planning, Forecasting and Replenishment

IS: - Information system

IT: - Information technology

SC: - Supply Chain

SCM: - Supply Chain Management

SCR: - Supplier and Customer Relationship

HRM:-Human Resource Management

PLC:-Private Limited Company

SPSS: - Statistical Packages for Social Science

GDP: - Gross Domestic product

SCI:-Supply Chain Integration

HR: - Human Resource

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ABSTRACT

Supply chain management is the means by which firms engaged in creating, distributing, and selling products, can join forces to establish a supply network. The supreme competitive advantage-has emerged as one of the most powerful business improvement tools around is supply chain management. Companies all over the world are pursuing supply chain as the latest methodology to reduce costs, increase customer satisfaction, better utilize assets, and build sustain their revenues. The purpose of this research paper was to assess the practices of supply chain management practices from the five supply chain management practices perspectives (Supplier and customer relationship, internal operations, information sharing, information technology and training) and to see the integrations among supply chain partners. For the accomplishment of this, the study employed descriptive research design in which the selections of the respondents using stratified simple random sampling techniques. The total numbers of K.O.J.J food processing complex plc employees are 773 out these, 125 employees and there are 150 enterprise level customers and raw material suppliers among those 32 raw material suppliers and industrial customers would have been considered as a sample unit. Furthermore, one general manager and five functional managers were interviewed. A primary source of data was used for this study. Five point Likert scaled questionnaire and interviews have been used as instruments for data collection. The data were analyzed using descriptive and inferential statistical tools presented in tables. The major finding indicates that, most supply chain management practices are moderately practiced within the K.O.J.J''s food processing complex plc supply chain. Whereas information technology and training practices are poorly applied. Sales forecast information sharing with customers is poor. Based on both quantitative and qualitative analysis the case factory relationship with its customers and suppliers would be poor customers' services. Manufacturing, supply and demand uncertainties which are the major headaches or challenges of the case factory supply chain which prohibits effective implementation of supply chain management. Therefore enhancing organizational objective effective and efficient, it is better for the organization to give due attention to the make supply chain management practices and the integration of supply chain actors effective.

Keyword: supply chain management, Supply Chain integration, customer service

CHAPTER ONE

1.1 Background of the study

Mentzer, (2001) define supply chain as: "a set of three or more entities organizations or individuals directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer."

The above given definitions of supply chain tell us that it is the efficient and effective inbound and outbound transaction of goods, service, information and finance that necessitates supply chain management. Thus, the process of integrating organizational efforts and managing these two sides of a business activity is a very crucial task, and these days we use to refer this value addition effort as „supply chain management". In addition to this in order to deliver their products to their customers companies use to go through different means.

According to Cooper *(*1997) SCM is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders."

Here, the most important question is that, how a given company efficient is? Must be engaged using different criteria so as to determine the level of fit to mission and goals .The answer seems very easy but it's complicated because no one can answer this question without understanding the concept of SCM thoroughly. This is to mean that this question worth measuring practice of supply chain management

Therefore, this study intended to address the gap related supply chain management practice by adapting different backgrounds mainly those variables related to practice of supply chain management, resulting from previous studies in the area. Hence, in the following section of this paper we would have seen different concept and intended ways of practice supply chain management of K.O.J.J .food processing complex plc.

The current economic environment in Ethiopia has been providing opportunities for the private sectors to participate actively in investment activities as different to the previous government policies which put investment activities under government control. Among these investment areas food sector is the one (Assefa, 2011).

Because of globalization, high level of competition, change in market demand and the rapid adoption of subcontracting or out sourcing, today's organizations are operating in a "work together" business environment. As far as the business world is worried the customer, who is perceived as the ''king'', is the leader of change in the market place. Their changing attitudes are pushing businesses to change round their strategies. In general, business environment is characterized by distrust and volatility. Therefore, adopting a more integrated approach to SC relationship management has been increasingly viewed as a way of meeting changing customer needs Eyong, (2009).

As it was mentioned by Neeley, (2006) that Forrester was the first researcher who gave the concept that would eventually become Supply Chain Management (SCM). Forrester's theory of distribution management was introduced in 1950's. This theory was about an understanding of inter-organizational relationships and coordination.

SCM has raised the interest in the past years as organizations started to realize that, the actions taken by one member of the chain actually have an influence on the profitability of other members in the chain. This scheme generated the act of competing as a part of supply chain against the other supply chains instead of competing as a single firm against other individual firms Silver, (1998).

This is due to the fact that, now a days the new source of business competition lies outside the walls of organizations, and it is determined by how effectively companies link their operations with their supply chain partners such as suppliers, manufacturers, distributors, wholesalers, retailers and end customers Silver.*et al*, (1998). Therefore, Supply chain management offers a management philosophy to manage activities and integrate with down-streams, up-streams as well as firms internal supply chain operations Ross, (1998).

With the growth of inter-network competition, individual business may no longer compete individually as independent company but must do as supply chains. Companies associated in the same network require efficient supply chain integration in order to optimize their collective performance. Moreover, numerous companies have started to appreciate that, as SCM plays a major role in building a sustainable competitive advantage for their products in highly competitive markets Jones, (1999).

Because of the collaboration between members of the chain, supply chain management gives significant opportunities to the firms involved in terms of cost reductions, revenue enhancement, flexibility, customer satisfaction, speed and economy of time Forrester, cited in Neeley, (2006).

The general understanding of the business environment in most industries as, competition has been increasing and the condition under which business is running becomes more worried. By understandably this, many companies are now focusing on improving and developing their supply chain processes because it can play a significant role in customer service and their profitability Morten, (2003).

Currently the Ethiopian business environment is becoming customer based, competitive and technology based. Hence, it is unquestionable that companies should build an integrated and efficient system through which resources would flow in a unified and prompt manner across the supply chain. The current practices of Ethiopian manufacturing industries with regard to supply chain management is traditional in that, partners involved across the supply chain act independently in designing, developing and executing strategies with minimum effort made to align strategies with the partners doing business with them particularly suppliers, whole sellers, distributors, and end users Assefa, (2011)

As a coping up strategy suggests that the relationship with suppliers and other partners should be supported with an appropriate level of collaboration, information technology, information system and lean- agile principles Russell, (2006). Therefore, the researcher would have, thus, been inspired to conduct a study on the practices of SCM in K.O.J.J food processing complex plc and forward possible suggestions that would have been enable the factory to be competitive.

K.O.J.J Food Processing Complex plc is established in 1994 Ethiopian calendar year and occupies that has the great market share in Ethiopia by manufacturing quality product. Over the last 15th years of its existence, this massive industry had been consistently excavating a wealth of experience in industrial production and marketing of a mix of food products. The factory used to be widely popular for its traditional out puts branded a ‘‘Sarem Biscuit’. By now K.O.J.J Food Processing Complex plc has grown in to a for-reaching standing for mounting quality and taste of its products among the consumer public all over the country. K.O.J.J food processing complex plc enjoys on ideal foundation located at Gulele sub city the center of Asko11 Kilo meters away from metropolitan Addis Ababa. It is located on the Addis Ababa –Ambo main road.

1.2 Statements of the problem

Companies which have recognized opportunities that exist there is the SCM and directed their effort towards developing a competitive supply chain based on speed, flexibility, innovation, quality & responsiveness had significantly improve customer service and their profitability. Therefore, the primary goal of supply chain management is to enhance competitive performance by closely integrating the internal functions within a company & closely linking them with external operations of suppliers, customers, and other channel members Kim, (2006).

For seeking the efficient and effective cooperation between organizations of a supply chain, each chain member must seek not only to improve its own individual competitiveness (i.e. quality, cost, delivery lead time, and etc.) but also improve the competitiveness and performance of all creativities in its supply chain. This involves sharing of information, working together to reduce costs, cut lead-time and building total quality into all the stages of the supply chain Davis, (1993).

The majority of food processors operate individually without any strong relationship with their partners apart from sell-buy relationship. Each member within the network seeks to optimize individual profit rather than the entire supply network. This is an implication of yet, reform heterogeneous supply chains is not an easy task, since each business entity has individual work

structure, organizational structure, work flow, information flow, and culture Makweba & Xu, (2009).

On the other hand Lee *et al., (*2000) suggested that trading partner companies, should get out of mere coordination and move towards collaborative SCM in an effort to reduce the information imbalances that result in the "bullwhip'' effect, while increasing their responsiveness to market demand and customer service.

A food supply chain is complex, time-critical and dynamic. Therefore, food supply chain needs effective management, integration, knowledge, and due attention throughout the supply chain. If properly implemented SCM can improve the company's responsiveness, flexibility and efficiency Olsson and Skjolde, (2008).

However, most of the researches related to the supply chain managements practices were carried out in developed countries which have different economic, political, technology, social, legal and cultural status. As a result, it may be difficult to directly apply and generalize that the same practices and collaboration as well as problems of SCM exists in Ethiopia. This is because of Ethiopia has different Economic, political, social, legal and cultural status related with other countries.

In Ethiopia the practice of integration, collaboration, and having willingness and the trend of managing the SC from supplier to the customer is traditional i.e., not more than just buy–sell/ transactional relationship. Even if there is SC by default it is not well managed, and implemented for getting the benefits resulted from effective SCM. So that, each partners with in the SC are using their own individual efforts to improve their own competitiveness like, quality, cost, delivery lead time, and etc but it is not as such effective.

One of many management philosophies that increase the growth, flexibility and management efficiency in SCM, that operate under an integrated, collaboration and efficient value chain all over the world but its effective implementation varies country to country. In the other extreme, there are many research works on various business practices in Ethiopia particularly; financial performance, technology application, human resource aspects and etc. Unfortunately, the investigator of this paper would have been hardly come across sufficient research works on this

timely global management philosophy, SCM which affect competitive advantage in many proxies if it is managed well.

In the Ethiopia case Arkebe (2015) pointed out that despite government efforts to put the Ethiopian economy on a high growth path, the share of manufacturing in GDP remains low and the sector is characterized by many structural constraints such as low productivity, low value and lack of international business practice. The sector currently employs around 100,000 citizens, plays a vital role in import substitution by saving a significant amount of foreign currency by substituting imported products by locally produced ones. Hence, as the sector creates employment opportunities, saves foreign currency and is one means in transforming the country's economy from agriculture lead to industry lead economy, due consideration should be given to the sector at large.

Yet limited researches have been accomplished in the area of SCM practices in the Ethiopian manufacturing companies. Scientific study on such knowledge gap is needed and this deficiency that the study seeks to fill. Furthermore, this research has been motivated by existing gaps, namely lack of adequate knowledge of managers in supply chain management the trend of managing supply chains from suppliers to customers being traditional which is not more than just a buy and sale (Transactional) relationship. In addition to this, to find out the practice of the existing Supply chain management and to know the existing problems and hindering factors in the product manufacturing and distribution processes.

In addition to this, to find out the level of the existing supply chain system and to know the existing problems and hindering factors in the product manufacturing and distribution processes. Studying the level of integration in case factory and to assess the relationship between case factory and its suppliers and enterprise level customer is necessary since, to select and use the most efficient and effective supply chain in which to place a product in to the hands of the customer is very important for such food manufacturing companies.

Therefore, the overall intention of this study would have to assess the case factory's orientation towards supply chain management practices and its performance level pertaining to customer service.

1.3. Research questions

The study has primarily aimed to answer, what are the practices of SCM in K.O.J.J food processing complex plc. More specifically to answer the following basic research questions.

- How supply chain management is being practiced at K.O.J.J?
- How supply Chain collaboration/integration is exercised by K.O.J.J with Supply Chain key players?
- How the case factory is working towards integrated internal operation for customer service?
- What are the factors that affect the case factory supply chain management practice?

1.4 Objectives of the study

The general objective of this paper was to assess the practices of supply chain management in the case of K.O.J.J food processing complex plc.

More specifically the study was try to achieve the following objectives:

- To examine the existing practices of supply chain management from the five SCM practices perspectives;
- To investigate the extent of collaboration and integration among the SC partners;
- To examine the K.O.J.J's orientation of internal operation towards customer service.
- To investigate the factor that affect SCM practice of case factory.

1.5 Significance of the Study

Primarily, this is a study undertaken in an environment where the practice of SCM has yet to mature. In Ethiopia, where there are limited bodies of existing knowledge in the area as well as the growing importance of the sector in the country. Hence, this research will contribute for the development of the discipline in this environment.

More specifically, research endeavors are limited within K.O.J.J food processing complex plc underline the importance of sufficient and relevant information for planning and making successful decisions about a marketing strategy of case factory.

Additionally, this research will serve as a point of departure for further research by academicians because the concept of this research is new for the country.

For policy maker the concept is new for Ethiopian overlays the way for educators or training institutions to consider when designing training on the issues relating to the SCM. Since the sector is get attention by the government in growth and transformation plan and by respective stakeholders, it would be useful to know the practice and challenges related to SCM in the sector.

1.6 Delimitation of the Study

The principal concern of this study is to examine supply chain management practice of responsiveness, collaboration, flexibility and related activities of K.O.J.J food processing plc.

The main limitation of this study is that the research is conduct only on case factory and the findings may not indicate the general situation in other organization. Unavailability of well documented and organized secondary data was the limitations. Moreover, the employees are not willing to distribute and collect the data on time. Despite the limitation mentioned, the data were collected by probing respondents through clarifying the aim of the research.

The subject scope of this study would also limited to the factory's point of reference towards collaboration, supplier and customer relationship, information sharing, information technology, internal operations, training of SCM and customer services and also challenges/Barriers of effective SCM. The area of the study also limited to the case factory i.e., K.O.J.J food processing complex plc and the down streams and upstream of the supply chain.

1.6 Definition of terms

Bullwhip effect- It is the distortion of information within the supply chain which lead to an increment of inventory fluctuation than really expected Assefa, (2011).

Logistics- is the management and movement of goods, services, information and other resources from the point of origin to the point of consumption including storage and warehousing Eyong, (2009).

Lean logistics: Means doing more with less time, less space, less human effort, less machinery, less material with high cost precision and giving the customer what they want Eyong, (2009).

Integration: Is the process of combining or coordinating separate function processes, or producers and enabling them to interact in a seamless manner Sunil, (2004).

Supply chain: Is all inter-linked resources and activities needed to create and deliver products and services to customers Sunil, (2004).

Supply Chain Management: Is a network of relationships, with the goal to deliver superior value, the management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole Christopher, (2005).

Customer service: - is the output of the supply chain management which includes such factor as order completeness, cycle time, and consistency of performance, responses to error and requests for information, special requests, and services Ellram, (1989).

1.8 Limitation of the study

The research sample didn’t incorporate all the SC participants namely: the end users in the sample due to time and financial constraint so that it couldn't be generalized/applied to the complete SC of the factory under investigation.

Hence to made this study easily and timely managed only internal operation, supplier and customer relationship, information sharing, information technology (IT) and training practices of supply chain management incorporates in this study other practices of SCM doesn't incorporated.

Since the supply chain management practice of the factory is peculiar to itself, it is difficult to generalize the findings of the study to other firms in the food industry in Ethiopia. Finally, the supply chain performance measures presented in the study are only a proportion of the potentially relevant variables that might have been included these measures only serve as examples and special attention is rather paid for structuring the vast major of measures. And therefore it is important to note that the findings of this study can only be used for comparative purposes not to generalize.

1.9 Organization of the Paper

This research paper has organized into five chapters: Chapter one contains the introductory part dealing with back ground of the study, the research problem, basic research questions, objectives of the study, delimitation/scope of the study, definitions of terms, and significance of the study and limitation of the study. The second chapter deal with discuss the related literature review about the subject matter ,empirical review, conceptual frame work and identified literature gap. Chapter three deals about the research methodologies would have been presented. Under the third chapter, the type and design of the research, the subjects/participants of the study, the sources of data, the data collection tools, the procedures of data collection, sampling procedures the methods of data analysis, ethical clearance, reliability and validity were described. Chapter four summarizes the Results, Discussion and interpretations. Finally chapter five comprises three sections, which includes summary of findings, conclusions and suggestions.

CHAPTER-TWO

Related Literature Review

2.0 Introduction

The literature review of this study is composed of basic theories which provide evolution, definition and explanation about supply chain management, supply chain management practices, and related works which is presented by different scholars, identified research gap and finally the conceptual framework of the study which is constructed based on the theoretical framework.

These days, competitive global market has high influence on business activities whether they are local or international on their own. Apparently, supply chains as the key part of global business are needed to be considered in particular. In supply chain management, it is necessary for industries to develop and organize networks of activities involved in procurement, production, delivery of production and delivery of products globally. Since its introduction in the early 1980s, supply chain management (SCM) has become one of the most popular concepts within management in general and within logistics in particular Baharanchi, (2009). Most of definitions of SCM are related to integration: "the entire concept of SCM is really predicated on integration" Carter, (2009).

2.1. Theoretical Literature Review

2.1.1Definition of Supply Chain Management

The known authors Heizer and Render (2011), stated by Wondimeneh, (2013) define SCM as the integration of the activities that attain materials and services, transform them into intermediate goods and final products, and deliver them to customers. These activities include purchasing and outsourcing activities, plus many other functions that are important to the relationship with

suppliers and distributors. SCM includes determining transportation vendors, credit and cash transfers, suppliers, distributors, warehousing, and forecasting and production information. Also the Council of Supply Chain Management Professionals (CSCMP), (2012); consider supply chain management encompasses the planning and management of all activities involved in sourcing and procurement and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, SCM integrates supply and demand management within and across companies. Also some studies expand that SCM also encompasses recycling or reuse stated by Baatz , (2001).

2.1.2 Historical Development of Supply Chain Management

Before the term supply chain was invented, the term used for management and movement of product and services was logistics. The development of logistics was originally undertaken by the military in ancient times (Cited in Britannica, 1994). Therefore Supply Chain Management is driven from Logistics concept. The term supply chain management was coined in, 1982 by Keith Oliver, a management consultant at Booz Allen Hamilton, Cortada, (2001) cited in Assefa, (2011). Oliver used the term to develop a vision for tearing down functional storing that separated production, marketing, and distribution.

As Cortada stated the concept was enlarged upon efficiencies and mutual benefits associated with information sharing and decision coordinating to up and down a supply chain. In 2005, the Council of Logistics Management (CLM) changed its name to the Council of Supply Chain Management Professionals (CSCMP) (Council of SCM, 2005 cited in Christopher, 2005).

2.1.3 Drivers of Supply Chain Development and main initiatives

In today's global economy, companies face increasing pressure to reduce costs while maintaining production and quality levels to deliver products and service to the customers or end users.

Hand Field, (2002) summarized the basic drivers for SC development as: Ever-increasing customer demand in terms of product and service, cost, quality, mode of delivery, technology, and cycle time brought by global competition.

Companies all over the world are pursuing supply chain as the latest methodology to reduce costs, increase customer satisfaction, better utilize assets, and build new revenues. In order to achieve these goals, companies must successfully overcome a numbers of challenges/ problems Makweba & Xu, (2009).The consequence of this development is that companies are putting more and more efforts/change the strategies in order to developing new ways to increase competitiveness on the market in terms of more efficient and effective by applying supply chain management as core competency.

2.1.4 Key Components of Supply Chain Management

According to Johnson and Pyke, (2000) to help discussion they identified twelve areas of SCM, from their own experience of teaching and researching supply chain management, from analysis of prospectus and research papers on supply chain, and from their discussions with managers. These twelve categories they identified and defined are: location, transportation and logistics, inventory and forecasting, marketing and channel restructuring, sourcing and supplier management, information and electronic mediated environments, product design and new product introduction, service and after sales support, reverse logistics and green issues, outsourcing and strategic alliances, metrics and incentives, and global issues. So that when anyone think about SCM should have to consider these issues.

2.1.5 Collaboration in Supply Chain

The core of supply chain there has to be mutual trust among parties. This trust must be based on agreed-upon methods and technology to assure maximum cost savings and increased profits for

all parties. Normally this trust starts with supply chain management planning and collaboration. Planning constitutes the strategic aspect of the supply chain. It centers on a strategy for managing all the resources that go into meeting customer demand for a particular product or service. In fact, the emphasis on planning continues to grow. However, one difficult challenge of planning is developing a set of metrics that helps a company monitor its supply chain activity. A good set of metrics keeps the system focused on efficiency and cost savings, as well as sustainable value and high quality for the customer Robert Malone, (2003).

Supply chain collaboration has been a major component of competitive strategy to enhance organizational productivity and profitability. Collaboration is a recent trend in supply chain management that focuses on joint planning, coordination and process integration between suppliers, customers and other partners in a supply chain. Its competitive benefits include cost reductions and increased return on assets, and increased reliability and responsiveness to market needs Bogale A. (2015).

Supply Chain Management is now recognized as a critical business process for companies manufacturing or distributing products. This is because customers' demand for most products are ever more demanding in response time, in choice and in seeking more competitive prices and thanks to globalization, customers can choose from an increased number of suppliers Lazarovic *et al.,* (2007).

2.1.6 Practices of Supply Chain Management

SCM practices are defined as a set of activities undertaken in an organization to Promote effective management of its supply chain. Many manufacturers and distributors are waking up to the potential for the major cost reduction and service improvements offered by implementing best practices in their supply chain.

A number of literatures show many different perspectives of SCM practices Tan *et al.*, (2002); Chen and Paulraj (2004); and Li, (2002) and (2005). These different writers perspectives suggested a multi-dimensionality of SCM that covers set of activities and processes from upstream, firm's internal operations to downstream of the supply chain.

There are five basic dimensions/perspectives of supply chain management practices. These are namely; supplier and customer relationship, information sharing, internal operation, information technology and training Perry and Sohl (2000); Lazarovic *et al.*, (2007).

2.1.6.1 Supplier and customer relationship

Supply chain management is the integration of key business process from supplier to end user so as to provide products, services and information that add value for customers and other stakeholders. This integrative approach aims at synergizing efforts created through linkages, controlling, cooperation, distribution channel relationship for the benefits of all parties involved, to maximize efficient use of resources in delivering customer satisfaction, effectiveness and efficiency Sanjeev Lalhotra, (2014).

Steven, (1990) describes the objective of the supply chain management is to achieve a balance between goals of high customer service, low inventory investment. It helps to create a competitive advantage and greater profitability for the channel through coordinated attention to costs, better customer service, and lower inventories. Between the business and the customers there are close relationships that allow identifying the benefits from the strategic point of view of the system functionality. The management's attention should focus not only on the business, but also on the interactions giving logistical system functionality. Adriana Scrioteanu, (2015).

Supply chain relationships play an important role in achieving the firm's goals. The coordination and integration of activities with suppliers and understanding of customer's needs results in greater benefits for companies. According to Fraza (2000), supply chain management is directly related to relationship management, which includes suppliers and customers. Strategic supplier partnerships and customer relationships are main components in the supply chain management practices (Li *et al*., 2005), leading to information sharing, which is one of the five pillars in achieving a solid supply chain relationship Lalonde, (1998).

2.1.6.2 Internal operation

Internal supply chain refers to the chain of activities within a company that arranges with providing a product to the consumer. This process involves multiple functions within company's sales, production and distribution. It is obvious that these functions need to be integrated in order to deliver good customer service.

According to Lambert and Cooper, (2000) to make supply chain management successful, a company must have cross functional integration, supply chain management is increasingly known as the "management of multiple relationships across the supply chain.

2.1.6.3 Information sharing

The globalization of markets and manufacturing has forced the management of supply chains to consider not only business processes in the traditional value chain, but also processes that penetrate networks of organizations. Information and knowledge is very important in the daily running of any business. The success and failure of any organization can be determined by how information and knowledge is shared and utilized internally across functions and strategically to integrate and collaborate with suppliers and customer Thawatchai, (2005).

According to Li *et al (*2006) by taking the data available and sharing it with other parties with in the supply chain, information can be used as a source of competitive advantage. Information sharing means distributing useful information for systems, people or organizational units. While information sharing is important, the significance of its impact on supply chain management depends on what information is shared, when and how it is shared, and with whom.

2.1.6.4 Information technology

With the realization of global competition and advances in information technology, the utilization of information technology can have a direct effect on value creation by integrating firms supply chain activities resulting in higher quality products, improved productivity, efficient machine use, reduce space and increased efficiency and flexibility. Increasingly, IT is used to facilitate internal coordination with in firm and enhance external integration with external constituencies' customer and supplier and also to enhance decision making among supply chain members. IT provides competitiveness to firms such as creating value for customers, creating value for companies, optimizing or integrating value chains through IT to improve competitiveness and accommodating the creation of a new value chain Assefa, (2011).

Nowadays, hence IT is involved in every step of operation in each company, therefore it is not surprising that organizations' Supply Chain Management supported by adopting IT. Talluri, (2000) makes the comment that the advances in IT systems have given opportunities for organizations' to transform the way they manage their business.

Li *et al*, (2005) reviled that, the objectives of IT in SCM are; to provide the information availability and visibility to supply chain partners, to enable the collaboration with organizations in the supply chain and to allow the decision making based on the total supply chain information.

2.1.6.5 Training

Research conducted by Naveed R. (2013), Syed M. Taha (2013), Arsalan M, (2013). Ghouri1, (2013) Mustafa R. Khan, (2013), Chee K. Yong, (2013) shown that the research demonstrated that SCM success is activated by HRM practices. Hence it proved the argument that HRM significantly amplified the level of supply chain success. Moreover, trained and motivated employees and managers contributed effectively under supply chain management practices. This study found that by applying HRM practices at modest level and if linked with SCM, an organization can enhance SCM effectiveness. This would provide an edge to lead in the competitive markets. Moreover, the integration of best HRM practices with SCM has significant

effects on organizational performance as well cited in (2009) Souviron and Harrison, (2007); Shub and Stone braker, (2009); Mac Duffie, (1995). Indeed this integration provides an edge over those who either focus on human resource management or supply chain management. The finding clearly indicated a unidirectional effectiveness of HRM on supply chain, which is not vice versa. It means that organizations need to focus more on HRM not only to improve the performance of employees but also to enhance the supply chain management success.

The major concept of SCM is collaboration and seamless integration between various value adding activities with in individual companies and across different organizations along a supply chain. Beginning this concept in to practice requires significant changes in corporate culture as well as a new level of human performance. Successes full implementation of SCM concept largely depends on human aspects of organizations Bowersox *et al*, 2000; Mentzer, *et. al*. 2004).

2.1.7 Supply Chain Performances

Empirical studies by Ross (1998), confirmed the theory that, SCM practices considerably improve companies performance. Moreover, the results specifically highlight that IT and information sharing significantly contributes to more performance measures than supplier and customer relationship practice.

With regard to the relationship between SCM strategies and operational performance, Tan *et al*., (2002) observed that the following SCM-related strategies were significantly related to overall product quality and overall customer service: namely determination of customer's needs, reduction in response time and supplier delivery time, improvement of integration activities, trust among supply chain members, communication of future needs, use of information sharing, and assistance of suppliers in JIT (just in time) capability.

Customer service: - is the output of the supply chain which includes such factor as order completeness, cycle time, consistency of performance, responses to error and requests for information, special requests, and services Ellram *et. al*., (1989). The performance outcome objectives of SCM are improved efficiency (cost reduction) and effectiveness (improved service).

Customer service activities, as an important component of supply chain management, should be aimed at delivering of same level of service at a lowest cost or improved level of service at the same cost to deliver value to downstream customers.

A successful SCM implementation is expected to enhance the relationship between upstream suppliers and downstream customers, and thereby increase customer satisfaction and firm performance. Prior research has indicated SCM performance as a key driver of firm performance

Everyone agrees that effective supply chain management can provide a major source of competitive advantage. The goal of a supply chain manager must therefore be to link the end customers, the channels of distribution, the production processes and the procurement activity in such a way that customers' service expectations are exceeded and yet at a lower total cost than the competition.

2.1.8 Challenges /Barriers of Supply Chain Management

Most SCM related-problems mainly occur from uncertainties and an inability to co-ordinate several activities and partners Turban *et al,* (2000).

Fawcett, (2001) identified top ten barriers to supply chain management these are: Inadequate information sharing, Poor/conflicting measurements, Inconsistent operating goals, Organizational culture or structure, Resistance to change- lack of trust, Poor alliance management practices, Lack of supply chain vision or understanding, Lack of managerial commitment, Constrained resources, No employee dedication/ empowerment.

Currently, companies are striving for lower cost so that they will be competitive in the market while they have to maintain their service level. The key factor to offering the features that the customers want at the level of service they are willing to pay for is to minimize the lead time. One approach suggested to solve this problem is synchronized material movement where all parts of the supply chain have access to the information at the same time Waters, (2003).

2.1.8.1 Uncertainty

SCM basically comprises of suppliers, manufacturers and customers. Manufacturers usually enter into a very complex relationship with suppliers in a supply chain that involves numerous sources of uncertainty. Generally Davis, (1993) identified three major sources of uncertainty: manufacturing, demand and supply uncertainty:

Manufacturing uncertainty: Machine breakdowns that lead to the postponement of production, poor process design that causes a bottleneck in production or produces product of poor quality, are the manufacturing variables accounting for the late delivery and reduction in customer satisfaction.

Demand uncertainty: Irregular orders from inconsistent customers may easily mislead manufacturers to make wrong forecasts, which cause excess inventory or insufficient supply.

Supply uncertainty: Normally, suppliers fail to commit to promised dates, possibly due to poor material quality, machine breakdowns or deficiency in natural resources and so forth.

Wilding, (1998) states one key issue known to impact on the effectiveness of a supply chain is that of uncertainty. The major source of supply chain uncertainty is the demand forecast, which may be influenced by several factors such as competition, prices, technological development, customers' general confidence, and more.

Other uncertainties exist in delivery times which depend on many factors ranging from machine failures to road conditions and traffic jams that may interfere with shipments.

Levi *et al*., (2003) states some factors interfere to uncertainty, they emphasized the challenge of matching supply and demand, the impact of inventory and forecast, and finally factors except those embrace demand as a source of uncertainty; including delivery lead times, manufacturing yields, transportation times, component availability, and so on can also have significant supply chain impact.

The uncertainty of a business environment has many sources, including the wide variety of customer's needs. Environmental uncertainties are related to how hard it is to precisely foresee

the future Lee *et al*., (2009). According to Sung and Hsu (2009) supply chain performance can be influenced by environmental uncertainties, which can allow deciding about significant aggressive factors to take into account and weigh in for the formulation of a successful competitive strategy.

2.1.8.2 Bullwhip Effect

Another barrier that different companies have been facing in their supply chain is bullwhip effect. The Bullwhip Effect is an observed phenomenon in forecast-driven distribution channels. The concept has its roots in Forrester's Industrial Dynamics (1961) and thus it is also known as the Forrester Effect. This phenomenon has been observed across most industries resulting in increased cost and poorer service.

Hau, *et al*., (2004), concluded as, one of the most common problem that hinder the smooth functioning of SCM is the so-called bullwhip effect which is resulted from inaccurate or distorted information flows. The bullwhip effect has been viewed as one of the forces that paralyze supply chains. The major consequences of bullwhip effects are: inefficient production or excessive inventory, low utilization of the distribution channel, necessity to have capacity far exceeding average demand, high transportation costs and poor customer service due to stock outs.

2.2. Empirical Literature Review

Researches with appropriate analytical methodologies and measuring tools can significantly contribute to investigating work on SCM which analyzed reasons one of weapons or take competitive advantage over the other similar firms when it is well managed. Therefore, the researcher tries to assess some articles towards SCM as follows.

A research conducted on which is entitled by Study on the Effect of Supply Chain Integration on organizational performance show that effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage and improving organizational performance since competition is no longer between organizations, but among supply chains (Salem Samuel 2012).

Another researcher Wondimieneh Sewuye, (2013) conducted his research on to investigate the SCM practices of Ethiopian pharmaceuticals manufacturing companies. So the pharmaceutical manufacturing focus is not only on the single company, rather the overall value chain starting from the raw materials suppliers to the ultimate customers. To be competitive, in long term Sc practice throughout the actors will be managed well is fundamental. Hence organizations not have well managed supply chain with their suppliers, customer and they are not achieve their ultimate goals and objective and also they are not competitive in quickly changed market.

Research conducted by Suhong Bhanu, (2004) entitled the impact of supply chain management practices on competitive advantage this paper provides empirical justification for a framework that identifies five key dimensions of SCM practices and describes the relationship among SCM practices, competitive advantage. For the purpose of investigating this issue a comprehensive, valid, and reliable instrument for assessing SCM practices was developed. They have instrument tested using rigorous statistical tests including convergent validity, discriminant validity, reliability, and the validation of second-order constructs. This study provides empirical evidence to support conceptual and prescriptive statements regarding the impact of SCM practices on competitive advantage.

Different studies show that well managed SCM practices become it is one of non-price competitive tools the strategic weapons for an organization.

2.3. Conceptual Framework

Major components of the Conceptual Framework

After going through tremendous literatures (journals, articles, books and etc.) the researcher has tried to adopt the conceptual frame work of this study in five essential parts: SCM practices, supporting elements of integration and efficiency, challenges of SCM, integration and efficiency, and customer service which is the ultimate goal of collaboration. As the diagrammatical expression of the conceptual framework indicates commonly known SCM practices namely: supplier customer relationship, information sharing, information technology, training and internal operation.

According to Eyong M, (2009) having this practices in a typical organization is not sufficient to judge an enterprise's SCM as integrated and efficient or generally poor. The researcher states that each practice should be measured for their appropriate level of integration and efficiency. To this end, the parameters of supporting elements that were used to measure the efficiency and integration level are collaborative SCM and information systems.

On the other extreme, literatures indicate that SCM is not an easy going management system; It has many challenges especially bullwhip effects and uncertainties associated with strategic Planning and implementation.

According to the conceptual frame work companies that are able to pass through all the practices in an integrated and efficient manner having red off impediment can provide a better customer service which is the ultimate goal of SCM. This conceptual framework is adopted for the purpose of this study. Most components of the framework are adopted from different authors developed at different time; whereas other parts are taken from review literatures, which were findings of some other researchers.

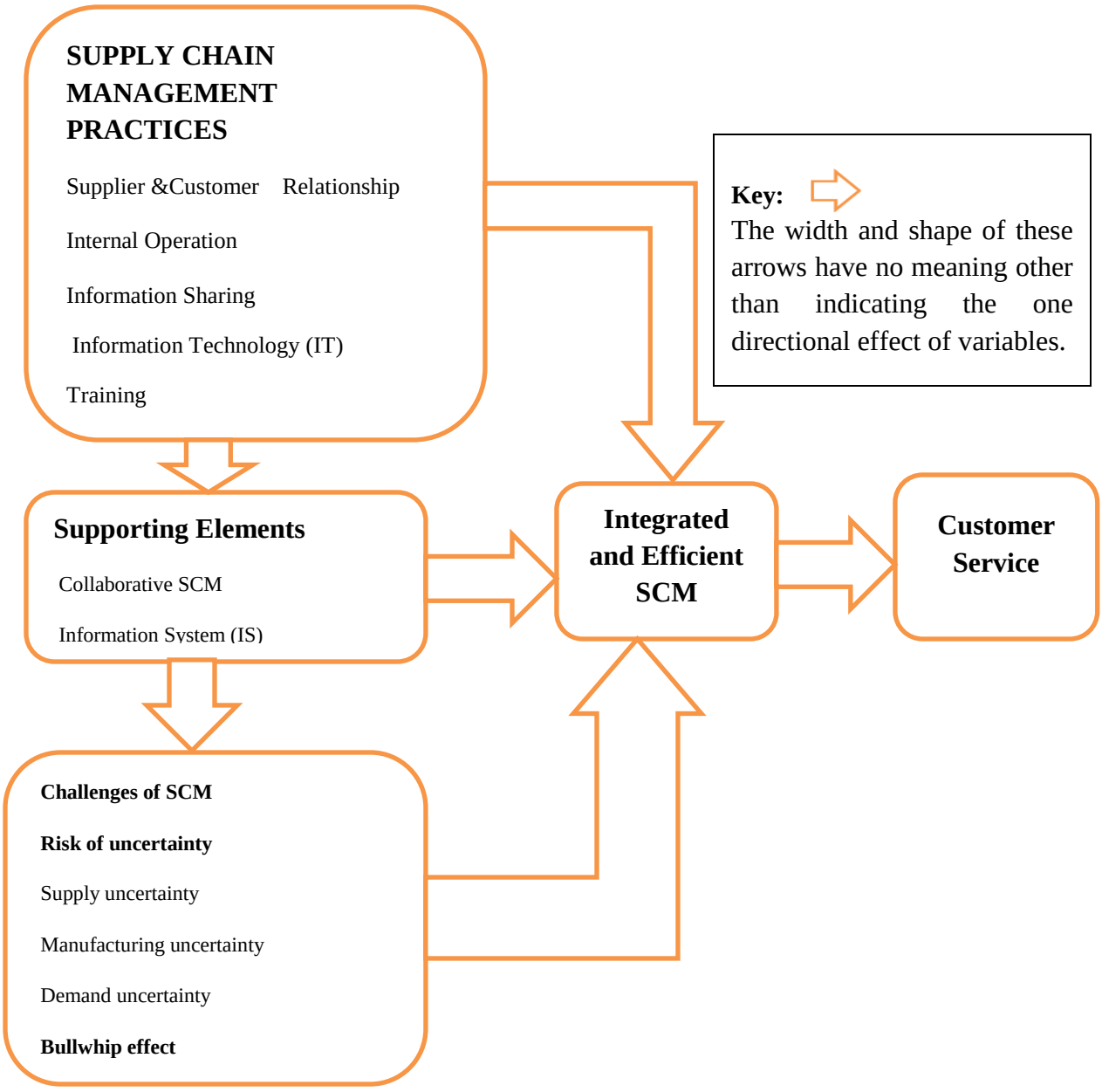

Fig 2.1 Conceptual frame work adopted for this study

Source: Eyong M, (2009)

2.4 Identified Literature gap

The available research to day on supply chain management practice (SCM) is still at the development stage. According to Gold, (2010) referred that "literature on SCM is still limited, and literature reviews are scant".

The food supply chain needs effective management, integration, knowledge, and due attention throughout the supply chain. If properly implemented SCM can improve the organization responsiveness, flexibility and efficiency Olsson and Souled, (2008).

Most of the researches related to the supply chain managements were carried out in developed countries which have different economic, political, technology, social, legal and cultural status. As a result, it may be difficult to directly apply the same practices and collaboration as well as problems of SCM exists in developing countries especially in Ethiopia. This is because of Ethiopia has different Economic, political, social, legal and cultural status than other countries.

In Ethiopia the practice of integration, collaboration, and having willingness and the trend of managing the SC from supplier to the customer is traditional i.e., not more than just buy–sell/ transactional relationship. Even if there is SC by default it is not well managed, and implemented for getting the benefits resulted from effective SCM. So that, each partners with in the SC are using their own individual efforts to improve their own competitiveness (like, quality, cost, delivery lead time, and etc.) but it is not as such effective.

Even if it is clear that, currently other sectors of industry are playing a significant role for the economic growth of Ethiopia, in addition to these sectors it is not a new history that for a long period of time and still now the Ethiopia economy is dominated by agriculture.

Now days there are research work done by Ethiopian MBA students and scholars focusing on different aspects of supply chain management. Recent research work done by Natnael, (2016), Mesfin, (2016), Mebrhatom, (2016), Endale, (2016), Belayhun (2016) , Salem (2012) and other researches. These research works are not show us the actual practice of supply chain management mention other aspects of SCM. Even if there are research works done by Assefa,

(2011) focus on food industry and (Wondimeneh, 2013) focus on pharmaceutical sectors that show practice of supply chain management they have their own limitation.

So all those research works have their own strength it is very difficult to apply directly in other firms because those have different, technological, physical, cultural environments based on those facts generalize other sector actual practice may lead to wrong conclusion. Even researches conducted on food industry not incorporate all supply chain actors which are suppliers or customers. All these researches tell us that there is gap between theory and real world practices.

This work is the primary research thesis work for the K.O.J.J.food processing complex plc it is not done in any other case it is based on really problems that is the factory is facing. Even if there are similar research work done in Ethiopia this research work is different from other research works is that incorporates all the SC actors of case factory and the methodology that the researcher followed was appropriate scientific method. The sample size to represent the population in this research will be selected following appropriate manner. The researcher come across reading different research work and triangulates his research findings with other research works. Because of deviation between actual performance and theoretical aspects so this deviation or gap is minimized by conducting as such conducting research work and show the real gap and an organization take corrective action to make the organization sustain and become competitive.

CHAPTER -THREE

3. Methodology of the study

3.0 Introduction

This chapter describes the methodologies that were used in this study: It includes, the choice of particular research designs, data type and source of data, research approach, data gathering technique and instruments, sampling and sampling techniques, data analysis techniques, validity and reliability of the study along with an appropriate justification associated with each approach.

3.1 Research Design

The study adopted practical investigation with descriptive research design since the major focus of the research is the practices of supply chain management in K.O.J.J food processing complex plc.

3.2 Type and Techniques of Data Collection

The required data for the study were collected using both primary and secondary data collection methods.

Primary data:-Primary data have been collected from employees of the factory, enterprise level customers of the factory and suppliers of raw materials by using a self-administered questionnaire that consist closed ended questions that is designed to collect responses for qualitative and quantitative analysis respectively. Different practical studies used five point likert scales for practices of supply chain management. It is an ideal measurement approach since it helps to ask respondents to rate their opinion for the items of various dimensions. The standard questionnaire is used to collect the necessary information regarding the study is adopted from the work of other studies from (Assefa,2011) and also primary data were collected in the form of personal interviews with procurement and supply manager, production & technique manager, marketing and sales manager and human resource managers, general manager of the factory.

Secondary data: - The source of secondary data for this research different books, researches and research journals as a stepping board for the research.

3.3 Data Collection Instruments

For the data collection purposes, two basic instruments namely, questionnaire and document analysis have been used.

Questionnaire: It is adopted based on the review of the related literature. Because the numbers of respondents are large, this tool is appropriate to gather the necessary data. The items are close ended supplemented with few open-ended interview items for managers of the case factory to get more detail data. The type of questions, from, wording and sequences considered carefully.

Document Analysis: With this data gathering tools, annual sales volumes, journals, books, different scholar's research works and relevant document have been reviewed and gathered from human resource department, production and technique and Marketing & sales. This data gathering tool is used to enrich the data which is obtained through questionnaire method.

3.4. Sample Design

3.4.1 Target Population

The target population is said to be a specified group of people or object for which questions can be asked or observed made to develop required data structures and information. Therefore, for this study, the target populations were employees of K.O.J.J food processing complex plc, suppliers of raw materials and enterprise level customers of the factory were the target population for this study.

3.4.2. Sampling Technique

The researcher has made Stratified random sampling to select the sample from target population for the study. When the researcher used stratified random sampling to select the sample from each functional departments of the K.O.J.J food processing complex plc.

To triangulate the data were gathered from the employee the researcher was selected 32 sample unit by using simple random sampling technique were applied selecting respondents from suppliers of raw materials and enterprise level customers. Selecting the representatives from functional department were followed the method of proportional allocation under which the sizes of the samples from different stratum have relatively kept proportional to the sizes of the stratum. Since the information required for the study needs different people who have knowledge and awareness about different supply chain management practices/dimensions, and organizational performance of the firm. Production/technique department, Marketing & sales, Procurement & supply, HR, and finance departments were considered in the sample. In addition to this four department managers and one general manager of the factory were considered for an interview to representing management bodies because the researcher assumed they had sufficient information regarding supply chain management of the factory.

Based on below table formula 125 employees were selected as a sample unit and to triangulate the information/data were gathered from employees of the factory by using accidental or by using convenience method 27 and 5 questionnaires were distributed for enterprise level customers and suppliers of raw materials respectively.

3.4.3. Sample Size

Malhortra and Peterson, (2006) and Zikmund, (2003) stated that, the larger the sampling size of a research, the more accurate the data generated. However, due to time and financial limitations and the nature of the population, sample determination method developed by J Carvalho, (1984),

Archival application of mathematical sampling technique. Quoted by national Archive report Richmond, (2005) was preferred to be used by researcher as a method to determine a sample size.

Table 3.1: Sample size determination

Population size Small	Small	Medium	Large
51-90	5	13	20
91-150	8	20	32
151-280	13	32	50
281-500	20	50	80
501-1200	32	80	125
1201-3200	50	125	200
3201-10,000	80	200	315
10,001-35,000	125	315	500
35,001-150,000	200	500	800

Source: (J Carvalho, 1984)

3.5. Methods of Data Analysis

The data collected through questionnaire were presented in table form and descriptive statistics has been employed. After making the necessary coding, to analyze the usable data were collected from respondents Statistical Package for Social Sciences (SPSS version 16) were used. Descriptive and statistical method was applied in terms of its frequency and mean.

3.6. Ethical Clearance

Formal letter was written from Wolkite University, College of Business and Economics, Department of Management to K.O.J.J Food processing complex plc. The data collection only started after getting consensus from the parties mentioned above. In addition to this, name of the employees selected for the sample were not included to maintain confidentiality. Both close ended and open ended questions that were adopted for gathering data from respondents were

translated into Amharic language respondents easily understand the questions and easily to answered.(Stadium language translation service,2018)

3.7. Validity and Reliability

3.7.1. Assessing Reliability

Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure while reliability has to do with the accuracy and precision of a measurement procedure measuring instrument is reliable if it provides consistent results. As multiple items in all constructs were used, the internal consistency/reliabilities of SCM practice, Supply chain integrations challenges/barriers of effective supply chain management implementation, and customer service were assessed with Cronbach‟s Alpha and the reliability values for all constructs are confirmed as greater than 0.6, which are considered ideal (Pallant 2005).The following table shows the summary of reliabilities of all construct variables.

Table 3.2: Reliability of constructs

S/N	Variable	No Items	Reliability
A	Supply Chain Management practices	30	0.993
1	Internal Operation	30	0.977
2	Suppliers and Customers Relationship	30	0.968
3	Information Sharing	30	0.981
4	Information Technology	30	0.637
5	Training practice	30	0.957
B	Challenges of Supply Chain Management	30	0.972
C	Collaboration in Supply Chain	30	0.972
1	Integration With suppliers	30	0.952
2	Integration with Customers	30	0.952
3	Cross functional integration with in a factory	30	0.948
D	Customer Service Analysis	30	0.962

Source: (Own survey, 2018)

3.7.2 Analysis of Validity

Malhotra, (2010) mentioned about three types of validity in his study: content validity, predictive validity, and construct validity. This study addressed construct validity through the review of literature and adapting instruments used in previous research. The researcher adopting the questionnaire and by using pilot study distributing to 30 employee of case factory all respondents were given an answer for each questions so based on the pilot study the researcher were proved all the variables were valid for this research work.

CHAPTER FOUR

4. Results, Discussion and Interpretation

This chapter deals with presentations, discussion and interpretation of the data collected through questionnaire and interview. The discussion particularly focuses on respondents profile, SCM practices, and supply chain integration, challenges of SCM and Customer Services.

Out of 157(One hundred fifty seven) questionnaires were distributed to respondents 150(one hundred fifty) were returned (Accepted). From the accepted responses were found valid and used for the analysis. This accounts for 95.5% of response rate. Thus, based on the responses obtained from the respondents data presentation and analysis were made as follows.

4.1 Frequency Analysis of the Respondents' Profile

The demographic profile of the sample respondents is presented and analyzed below. The purpose of assessing respondents' age, sex, is that, to determine whether the researcher considered heterogeneity of sample units. On the other hand assessing the work experience and education level of the respondents' is that, when the respondents are more experienced and educated they have better opportunity to understand the case and give better response than else.

Table 4.1 Gender Frequency

Description		Frequency	Percent
Sex of respondents	Male	76	50.67
	Female	74	49.33
	Total	150	100

(Source: Own Survey, 2018)

Gender frequency of the respondents shows that the numbers of male respondents were almost equal with that of female a respondent which is 50.67% of the respondents were male, while 49.33 % were female respondents.

As table 4.2 below shows that, the researcher divided the age of the respondents into five categories, starting from 20- 25 years of age to above 40. In this study, the researcher can conclude that most of the respondents were between ages of 31-35 and 36-40 years show similar percentage that is 26.67%. This group covers 53.34 % of the respondents to the questionnaire.

Table 4.2 Respondents' frequency distribution of age

Description		Frequency	Percent
Age of respondents	20-25	23	15.33
	26-30	26	17.33
	31-35	40	26.67
	36-40	40	26.67
	>40	16	14
	Total	150	100

(Source: Own Survey, 2018)

The next age group with percent of 17.33 is respondents gain aging between 26- 30. On the other hand, respondents within age group of 20-25 which is 15.33 %. In addition, > 40 age groups represent 14 % of respondents.

As table 4.3 below clearly shows the frequency distribution of respondents work experience, the largest of the respondents (36 %) 54 have between 4-6 years of work experience. In the same case, (31.33%) 47 of respondents have from 7-11 years of work experience and followed by greater than 11 years of experience, which accounts (19.33%) 29 and (13.33 %) 20 respondents represents having 7-10 years of experience. This implies that in total more than 67.5% of the respondents have more than 4 years of work experience with in the case factory and it is sufficient to judge and give views. This is because when the respondents are more and more experienced within the organization they have better opportunity to know more and more about the organization.

Table 4.3 Respondents' frequency distribution of experience

Description		Frequency	Percent
Work experience of respondents	1-3	20	13.33
	4-6	54	36
	7-11	47	31.33
	>11	29	19.33
	Total	150	100

(Source: Own survey, 2018)

As shown below in table 4.4 the highest education level attained by most of the respondents was college diploma holders which represents, 43 (28.67%) out of the respondents and followed by first degree holders which accounts 42 (28%). Three education levels that are Grade 10 completed, Grade 12 completed and certificate levels shows results that is 13 (8.67%),17(11.33%) and 34 (22.67%) respectively of the respondents. Master's degree holder accounts 1 (0.67%) of the respondents. Therefore, out of respondents about 57.34 % are diploma and above diploma holders.

Table 4.4 Respondents' frequency distribution of educational qualifications

Description		Frequency	Percent
Educational backgrounds of respondents	Grade10 completed	13	8.67
	Grade 12 completed	17	11.33
	Certificate	34	22.67
	College Diploma holder	43	28.67
	First Degree holder	42	28
	Master Degree and above holder	1	0.67
	Total	150	100

(Source: Own survey, 2018)

Table 4.5 Respondents' frequency distribution of working department

Description		Frequency	Percent
Respondents working department	Human resource management expert	5	3.33
	Marketing and Sales department expert	25	16.67
	Finance department expert	7	4.67
	Production and Technique department expert	78	52
	Procurement and Supplies expert	10	6.67
	Customers	20	13.33
	Supplier	5	3.33
	Total	150	100

(Source: Own survey, 2018)

When we have seen respondents' frequency distribution of working departments, Human resource management experts account 10 (6.67%), marketing and sales department 20 (13.33%), finance department 13 (8.67%) , production and technique department 60 (40%) , procurement and supplies department accounts 22 (14.67), customers 20 (13.33%) and lastly suppliers of raw materials accounts 5 (3.33%) respectively. Therefore, out of respondents about 83.34 % are internal worker of the factory.

4.2 Descriptive Statistical Analysis

As it was revealed in the methodology part, the designed method is descriptive statistical analysis & using analysis of variance (ANOVA) to analyze the five components of the conceptual framework adopted for this study. In addition to the quantitative data analysis, the qualitative data found through interviews from managers of K.O.J.J's food processing complex plc used to analyze each components of conceptual framework. The analysis was on: five SCM practices, challenges of SCM, collaboration /integrated supply chain management, and customer services.

The above listed items are the most critical parts of the conceptual framework and basic research variables of this thesis paper. Therefore, the discussion of the conceptual framework components was answered the basic research questions and meets the stated objectives of this study.

For the analysis of all variables, mean, standard deviation, F-value and significance level were calculated. Particularly each group mean and significance level value of the respondents has considered as an important indicator to the extent of the factory's practices on each variables. To conclude the overall performance of the case factory's practices on each variable, mean of mean was calculated.

From other research works & researcher point of view indicates mean statistical values less and approaching to 2.5 indicates the poor performance, mean statistical values between 2.5 and less than 3.5 moderate/average performance while mean statistical values 3.5 and 5 indicates high and excellent performance of the factory on that particular variable to reached to interpreted the result and drawn conclusion. Significance level greater than 0.05 indicate better practice of specific variable practices & significance level value less than 0.05 indicate each specific variable performance poorly practiced.

4.2.1 Supply Chain Management Practices

As it was briefly mentioned in the literature part of the study, the most common practiced supply chain management practices are supplier and customer relationship, internal operation, information sharing, information technology and training.

This study focused on the case factory's SCM practices from these five perspectives. For each practices different questionnaires were developed and measured based on their mean, standard deviation, f-value and significance level .

A. Internal Operation

Internal operation is the starting point to make the environment encouraging for integration with the external partners. Poor internal operations can lead to disaster in coordinating with external partners.

As table 4.6 below illustrates that shows the extent of the internal operation of the case factory.

Table 4. 6. Analysis of Internal Operation Practices

S/N	Description	Mean Score	Std	F-Value	Significance
1	Employees	3.01	.5928	4.31	0.07
2	Customers	2.77	.6504	1.08	0.02
3	Suppliers	2.47	.7468	0.23	0.03
Mean of Mean					2.75

(Source: Own survey, 2018)

The overall groups mean value of K.O.J.J's SCM practice from the perspective of internal operation of SCM for employee is 3.01 and 0.07 significance level.

On the hand regarding groups mean value of K.O.J.J's SCM practice from the perspective of internal operation of SCM for customer is 2.77 and 0.02 significance level. Regarding suppliers groups mean value significance level shows 2.47 & 0.03 accordingly.

Besides to the data collected through questionnaire, interview was held with the general and production managers of the case factory. According to the data gathered there is an approaching moderate average internal operation facility in the factory's. It is not supported by comprehensive reports, due to absence of supportive IT infrastructure or information system with their customers. Even the marketing and sales, purchase and procurement department of the case factory does not provide appropriate information about sales forecast/supplies of raw materials and other related information to make the internal operations producing up to maximum capacities.

Automated orders and automated productions are the key enablers to realize the quick response program. Internal operation is the most critical factor to measure organization's potential to go for external integration. An organization should be internally efficient and effective before embarking on external integration.

In view of theoretical, collected and analyzed data the group mean values is 2.75 and 0.04 significance level respectively, so the extent of flexibility to market change and handling order pattern is weak, and it clearly tells there is problems' prohibiting flexibility to handle these changes. In fact, the customers' preferences and the marketing environments are changing very rapidly over time. This change enforces organizations to adopt flexibility to meet the changing market and order patterns.

When we are talking about effective supply chain internal operation in Ethiopian food industry which is in its beginning stage, when it is a challenge even for the advanced countries that have sophisticated supply chains practices, would be far from the truth. This indicates that there is a problem of internal operation as well as linkage in the upward stream and downstream supply chain of K.O.J.J. food processing complex plc.

Because the internal operations critical for creating integration or relationship with external participants or supply chain partners. Therefore, it implies that, the K.O.J.J food processing complex plc has an assignment to improve its internal operation to create effective relation with external partners. That indicates, K.O.J.J has to take corrective actions on these variables to meet the customers' preferences and other related internal operation practices.

B. Suppliers and Customers Relationship

The most commonly known characteristics of suppliers and customers relationships are: joint product planning, cooperativeness, frequent meeting, and others related variables. To measure K.O.J.J food processing complex plc orientation towards the SCR seven items were adopted by the researcher.

Table 4.7 below indicates the extent of relationship that exists between suppliers, Customers and the case factory.

S/N	Description	Mean	Std	F-Value	Significance
1	Employees	2.49	.5905	13.24	0.01
2	Customers	2.60	.5323	0.23	0.32
3	Suppliers	2.41	.4614	0.26	0.03
	Mean of Mean	2.50			0.12

(Source: Own survey, 2018)

Specifically, employee's response aggregate mean & significance level shows that, 2.49 & (0.01) respectively. These, mean values imply that K.O.J.J food processing complex plc has poor relationship with its customers and suppliers.

Whereas response of customer aggregate mean & significance level shows that, 2.60 & (0.32) respectively, and also suppliers responding collective mean & significance level shows that, 2.41 & (0.03) respectively.

The overall group means & significance level of suppliers and customers' relationship of case factory is 2.5 and (0.12) that is below average or mean value performance with respect to the overall measures taken into consideration. This simply indicates the case factory is not meeting the full requirements of the customers as per their desire. On the other hand, customers are not fully satisfied in getting the amount of product they required. The reason for this gap is the case factory is not able to deliver the required amount of products to the customers' due to shortage of raw materials. The shortage of raw materials is because of the K.O.J.J's weak relationship with its customers on joint product planning.

In addition to the data collected through questionnaire, interview was held with the general manager and marketing and sales manager of the case factory. According to the data obtained there are approximately poor Suppliers and Customers Relationship and related activities in the factory.

In order to experience successful relationship with customers and suppliers, there has to be a joint production and product planning. On the other hand, customers' delivery adherence requirement replies that the customers are more dependent on full quantity and timely delivery of their requirement. So that, this can adds pressure on the case factory's to meet its customers' requirement. But the current performance of the factory to meet this is nearly on status of poor.

Based on theoretical, and collected and analyzed data the case factory's is not in a position to improve supplier and customer relationship practices, without any in decision the case factory's customers' have an opportunity to go to its competitor companies those provide these services in a better way than the case factory and the has also a great possibility to loss its major customer.

Therefore, simple sale-buy and weak relationship with its suppliers and customers resulted not fully satisfy its customers compliance requirement on time due to absence of good suppliers and customers relationship and related activities inside.

C. Information Sharing

Theoretical evidence confirms that supply chain management rides on the back of information in order to meet the required resources at the right time, and at the right place, unified and instantaneous information flow should exist across the value chain. With respect to the above justification, this study tried to investigate the practices of information sharing practice among the supply chain actors of the case factory.

Accordingly, seven items related to information sharing practice adopted by the researcher. Table 4.8 below indicates, the mean value & significance level of each actors that can generalize the information sharing practice of the K.O.J.J food processing complex plc with its upward and down-stream supply chain partners.

Table 4.8 Analysis information sharing practices of case factory

S/N	Description	Mean	Std	F-value	Significance
1	Employees	2.22	.6945	3.61	0.07
2	Customers	2.35	.5711	0.11	0.08
3	Suppliers	2.63	.5328	1.14	0.04
Mean of Mean		2.40	.5994		0.30

(Source: Own survey, 2018)

As observed from table 4.8, indicates, the collective mean value and significance level of employees, customers & suppliers regarding information sharing practices of case factory is 2.22(0.07),2.35(0.08) and 2.63 (0.04) singly.

The overall practices of inter-organizational coordination and information sharing has a mean value & significance level of in case of K.O.J.J food processing complex plc is 2.4 (0.30) correspondingly.

Sharing forecast information with such customers would help the case factory and consolidate its market demand forecasts. So that, having poor relationship with such partners who cause for poor information sharing practices which make the forecast of the case factory weak and unrealistic.

In addition to the data collected through questionnaire, interview stood conducted with the general and marketing and sales & procurement managers of the case factory. According to the data obtained confirm there is poor information sharing and related activities within the supply chain actors of the factory.

Information sharing serves as an essential approach for the survival of enterprises and enabler of supply chain integration. Nowadays, with the advancement in information and communication technology, information sharing has become more possible. Furthermore, information sharing in

supply chains has become more efficient by the global introduction of long term cooperation and coordination which leads ultimately to the improvement of companies' competitive advantages.

From the above available data, the researcher can conclude that the information sharing practice between K.O.J.J and its supply chain key player is poor. In fact, customers like whole sellers, distributors, agents and retailers are closer to the end customers & they have better opportunity for understanding the end users' demand. Sharing forecast information with such customers would help the case factory and consolidate its market demand forecasts. So that, having poor relationship with such partners is a source for poor information sharing practices which make the forecast of the case factory weak and impractical.

Therefore, based on the analysis and the current 21th century real world practices and importance of information sharing and its impacts on any kind of organization, even if the mean value shows low status with respect to these stated issues the result is not sufficient to create effectiveness and efficiency in SCM activities.

D. Information Technology

Advance in information technology have given opportunities for organizations to transform the way they manage their business.

As table 4.9 reveals that, four items were used to measure IT application of the case factory. Out of four items developed to see the extent of IT application in K.O.J.J food processing plc.

Table 4.9 Information Technology Practices of SCM

S/N	Description	Mean	Std	F-Value	Significance
1	Employees	2.02	.6910	19.25	0.00
2	Customers	1.60	.4999	0.12	0.02
3	Suppliers	1.60	.5954	0.00	0.03
Mean of Mean		1.74	.5954		0.04

(Source: Own survey, 2018)

As table 4.9 reveals that, four items were used to measure IT application of the case factory's. Out of the respondent employees response scored the mean & significance level approximate to 2.02(0.00) correspondingly. Similarly enterprise level customers answer scored the mean & significance level approximate to 1.6(0.02) separately. On the other hand suppliers of raw material responding scored the mean & significance level approximate to 2.02(0.03) respectively.
Generally, the groups mean value of SCM practice from IT perspective of case factory is 1.74 (0.04) which approximate 2.00 that is below the mean values.

Close to the data collected through questionnaire, interview was thought with the general manager, marketing and sales & procurement managers of the case factory. According to the data gathered there is poor IT facility in the factory. The factory has no plan to implementing intra-network connection facilities to connect marketing, purchasing, production and other departments.

The use of IT has received significant attention in the supply chain context, which involves the flows of material, information, and finance in a network consisting of customers, suppliers, manufacturers, and distributors.
Currently, many manufacturing companies are using integrated information systems to manage their business activities. To share information there should be an up-to dated IT and integrated information system which is capable of connecting all functional units of the organization and its external participants.

In general based on the information gained from literature, empirical studies data collected and analyzed data in questionnaire and interview and the analysis made on the IT practices, the existing IT System of K.O.J.J's supply chain cannot support effective SCM implementation. The SCM practice of IT in the case factory is poor and carries that a lot has to be done to bring change in the IT system of the case factory in order to support effective SCM implementation.

E. Training practice

It is presented in the literature review, the fifth last element of SCM practice is training. The ultimate objective of SCM is customer service as it was depicted in the conceptual framework developed for this study. To provide good customer service, organizations are made-up to improve and continue existing skills and knowledge of employees.

Table 4.10 Training practices of SCM *ANOVA's Summary*

S/N	Description	Mean	Std	F-value	Significance
1	Employees	2.24	.6267	1.62	0.06
2	Customers	2.34	.5985	0.00	0.00
3	Suppliers	2.02	.5126	0.40	0.00
Mean of Mean		2.20	.5979		0.02

(Source: Own survey, 2018)

According to the above table shows that five items developed to investigate the training practice of K.O.J.J food processing complex plc. Even if the training practice is considered as one of SCM practices of the collective mean and significance level of employees, customers and suppliers is 2.24(0.06) ,2.34(0.00) and 2.02(0.00) respectively.

The group means & significance level scored values of 2.2(0.02), which is the less mean value, even compared with other SCM practices next IT practice group mean values.

A long side to the responses obtained through questionnaire, an interview conducted with human resource manager and human resource officers. According to their response, still now there is no well-organized training program within their factory to the employees and managers. Even there is training within the factory and invitation from training institutions simply some managers or employees have been sent to the training without consideration of the relevancy of the trainee to the factory's to solve existing problem.

Based on the information collected primary data clearly infers that, there is problem with the human resource management area of the case factory. It is a fact that whatever the extent of information technology, information sharing and other SCM practices is applied; without skilled

and committed human resource it is impossible to satisfy organizations customer. These all practices of SCM require the human resources to make it efficient and effective.

There is no established criterion to evaluate and prepare employees and leaders for the training that fits or concerns them. Furthermore, frequently employees are leaving the case factory. If the case factory not taken actions in order to solve a such poor practice and related problems it creates negative consequences on its SC. The strong impact of poor training program/practice is reflected on internal operation of the factory, which is a spring board for external integration.

Therefore, based on the whole analysis the researcher find out contradiction between the theory and the real practices that is going on in the case factory. And there is consistency between qualitative and quantitative information collected from the respondents.

So that, the SCM practice from the training/human perspective of the K.O.J.J's at hand is poor this shows the overall mean & significance level sum scored 2.2(0.02). If it continues in such a way the factory will be at risk in the future to achieve its objectives and to satisfy its customers.

4.2.2 Challenges of Supply Chain Management

The third part of the conceptual framework developed for this study is challenges of SCM that consists of uncertainties and bullwhip effect.

As illustrated in table 4.11 below, six items were used to determine the extent of challenges in supply chain management practices of case factory.

Table 11 Analysis of Challenges/ Barriers for SCM implementation

S/N	Description	Mean	Std	F-Value	Significance
1	Employees	3.03	.7690	1.48	0.04
2	Customers	2.75	.6288	0.14	0.08
3	Suppliers	2.68	.5989	0.98	0.02
Mean of Mean		2.82	.6655		0.05

(Source: Own survey, 2018)

Table 4.10 presents factors causing challenges/ barriers for in implementation of supply chain management in K.O.J.J'S:-on the side of employees, customers and suppliers responding mean & significance level show that 3.03(0.04), 2.75(0.08) and 2.68(0.02) respectively

When there is poor willingness to share risks and benefits with the SC partners that conveys weak relationship and integration among the SC partners. The implication is that the supply chain practice between the partners is traditional. That means, partners/members with in the chain make their own decision and take the responsibility for any risk in a disintegrated manner

The reason for manufacturing uncertainty it was affected by both internal and external factors. Some of the internal factors are breakdown of machineries, ineffectiveness of employees, electric power interruption and external factors are change in demands of customers', and suppliers' inability to provide the required inputs according their promises. So that, manufacturing uncertainty of K.O.J.J is persecuted with all these factors.

For further, consolidating quantitative analysis and qualitative information were collected through interview from procurement, marketing and production & technique managers. These management bodies also confirmed that manufacturing, supply and demand uncertainties are the factory major challenges.

According to the production manager's response, there are numbers of possibilities stoppage of production due to shortage of raw materials and absence of orders from customers. Particularly, for pasta and biscuits products, there is shortage of supply of raw materials even the absence of spare parts to machineries, sometimes; there is also power interruption, which enforces to stoppage of production.

From interviews with production manager, the study also found that supply chain management at K.O.J.J's is also affected by factors related to suppliers of raw materials. These factors include; late delivery of raw materials, delivery of poor quality raw materials and delivery of raw materials in a lower quantity that the order one.

To triangulate the analysis, procurement and supply manager was interviewed for supply uncertainty. According to his response, there is a shortage of supply for the above-mentioned products and spare parts the reason is that domestically there are few sources of supplies for such products (i.e. pasta and other products) and spare parts.

Furthermore, importing inputs from abroad at the current situation is costly and consumes great time. In addition, the case factory has no long term agreements with suppliers. This is because, the factory buys its inputs through formal bidding procedures and always the suppliers that wins the bid will supply the items there is the chance to buy wheat at high price or gain wheat under specification and also from the government the case factory gain wheat which is imported abroad even if its supplied by the government there is the chance to gain the quality is under the specification.

Finally, the marketing manager replied as, the demand is always changing. Sometimes, there is decrease in demand and at another time; the demand may be greater than really expected. Because of such problems the customers may not get the full quantity when they expected to get. The general manager also confirmed the above problems i.e. there is shortage in supply and fluctuations in demand.

Therefore, based on all the above quantitative, qualitative analysis and empirical researches the case factory's SC is exposed for different challenges. Out of these challenges manufacturing, supply and demand uncertainties are major problems that the K.O.J.J food processing complex plc facing. Next to these problems, inventory fluctuation due to bullwhip effect is also another challenging factor that prohibits effective supply chain management. So that, all these challenges are mostly stimulated from the existence of poor relationships between SC partners, weak information sharing, poor IT and weak internal operation practices of SCM.

4.2.3 Collaboration in Supply Chain

As companies move toward more extended supply chains, collaboration is becoming their most strategic activity. Collaboration may be with customers, suppliers and even with in organization's functional units. Some of the features which many participants anticipate when

entering in to collaboration are: joint planning, management and measurement, sharing goals, objectives, resources, information, risks and benefits with partners.

SCM is actually the main theme in discussions on business competitiveness that is the "business of business", but it has been managed as back office by companies.

Some difficulties in its operationalization have drawn the attention of academics, entrepreneurs and managers of this issue mainly those related to integration. Collaboration in the supply chain can only be achieved with the integration of intra and inter organizational functions and with the establishment of common goals.

When the level of collaboration is becoming more and more strong it leads to integrated and efficient SCM. Based on this, the researcher has tried to see the extent of integration of the case factory classified into integration with suppliers, enterprise level customers and cross functional units within the factory.

4.2.3.1 Integration With suppliers

In this part, the researcher tried to see the level of integration between K.O.J.J food processing complex plc and its suppliers.
Integration is the process of combining or coordinating separate functions, processes, or producers and enabling them to interact in a unified and continuous manner.

Table 4.12 Factory Integration with Suppliers

S/N	Description	Mean	Std	F-value	Significance
1	Employees	2.24	.7616	28.89	0.00
2	Customers	1.8	.4645	0.12	0.03
3	Suppliers	2.53	.6130	1.20	0.03
Mean of Mean		2.19	.6130		0.02

(Source: Own survey, 2018)

As illustrated in table 4.12, there are three group used to determine the extent of integration of the case factory with its suppliers. Accordingly, relatively to other group the high mean value was scored on the supplier which 2.53(0.03), followed by employee, 2.24(0.00). The mean & significance level value of customer is 1.8 (0.03) respectively.

Furthermore the overall group mean & significance level shows that values of 2.19(0.02) respectively. The groups mean value approximately revealed poor integration between K.O.J.J and its suppliers.

In addition to quantitative analysis, interview was held with procurement and supply manager of the case factory to association the information obtained through questionnaire. According to the interview response, K.O.J.J food processing complex plc has no common supplier both in domestic and foreign cases. This is due to the procurement method of the case factory follows is bidding procedures and any supplier who fulfills the specification and requirements of the factory wins the bid and the factory buys the materials from those winner organizations even they are not meet the integration.

According to the interview there is no stable procurement procedure directed through networking. And also the factory has no strategic/planned relationship with its suppliers. But, sometimes the factory made contracts with the winner suppliers between three or four months.

Some researchers have investigated supply-side integration in different dimensions. Supply integration as obtaining frequent deliveries in small lots, using single or dual sources of supply, evaluating alternative sources on the basis of quality and delivery instead of price, and establishing long-term contracts with suppliers. In terms of logistics communication, this concept could view supply integration as effective alignment, information sharing and supplier participation between suppliers and manufacturers.

Therefore, the researcher tried to identify the area for the respondents' difference through triangulated analysis. Even if the mean value of factory integration with suppliers reveals as low it is substantial. Because it is consistent with qualitative information of the responses found through interviews from procurement and supply department. The respondents of the

questionnaire assumed the three to four month contractual relationship as a strategic alliance which does not actually exist. Therefore, based on information obtained from both sources qualitative and quantitative the level of integration between the suppliers and the case factory integration with supplier is poor.

4.2.3.2 Integration with Customers

SCM suggests that, firms need to integrate with their customers to achieve both financial and none financial growth objectives.

Table 4.13 Company Integration with Customers

S/N	Description	Mean	Std	F-value	Significance
1	Employees	2.28	.6742	1.43	0.03
2	Customers	2.43	.5412	0.50	0.04
3	Suppliers	2.43	.4077	0.70	0.02
Mean of Mean		2.38	.5410		0.03

(Source: Own survey, 2018)

As table 4.13 above shows, four items were developed to evaluate the case organization towards integration with its customers or downstream of the SC. Accordingly, employees of case factory, enterprise level customer and suppliers of factory responding the aggregate mean and significance level of 2.28(0.03),2.43(0.04) and 2.43(0.02). Whereas, the group mean and significance level scored result shows 2.38(0.03) respectively implies that the case factory's integration with its customers is weak.

In addition to the total mean value obtained through questionnaire an interview remained with marketing manager and sales man of K.O.J.J food processing plc. According to their response the factory's does not have such a strong integration with their enterprise level customers. Because, customers are not only buying and selling to end users the case factory's products, they also buy and sale other companies products.

Marketing manager also responded there is weak follow-up of customer's feedback, poor contacts/ meetings with customers. In addition to this the marketing manager of the case factory replied not only with the enterprise level customer, but also with some of the factory's agents who are acting as distributors of factory's products that the current integration is poor.

From interview response there is no planned or contract based order from enterprise level customers with the exception of government customers. The major customers simply ask when they need products of the factory, whether what they need are there in the stock or not. As a result of such practices, sometimes the enterprise level customers may not get in full quantity when they required.

In terms of customer integration, the firm will penetrate deep into the customer organization to understand the product, culture, market and organization, so that it can respond rapidly to the customer's needs and requirements. The important concept of demand integration is based on the improvement of demand planning and visibility in supply chains. Without information, sharing from one end of the supply chain to the other, tremendous inefficiencies can occur in customer service.

Therefore, the whole implication of the K.O.J.J's integration with its enterprise level customers practice is poor. This will leads to the dissatisfaction of its customers and in a long-run there may be a chance losing its customers. If it is so, it may be difficult and dangerous to the factory to survive and compete in this intensive competitive market environment.

4.2.3.3 Cross functional integration with in a factory

Cross-functional orientation in SCM has positive effects on customer satisfaction and supply chain responsiveness in terms of improved efficiency among different functions in the supply chain. Integration plays a decisive role for successful SCM. To realize an effective internal operation functional integration plays a great role.

Table 4.14 Cross functional integration with in the factory

S/N	Description	Mean	Std	F-value	Significance
1	Employees	2.96	.6957	2.98	0.15
2	Customers	3.15	.6108	0.30	0.05
3	Suppliers	3.07	.5036	0.28	0.04
Mean of Mean		3.06	.6033		0.08

(Source: Own survey, 2018)

Table 4.14-above represents extent of internal integration of K.O.J.J's functional units on the side of employee is 2.96 (0.15), on the other side customers extent of internal integration of functional units is 3.15 & (0.05) .Accordingly, respectively extent of internal integration of functional units is 3.3.07 & (0.05) aggregate mean and significance level respectively.

On the other hand, the overall group means & significance level of internal integration is, 3.06(0.08) which reflect the internal cross functional integration of the case factory is nearly to the mean values. But it is not liked with IT infrastructures.

The eventual goal of SCI is to achieve effective and efficient flows of products and services, information, money and decisions, to provide maximum value to the customer.

Moreover, internal integration is characterized by full system visibility from distribution to purchasing, and required integration across functions under the control of the firm to achieve customer satisfaction. In practice, it means that special attention must be given to the interface between functional areas such as procurement, production, logistics, marketing, sales and distribution**.**

The case factory has poor IT practice therefore: with such environment information system integration could be poor. On the other hand, data integration among the functional units of the case factory is also highly related with IT application so that, even if its mean value approaches to moderate it is not sufficient. This implies that poor IT application practice also affects other factors like the extent of integration.

4.2.4 Customer Service Analysis

The ultimate goal of an integrated, efficient and effective SC system is superior customer service: short lead-time, quick response to requirements, accurate delivery, product accessibility, risk sharing, complains handling etc.

Table 4.15 Customer Service ANOVA summary

S/N	Description	Mean	Std	F-value	Significance
1	Employees	2.91	.6654	1.80	0.20
2	Customers	3.04	.5662	0.91	0.04
3	Suppliers	3.01	.6158	0.72	0.05
Mean of Mean		3.02	.6158		0.09

(Source: Own survey, 2018)

Table 4.15 above depicts that eight essential customers service attributes were used to investigate the extent of the case factory's orientation towards customers service performance. Accordingly, the groups mean & significance level value for employee is 2.91 and 0.20 that reveal that the case factory's orientation towards customer's service respectively.

On the other hand groups mean & significance level of customer show that 3.04 & 0.04 separately. Furthermore the groups mean and significance level of suppliers of shows that values 3.01 and 0.05 respectively.

The overall group means and significance level of customer service analysis which reflects the3.02 & 0.09 respectively.

It was presented in the conceptual framework developed for this study, customers service is the last component. This implies that, customer service is resulted from practices of supply chain management, level and nature of SC challenges, collaboration, and integration of the organization with its suppliers, customers and internal functional units. All of these variables except training and IT practices of SCM shows a moderate performance.

The researcher held an interview with marketing and production managers, and major customers of the case factory to triangulate, and state the extent of services given to the customers' and which finally results in customer satisfaction and loyalty.

As per the interview held with marketing and production managers of the case factory reveals that in lead time reduction, there are problems resulted from both in external and internal factors. As their response the external factor is related with suppliers i.e., some inputs are bought from abroad and it takes up to four months to reach to the factory which may increase lead time.

Whereas from the internal factors there is inefficiency, sometimes due to shortage of materials, power interruption, break down of machines; the production department do not produce the required amount and make it ready to the customers'. But, to minimize the delay resulted from shortage of input materials as much as possible the case factory has materials stock with in warehouse which pushed inventory cost up.

For the issues related with effectiveness and flexibility in meeting customers' requirement and product accessibility, as marketing manager's response shows the factory has different agents at different regional levels. But it is not sufficient and at the current time the factory stopped its agreement with some agents. In order to make products accessible to the customers' the case factory has been using both direct and indirect shipping system.

In the case of meeting customers' requirement, at the time of shortage in input materials the factory gives priority to some major customers. The level of flexibility is an average. In the case of effectiveness in managing customers' complaints, at the very beginning the factory checks the quality and other requirements before issuing the products. The main reason for doing this is in order not to take any risk. If any complaints come from customers the factory could manage it as its rationality. In addition, most private customers are not happy with prioritization principle of the factory i.e. whenever there is serious shortage government institutions would be given priority.

With respect to compliant management, major customers replied as, the case factory is not responding their complaints immediately, to solve this complain at least it took three weeks ,one month and above.

Therefore, the analysis of both quantitative and qualitative with different management bodies, and customers conveys that the factory's orientation towards customers' service is moderately practiced.

CHAPTER FIVE

Summary, Conclusion and Suggestions

5.0 Introduction

This chapter summarizes the purpose of the study, the major findings and conclusions, the study implication for theory and practice, and constructs recommendation. According to the data analysis in the previous section, summary of the findings is presented as follows.

5.1 Summary of Findings

The purpose of this study was to assess the case factory's orientation towards managing its SC and how this impacts on the customers' service. The K.O.J.J.'s orientation of SC was evaluated through five SCM commonly practiced and three types of integrations that determine efficiency and effectiveness of SCM. In addition, the impact of SCM orientation was examined through customer service level which is the ultimate goal of successfully implemented & managed supply chain. Based on the quantitative and qualitative data analysis, discussion of results with respect to the basic questions, the followings are the summary of major findings of this study.

With regard to internal operation, the descriptive data and interview analysis expresses that, there is good automated quality control system, moderate internal logistic flow, proficient use of resources, management understanding regarding SCM and the degree of production process automation. Comparatively the cases factory is weak in innovation of new products, stretchy production system to market change, suppleness of production system to handle order pattern, extent of endless and prompt product and service improvement and up-to datedness of production. In general the case factory internal operation of SCM is less than the mean value.

The degree of relationship through the supply chain of K.O.J.J is flattened to be transactional or adversarial, which is characterized by less joint product planning with suppliers and customers' and independent decision making across the SC. The descriptive analysis and interview with

management bodies has verified the occurrence of these characters of traditional relationship. The mean values for combined planning with major suppliers & customers, the level of cooperativeness with customers & suppliers and customer's delivery loyalty requirement shows poor values. The overall case factory's suppliers and customer's relationship mean values revealed that poor. Information sharing practices of SCM in the case factory is generally poor. On all variables of information sharing practices exposed to mean values become low. The overall efforts in coordinating and sharing information across the supply chain partners are weak. Even the shared information has shortages adequacy and quality.

Regarding information technology, the quantitative and qualitative analysis indicated that, poor and nonexistence of IT infrastructures with in the case factory which scored group mean & significance level accordingly values of 1.74 (0.04).

Supply chain management practice from human resource/training viewpoint of K.O.J.J.food processing complex plc is the poor in respect to other SCM practices next to IT which shown low mean and significance level values of 2.20(0.02) respectively. Each items and the overall training practice performance shows very poor than expected. Each variables of training variable poorly affects the effectiveness of SCM.

Among the possible challenges of SCM, manufacturing, supply and demand fears looked as the major challenges of the case factory's with low mean & significance level values. Inventory fluctuation due to in accurate information bullwhip effect is also another challenge of the case factory's SC. There is because of also poor willingness to share risks and benefits among the SC partners.

Concerning to integration among the SC partners of K.O.J.J integration with its supplier's shows poor mean significance level values. The qualitative and quantitative analysis of case factory tells poor integration with suppliers.

The quantitative analysis of customers' integration with company conveys it is really poor even if it approaches to neutral/undifferentiated the customers have no strong integration or strategic partnership with the K.O.J.J. that shows only there are buy-sale transitional relationship.

Regarding to the internal integration among functional department within the organization, data integration through network is poor and would not support external integration. But, the overall internal integration is moderate or more than the mean value.

Lastly orientation towards integrated superior customer service, both qualitative and quantitative analysis revealed that, the factory's success and competence in meeting customers' requirement is appreciating based on both quantitative and qualitative the analysis of the case factory orientation towards customers' service is have better performance.

5.2 Conclusions

The evidence from this study indicates that K.O.J.J food processing complex plc has a problem of internal operation, suppliers and customer relationship, information sharing, information technology and training practices i.e. lacks competitive advantage. The main reason behind this poor performance is lack of supply integration, across functional department and customer integration within the supply chain. This means, the higher performance of supply chain integration, the higher they can improve their product quality and get competitive advantage. Moreover, the root cause for the supply chain integration problem in K.O.J.J'S is lack of management's adequate knowledge in the subject matter. In addition, there is also a problem of understanding of SC by itself in terms of the global market environments.

In addition, the quantitative analysis of the factory's customer service is between well manners therefore, this can't ensure customer satisfaction with respect to customer service. The main reason mentioned for poor level of customer service is the internal operations that have direct effect on the organization ability to get on outside integration. Since SCM practices of the case factory has a great problem on training and IT practices. These two practices play a decisive role for creating effective and efficient SCM. Poor IT facilities lead to poor information sharing and

poor information sharing practices makes a supply chain management ineffective. For making internal operation effective, human resource is a critical factor. In order to have skilled, committed, and capable employees and managers, to utilize resources effectively and efficiently training plays a significant role. The researcher concludes that the great challenges that prohibits effective SCM of K.O.J.J's like, manufacturing, supply and demand uncertainties and fluctuation of inventories due to distorted information or bullwhip effect are because of poor relationships between SC partners.

5.3 Suggestion and Recommendations

On the basis of the findings and conclusions gratified, the following suggestions and recommendations were forwarded in order to improve the Supply Chain Management practices of the an organization.

It is noticeably explained that internal integration is vital in increasing the potential of the company to get external integration. K.O.J.J food processing complex plc is suggested to have integrate internal operational units, so as to bring about flexible, responsive and efficient production. This can be done principal, by networking the functional units of the organization with appropriate IT and integrated information system. Secondly breaking functional silos to encourage coordination and interdependent work design accompanied with alert work force and multipurpose machineries to improve flexibility and responsiveness to market and customers' requirements.

The human resource is the essential factor that performs all activities to make Supply Chain Management efficient and effective. At current situation market competition, customer preferences, and working environment is changing quickly. Therefore, this change enforces companies to change their strategies, and operations. Human resource is the most important resource and needs continuous training that can help to up-grade knowledge and skills of supply chain managements. However, attention that is given to training opportunities and staff development programs by the K.O.J.J's have been found to be unsatisfactory.

To overcome the challenge of lack of awareness on supply management practices among some of its staff members, K.O.J.J'S should provide frequent training to staff members on the best practices of supply chain management in form of seminars and workshops.

The current information technology practice of the case factory is affects effective communication and integration of data within the supply chain actors. The case organization has to improve and invest on IT facilities to improve information sharing practice both internally and externally. This can be done through establishing IT & IS departments and hiring IT specialists or out sourcing.

More importantly, K.O.J.J's suggested to improve its relationship with suppliers left only simply buy-sale relationship to a modern-day supply chain relationship through establishing strategic or long term relationship, contract, and continuous information sharing in order to minimize supply uncertainty which resulted in demand and supply unbalanced and dissatisfaction of customers of the factory. Because, this could help an organization to obtain the inputs at the right time and quantity from these suppliers and provide to the required quantity for the customers when they required. So that, this will minimizes the dissatisfaction of customers because of occurrence of shortage of materials.

Another important issue that is recommended to the case organization marketing department is has to improving the relationship with customers through continuously information sharing, follow-up them and get feedback, monitoring customers' perceptions towards service of an organization is rendered, improving its compliant management through conducting market research to become more responsive.

An important point that is recommended to the case factory's procurement and supply department have to be improving the procurement process with suppliers through a uninterrupted information sharing, follow-up and get feedback, monitoring suppliers' insights towards service of organization, should improving its compliant management through conducting market research for better responsiveness and made contractual agreement with selected farmers the factory supply high quality wheat.

From human resource report of case factory has no organized body or department to manage the SC and IT and IS. However in the current complex market organizations need to manage SCM strategically since it is becoming a matter of survival in the current increasingly competitive market besides a clear SCM practice enable the factory to predict the future and to excel from the current performance has to establish those departments have its own benefit.

Organized SCM contribute in managing operational effectiveness of supply chain and it can contribute in achieving goals and are also effective tool for good decision making process, when they are designed properly. The fact that the current complexity of market make it also harder to carry out the key supply chain activities of the organization to deliver products to the customers when they want them in the most efficient way. The factory has no proper strategic supply chain framework can cope up with the changing market situations, customer demands and overcoming the various challenges that should needs improvement. Many studies indicated, the concept of SCM is new for the Ethiopians. Firms are always facing many difficulties, in producing products and availing the products to the final market. Hence, all parties starting from government to firms have to promise their responsibility in creating proper infrastructure that improves the country's poor supply chain performance.

5.4. Suggestion for Further Study

The present study used only K.O.J.J food processing complex plc future studies will consider expanding their scope to include the similar company in Ethiopia. Furthermore the evaluation of implementation of SCM is limited to only small sample unit and downstream supply chain distribution network therefore further studies should be conducted more on external units.

References

A shish, (2006) .Modeling the Metrics of Lean, Agile, and Leagile Supply Chain: An ANP–base Approach, European Journal of Operational Research 173.

Achim, W & Ritter T, (2003). Relationship-specific factors influencing supplier involvement in customer new product development. Journal of Business Research, Vol. 56, no. 9

Arkebe O., (2015), Made in Ethiopia – Industrial Policy in Ethiopia, Oxford University Press.

Assefa Balda, (2011).Study on supply chain management practices a case study of Kality food Share Company.

ASSESSMENT OF GREEN SUPPLY CHAIN MANAGEMENT PRACTICES AND ORGANIZATIONAL PERFORMANCE: The Case of ethio telecom,by Mesfin Kora June 2016

Bagchi, K., Prabir Chun & H. Byoung, (2005). Supply Chain Integration: A European Survey. International Journal Logistics Management, Vol. 16, No. 2.

Balsmeier, P. & Voisin, W., (1996) .Supply chain management: a time based strategy. Industrial Management Vol. 38, no. 5.

Bowersox, D. J., (2000) Ten mega trends that will revolutionize supply chain Logistics. Journal of Business Logistics, 21(2),

Britannica, (1999).Section on logistics in Encyclopedia Britannica website, http://www.Britannica.com.

BY Mebrahtom Tesfay, June 2016 The Effect of Supply Chain Management Challenges on the Performances of Humanitarian Aid Organization: The case study of Addis Ababa City Administration.

Chae, B., (2005). Information technology and supply chain collaboration: moderating effects of existing relationships between partners. IEEE transactions on Engineering management, vol. 52 (4).

Chandra C. Kumar S., (2000). Supply Chain Management in theory and practice: a passing fad or a fundamental change Industrial Management & Data Systems, Vol, 100 (3).

Chen, J. & Paulraj, A., (2004).Towards a Theory of Supply Chain management. Journal of operations management 22(2).

Childhouse, P. & Towill, R., (2003) Simplified material flow holds the key to supply chain integration. Omega Vol, 31(1).

Christopher, M., (1998). Logistics and Supply Chain Management. Pitman, London

Christophre M., (2005). Logistics and supply chain management creating value adding networks. Prentice Hall, Dorchester, Great Britain.

Claycomb, C. Droge, C. & Germain R. (1999). The effect of just in time with customers on organizational design and performance. International Journal of Logistics Management, Vol.10 (1).

Cohen, Rousell, Joseph, (2004). Strategic supply chain management: The five disciplines for top performance. New York: Mc Graw-hill.

Cortada W., (2001). 21st Century Business: Managing and Working In the New Digital Economy. Prentice Hall PTR, New Jersey.

Davis, T., (1993). Effective supply chain management. Sloan Management Review, Vol. 34 No. 4.

Employees' Perception on the Effects of Supply Chain Management Strategy on Firm Performance (The Case of MOHA Soft Drinks Industry S.C. Addis Ababa) May 2016

ENDALE HAILEGEBRIEL TUFFA, ASSESSMENT OF HUMANITARIAN SUPPLY CHAIN PERFORMANCE OF SELECTED HUMANITARIAN ORGANIZATIONS IN ETHIOPIA,June 2016

Endale Hailegebriel, (2016).Assessment of humanitarian supply chain performance of selected humanitarian organizations in Ethiopia.

Eng., T., (2005). The influence of a firm's cross-functional orientation on supply chain performance. Journal of Supply Chain Management, vol.41, no.4.

Eyong, M., (2009). Creating a competitive Supply Chain: evaluating the impact of lean & agile supply chain.

Fawcett, Stanley, (2001). Achieving World–Class supply chain Alignment: Benefits, Barriers, and Bridges. Centre for Advanced Purchasing Studies.

Feldmann, M. & Muller S., (2003). An incentive scheme for true information providing in supply chains. OMEGA, Vol. 31, no. 3.

Ganesan & Shankar, (1994). Determinants of Long-Term Orientation in Buyer-Seller Relationships. Journal of Marketing, Vol. 58.

Gattoma & Clark, (2003). Education and Skills training Requirements in supply.

Hakanson B, (1999). Achieving Supply Chain Excellence through Technology. Montgomery Research Inc, San Francisco.

Hand field and Nichols,(1999). Introduction to supply chain management. New Jersey, Prentice-Hal, Inc.

Handifield & Robert, B., (2002). Supply chain redesign: converting your supply chain in to an integrated value stream. New York: financial prentice Hall.

Hau, L. Lee, V. and Whang, (2004). Information Distortion in a Supply Chain: The Bullwhip Effect. Management Science, Vol. 50, No. 12.

Higgins, A., (2010). Challenges of operations research practice in agricultural value chains. The Journal of the Operational Research Society, Vol. 61, No. 6.

Industrial Management & Data Systems, (2002) Vol. 101 (3).

Investigation on the Effect of Supply Chain Integration on Ethiopian Garment Industry‟s Performance, June, 2012 Salem Samuel Getahun

Johnson, M. & Pyke D., (2000). A Framework for Teaching Supply Chain Management.

Jones, C., (1999). Moving Beyond ERP: Making the Missing link Logistics Focus Vol.6, No. 7.

Kenneth, L. & Brian, F. (2006). Purchasing and Supply Chain Management 7th edition, Mc Graw-Hill Publishing Company Limited, New Delhi.

Khan N.R., (2013) .The impact of HRM practices on supply chain management success in SME. Log Forum 9 (3).

Kim, W., (2006). Effects of Supply Chain Management Practices, I Integration, and Competition Capability on Performance. An International Journal, Vol. 11(3).

Lambert, M. & Cooper, C., (2000). Issues in Supply Chain Management. Industrial Marketing Management, vol. 29, no.1.

Lazarevic, P. Sohal, A & Baihaqi, I., (2007). Supply chain management practices & supply chain performance in the Australian Manufacturing Industries. In Monish university.

Lee & Whang ,(2001). E-Business and supply chain integration. From http:// www. Stanford, edu/group/scforum/ welcome/ EB_SCI.pdf.

Lee & Whang,(2000). Information sharing in a supply chain. International Journal of Technology management, vol. 20, no. 3/4.

Lee, H.L. Padmanabhan, V. & Whang, S., (1997). Information distortion in a supply chain: the bullwhip effect. Management Science, Vol.43, no.4.

Lee, H.L., (2000). Creating value through supply chain integration. Supply chain management review, vol. 4, no.4.

Lee, H.L., (2002). Aligning supply chain strategy with product uncertainties. California Management Review, vol. 44, no. 3.

Lee, J. & Kim, Y., (1999). Effect of partnership quality on IS outsourcing: conceptual Framework and empirical validation. Journal of Management Information Systems, Vol. 15, no. 4.

Levi, D. Kaminsky P. & Levi, E., (2003). Designing and managing the supply chain. 3rd edition, Mc Graw-Hill Publishing Company Limited, New Delhi.

Li, S. Rao, S. & Ragu-Nathan, B., (2002). An Empirical Investigation of Supply Chain Management Practices. Proceedings of the 33rd annual meeting of the decision science institute, San Diego, CA, November 23–26.

Li, S. Rao, S. & Ragu-Nathan, B., (2005). Development and Validation of measurement Instrument for Studying Supply Chain Management practices. Journal of operation management, vol. 23, no.6.

Makweba, R. & Xu. Q., (2009). Supply Chain Management and Challenges Facing the Food Industry Sector in Tanzania. Vol. 4 No. 12

Malhorta, Naresh, K., 2007). Marketing Research: An applied approach 5th edition. Prentice Hall.

Mebrahtom Tesfay , (2016). The Effect of Supply Chain Management Challenges on the Performances of Humanitarian Aid Organization: The case study of Addis Ababa City Administration.

Mentzer, J.T. Min, S. & Zacharia, Z.G.,(2004). The nature of inter-firm partnering in Supply chain management. Journal of Retailing, Vol.76, no.4.

Mesfin Kora, (2016) Assessment of green supply chain management practices and organizational performance: The Case of Ethio telecom.

Milgrom, P. and J. Roberts, (1998). Communication and Inventory as Substitutes in Organizing Production. Scandinavian Journal of Economics, vol. 90, no.3.

Moberg, R. Cutler, D. Gross, A. & Speh, W. (2002). Identifying antecedents of information exchange within supply chains. International Journal of Physical Distribution and Logistics Management, Vol.32, no. 9.

Monczka, R.M. Petersen, K.J. Handfield, R.B. & Ragatz, G.L.,(1998). Success factors in strategic supplier alliances: the buying company perspective. Decision Science, Vol. 29, no. 3.

Morgan, N. Kaleka, A. & Richard, G.,(2007). Focal supplier opportunism in supermarket retailer category management. Journal of Operations Management, vol. 25, no. 2.

Morten, (2003). Managerial Challenges within Networks Emphasizing the Paradox of Network Participation. The Aarhus School of Business, vol.9, no. 3.

Natnael Gebreyesus, (2016). Employees' Perception on the Effects of Supply Chain Management Strategy on Firm Performance .The Case of MOHA Soft Drinks Industry S.C. Addis Ababa.

Neeley, R., (2006). Connective Technology Adoption in the Supply Chain: The Role of Organizational, Inter organizational And Technology-Related Factors. University of North Texas.

Nunnely, C. and Bernstein, H., (1994). Psychometric Theory New York, Mac Graw Hill.

Olsson, A. and Skjolde, C., (2008). Risk Management and Quality Assurance through the Food Supply Chain. The Open Food Science Journal, Volume 2.

Perry, M. & Sohl, S., (2000). Quick Response Practices and Technologies in Developing Supply Chains. International Journal of Physical Distribution and Logistics, vol.30, no 7/8.

Peter, P. Jessica, Yu & Sai, O., (2004). Identifying Obstacles against Implementation of Supply Chain Management in Construction. Hong Kong Surveyor Vol. 15, no.2.

Power J. & Sohal A., (2001). Critical success factors in Agile supply chain management. International Journal of physical distribution and logistics, vol, 31 (4).

Raghunatahan, (2003).Impact of Demand correlation on the value of and incentives for information sharing in a supply chain, European Journal of operational research, vol. 146.

Ross, D.F., (1998). Competing through chin management: creating market-winning strategies through supply chain partnership. New York: Chapman and Hall.

Russell, H. S., (2006). Supply Chain Management: More than integrated logistics, air force journal of logistics, Vol. XXXI, No. 2.

Salem Samuel, (2012). Investigation on the Effect of Supply Chain Integration on Ethiopian Garment Industry's Performance

Silver, A. Pyke, V. & Peterson, R., (1998). Inventory Management and Production Planning and Scheduling. John Wiley & Sons, New York.

Simchi-levi., (2000). Designing and managing the supply chain: concepts, strategies, and case studies. Boston: Irwin/ McGraw-Hill.

Stank, (2001). Supply chain integration: Tales from the Trenches, supply chain management Review, vol. 5(3).

Sunil, Chopra, Peter, M., (2004). Supply chain management strategic planning and operation. printice of India ,New Dehli.

Svensson, Goran, (2003). Holistic and cross-disciplinary deficiencies in the theory generation of supply chain management. Supply Chain Management: An international Journal, Vol. 8 No.4.

Talluri, S., (2000). IT/IS acquisition and justification model for supply chain management. International Journal of physical distribution and logistics management, vol , 30 (3).

Tan, (2001). A frame work of supply chain management literature. European Journal of purchasing and supply management, vol. 7, No. 3.

Tan, K.C. Kannan, V.R. & Handfield, R.B., (1998). Supply chain management: supplier performance and firm performance. International Journal of Purchasing and Materials Management, Vol.34, No. 3.

Tan, K.C. Lyman, S.B. & Wisner, J.D., (2002). Supply chain management: A strategic perspective. International Journal of operations and production management, vol. 22(6).

Thawatchai & Jitpaiboon ,(2005). The Roles of Information Systems Integration in the Supply Chain Integration Context - Firm Perspective.

Tsay, A. (1997). Forecast Revision and Supply Chain Performance. Working Paper, Santa Clara University.

Turban, E. McLean, E. & Wetherbe, J., (2004). Information technology for management 4th edition. John Wiley & Sons New York.

Waters, D., (2003). An introduction to supply chain management. Palgrave Macmillan, New York.

Wilding, R., (1998). The Supply Chain Complexity Triangle Uncertainty Generation in the Supply Chain. International Journal of physical distribution and logistics management, vol. 28 (8).

Wondimieneh S., (2013). Supply chain management practices of pharmaceuticals manufacturing companies of Ethiopia: the case of Ethiopian Pharmaceuticals manufacturing Share Company.

www.google search

Yan, Z. & Cheng, H., (2001). Benefits of information sharing with supply chain partnership.

Annex- i
Questionnaire

Wolkite University College of Business and Economics Post Graduate Program Department of Management Masters of Business Administration

Dear respondents, the purpose of this questionnaire is to gather data on the practice of supply chain management of K.O, J, J food processing complex plc. In order to fulfill the University's (Wolkite University) requirement set for awarding of a Master's Degree in masters of Business Administration. The study is purely for academic purpose and thus not affects you in any case and the identity of the respondent will be kept confidential. So, your genuine, frank and timely response is vital for successfulness of the study. Therefore, I kindly request you to respond to each items of the question very carefully.

General Instructions

♣ There is no need of writing your name

Part I. Respondents Profile

1. Sex

1. Male ☐ 2. Female ☐

2. Age:

1. Below 20 years ☐ 2. 20-25 years ☐

3. 26-30 years ☐ 4. 31-35 years ☐

5. 36- 40 years ☐ 6. Above 40 years ☐

3. Year of work experience in the organization:

1.1-3 years ☐ 2. 4- 6 years ☐

3. 7-11 years 4. Above 11 years ☐

4. Educational Qualification:

1. Below grade 9 ☐ 2. Grade 10 completed ☐

3. Grade 12 completed ☐ 4. Certificate ☐

5. College Diploma ☐ 6. First Degree ☐

7. Second Degree and above ☐

5. Occupation

1. Human resource expert ☐ 2. Marketing and sale expert ☐

3. Financial expert ☐ 4.Production and technical expert ☐

5. Procurement and supplies expert ☐ 6.Customer ☐ 7. Supplier ☐

6. Your current position

1. Internal worker ☐ 2. Customer ☐ 3. Supplier ☐

Profile for Supply Chain Management Practices Using the following Rating Scales under the columns, ‘‘put only one number from the given alternative numbers in the box after reading the variable on the left hand.’’

The numbers represent: 1- Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree and 5 –Strongly agree

S/N	Variables	Rating Numbers				
A	Internal Operation Practices	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Up- to- datedness of production system					
2	Suppleness of production system to handle order pattern					
3	The degree of production process automation					
4	The magnitude of innovation in product					
5	The extent of endless and prompt product and service improvement					
6	Management know-how regarding supply chain usefulness					
7	Stretchy production system to market change					
8	Proficient use of resources					
9	Extent of computerized quality control					
10	Internal logistics flow					
B	Suppliers and customers relationship					
1	Combined product planning with suppliers					

2	The level of cooperativeness with suppliers					
3	Customer's delivery loyalty requirement					
4	Agreement with customer's delivery in- full requirements					
5	Agreement customer's delivery on time requirements					
6	The level of cooperativeness with customers					
7	Joint product planning with major customers					
C	Information Sharing Practices					
1	Sales Forecast information sharing with customers					
2	Sales Forecast information sharing with suppliers					
3	Other product related information sharing with suppliers					
4	Other product related information sharing by customers					
5	Appropriateness and quality of information sharing throughout the supply chain					
6	Overall efforts of Inter-organizational information coordination and sharing					
7	Sense of trust and confidence along the supply chain					
D	Training practices					
1	Adequacy of training and development for management					
2	Employees training in supply chain concepts & management					
3	The overall adequacy of employee's training					
4	Provision of diversified skill training to employees					
5	Giving training to downstream SC members /intermediaries					
E	Information technology					
1	The level of information technology-based automated ordering from major customers					

2	The level of Information technology-based automated ordering to main suppliers					
3	up-to-datedness of Information technologies throughout the supply chain					
4	The sufficiency of Information technology systems throughout the supply chain					
F	Challenges/ Barriers for effective SCM implementation					
1	supply uncertainty (supplier inability to carry out the promise)					
2	Organizational trust to share private data.					
3	Readiness to share risks and benefits.					
4	Inventory variation due to wrong information sharing (bullwhip effect)					
5	Manufacturing uncertainty like, machineries break down, interruption of power, poor procedure design etc.					
6	Asymmetrical orders from unpredictable customers (Demand uncertainty)					
G	Supply chain collaboration					
G1	Company's integration with suppliers					
1	The level of strategic partnership with suppliers					
2	The establishment of quick ordering system					
3	Stable procurement through network					
G2	Company's Integration with Customers					
1	Follow-up customers for feedback					
2	Monitoring and measuring customer service level					
3	The level of market information sharing with major customers					

4	Frequency of contacts with major customers					
G3	Cross functional integration within a company					
1	Data integration among internal functions through network					
2	Information system integration among internal functional units					
3	Teamwork and intra-organizational coordination					
4	Extent of interaction between production and sales department					
5	Periodic interdepartmental meetings					
H	Customer service satisfaction					
1	Reduction of lead time/ speed of order handling					
2	The accuracy of order processing for customers					
3	Effectiveness and flexibility in meeting customers' requirement					
4	Product accessibility					
5	Low Stock out frequencies					
6	Timely invoice completion					
7	Extent of customers' complaints management					
8	The extent of after sales service					

Thank You for your collaboration!!!

Annex -ii
List of Interview Questions:

❖ For Procurement and Supply Manager

- How do you see the suppliers' capability? Are they permanent?
- How do you evaluate the extent of information sharing practice between your factory and your suppliers?
- What about the extent of integration between your factory and your suppliers?
- Is there uncertainty of suppliers, sense of trust?
- Do think that it is important to establish strategic or long term relationship with suppliers?

❖ For Human resource Manager

- Does your factory have training program & criterion in order to make employees & managers competent?
- How do you see provision of multi skill training for your employees?
- How does your factory manage employees' complaints?
- Does your factory have flexible /agile man power?
- How do you see the employees' commitment and initiation for work and learning?
- How do you see the internal operation practices of your factory?

❖ For Marketing Manager

- What look like your supply chain system?
- How do you see, your factory's effort to maintain and develop existing and new customers?
- How your factory manages customers' complaints?
- How do you see making your products accessible for your customers both in quantity and quality?
- How do you see the extent of information sharing practice between your factory and customers?

- Is there demand uncertainty?
- How do you see team work, flexibility, integration with in the factory for meeting change in market condition?
- How do you see the general integration between your factory and customers?

❖ For Production Manager

- How do you see the extent of supply uncertainty?
- How do you see the internal logistics system?
- Do you have flexible production system to meet change in market and orders?
- What about innovation of new products and improvement of existing products?
- How do you see the extent of manufacturing uncertainty?
- What about effective resource utilization?

❖ For general manager

- How supply chain management is being practiced at K.O.J.J?
- How supply Chain collaboration/integration is exercised by K.O.J.J with Supply Chain key players?
- What looks like the K.O.J.J is working towards integrated internal operation for customer service?
- What are the factors that affect the effectiveness of supply chain management of K.O.J.J food process complex plc?

Annex -iii

ቃለ መጠይቅ

ውድ/የተከበራችሁ መልስ ሰጪዎች/መላሾች የዚህ ቃለመጠይቅ ዋናው ዓላማ በፋብሪካችሁ ውስጥ የአቅርቦት ሰንሰለት አስተዳደር አፈጻጸምን አስመልክቶ መረጃዎችን ለመሰብሰብ ሲባል ነው። ይህም በወልቂጤ ዩኒቨርሲቲ በቢዝነስና ኢኮኖሚክስ ኮሌጅ በማኔጅመንት ትምህርት ክፍል ስር የቢዝነስ አድምኒትሬሽን የድህረ ምረቃ የሚሰጠውን መስፈርት ለማሟላት የተዘጋጀ ነው። ይህ ጥናት ሙሉ በሙሉ ለትምህርታዊ ዓላማ የሚውል ሲሆን እናንተን በምንም አይነት መልኩ ተጽእኖ የማያሳድር እና መልሶቻችሁ ምስጢራዊነት የሚጠበቅ ሲሆን የእናንተው እውነተኛ ግልጽ እና ወቅቱን የጠበቀ ምላሽ ጥናቱን ውጤታማ በማድረግ የጎላ አስተዋፅኦ ይኖረዋል። ስለዚህ ለእያንዳንዱ ጥያቄ በጥንቃቄ ምላሽ እንድትሰጡ በአክብሮት እጠይቃለሁ።

አጠቃላይ መመሪያ

- ስምዎን መጻፍ አያስፈልግም

የመልስ ሰጪ መረጃ

1. ፆታ

   1.ወንድ ☐ 2. ሴት ☐

2. እድሜ

   1.ከ20 በታች ☐ 2. ከ20-25 ☐

   3. ከ26-30 ☐ 4. ከ31-35 ☐

   5. ከ36-40 ☐ 6. ከ40 በላይ☐

3. በድርጅቱ ውስጥ ያለውን የስራ ልምድ

   1. ከ1-3 ☐ 2. ከ4-6 ☐

   3. ከ7-11 ☐ 4. ከ12 ዓመት በላይ ☐

4. የትምህርት ደረጃ

   1. ከ9 ክፍል እና በታች ☐ 2. የ10ኛ ክፍል ትምህርት ያጠናቀቀ/ች ☐

   3.12ኛ ክፍል ያጠናቀቀ/ች ☐ 4. ሰርተፍኬት ☐

   5. የኮሌጅ ዲፕሎማ ☐ 6. የመጀመሪያ ዲግሪ ☐

   7. 2ኛ ዲግሪ እና ከዚያ በላይ ☐

5. የሚሰሩበት ስራ የፋብሪካው ሰራተኛ ☐ የፋብሪካው ደንበኛ ☐ እቃ አቅራቢ

ተያያዥነት ያላቸው የእቃ አቅርቦት አስተዳደር ስራ በተመለከተ መረጃ ለመስጠት በግራ በኩል የሰፈሩትን ሀሳቦች ካነበቡ በኋላ ለጥያቄው አማራጭ መልስ የተሰጣቸው ቁጥሮች ብቻ በማስቀመጥ ደረጃቸውን ይግለጹ።
ቁጥሮቹ የሚወክሉት፣ 1 በጣም አልስማማም 2 አልስማማም 3 ገለልተኛ ነኝ 4 እስማማለሁ
5 በጣም እስማማለሁ

ተ/ቁ	መግለጫ	ደረጃ ገላጭ ቁጥሮች				
		በጣም አልስማማም	አልስማማም	ገለልተኛ ነኝ	እስማማለሁ	በጣም እስማማለሁ
ሀ.	**የውስጥ አሰራር አፈጻጸም**					
1	ወቅቱን የጠበቀ የምርት ስርዓት					
2	የምርት ስርዓቱን አቅራቦት ስርዓትን በተከተለ መልኩ ስለመካሄድ					
3	የምርቱ ሂደት በማሽን የሚታገዝበት					
4	በምርት ላይ ያለው የፈጠራ አሰራር					
5	ምርት እና የአገልግሎት ለማሻሻል ያለ ተነሳሽነት					
6	ተያያዥነት ያላቸው የእቃ አቅርቦት ጠቀሜታን በተመለከተ የአስተዳደር ክፍሉ ያለው ግንዛቤ					
7	የገበያ ለውጥ ለማምጣት የምርት ስርዓት					
8	ከፍተኛ ደረጃ ያለው እቃ መጠቀም					
9	በኮምፒውተር የታገዘ የምርት ቁጥጥር ማድረግ					
10	የውስጥ እቃ አቅርቦት ሂደት					
ለ.	**የእቃ አቅራቢ እና የደንበኛው ግንኙነት**					
1	ከእቃ አቅራቢ ጋር ጥምር የምርት እቅድ ማውጣት					
2	ከእቃ አቅራቢ ጋር የመረዳዳት መንፈስ ደረጃ					
3	የደንበኛ አቅራቦት ታማኝነት መስፈርት					
4	ከደንበኛው ጋር ያለው የእቃ አቅርቦት ሙሉ መስፈርት ስለመሟላቱ					
5	የደንበኛ በጊዜው የማቅረብ ስምምነት መስፈርት					
6	ከደንበኛ ጋር ያለ የመደጋገፍ መንፈስ ደረጃ					
7	ከዋነኞቹ ደንበኞች ጋር በጥምረት የማምረት እቅድ					
ሐ	**መረጃ የመለዋወጥ ልምድ**					
1	ከደንበኛ ጋር የሽያጭ ትንበያ መረጃ መለዋወጥ					
2	ከአቅራቢው ጋር የሽያጭ ትንበያ መረጃ መለዋወጥ					
3	ከእቃ አቅራቢው ጋር ከሌላ ምርት ጋር ግንኙነት ያላቸው መረጃዎች መለዋወጥ					
4	ከሌላ ምርት ጋር ግንኙነት ያላቸው መረጃዎች በደንበኛው በኩል መለዋወጥ					

5	ተያያዥነት ባላቸው የእቃ አቅራቦት የመረጃ ልውውጥ ተገቢነት እና ጥራት					
6	አጠቃላይ የውስጥ ድርጅታዊ መረጃ ማስተባበር እና ልውውጥ ጥረት					
7	ተያያዥነት ባለው አቅራቦት ሂደት ያለ የመተማመን እና በራስ የመተማመን ደረጃ					
መ	**የስልጠና ተግባራት**					
1	ለአስተዳደር ልማት እና የስልጠና አጥጋቢነት					
2	ተያያዥነት ባለው አቅራቦት ላይ እና የአስተዳደር ጉዳዮች አስመልክቶ የሰራተኛ ስልጠና					
3	አጠቃላይ ጉዳዮችን አስመልክቶ ያለ በቂ የሰራተኛ ስልጠና					
4	የተለያዩ ክህሎቶች ስልጠና በተመለከተ ለሰራተኞች የሚሰጥ					
5	በድርጅታዊ አወቃቀር በአማካኝነት ለደረጃ ለሚገኙ ወደ ታች የስልጠና አሰጣጥ					
ሠ	**የመረጃ ቴክኖሎጂ**					
1	ከዋና ደንበኞች የመረጃ ቴክኖሎጂ መሰረት ያደረገ ትዕዛዝ					
2	ከዋና አቅራቢዎች የመረጃ ቴክኖሎጂ መሰረት ያደረገ ትዕዛዝ					
3	ተያያዥነት ባለው አቅራቦት የመረጃ ቴክኖሎጂ ወቅቱን የጠበቀ ስለመሆኑ					
4	ተያያዥነት ባለው አቅራቦት ሂደት ውስጥ የመረጃ ቴክኖሎጂ ሲስተም በአጥጋቢነት ሁኔታ ስለመገኘቱ					
ረ	**የመረጃ ቴክኖሎጂ በአጥጋቢ ሁኔታ በመጠቀም ያሉ ተግዳሮቶች/እንቅፋቶች**					
1	ቃል የተገቡ ጉዳዮችን በአቅራቢ በኩል ለመፈጸም ያለመቻል ሁኔታ					
2	የግል መረጃዎችን ለማካፈል ያለ ድርጅታዊ አመኔታ					
3	ስጋቶችን እና ጥቅማ ጥቅሞችን የማጋራት ዝግጁነት					
4	በተሳሳተ መረጃ ልውውጥ ምክንያት የቆጠራ ልዩነት					
5	የምርት ስጋት እንደ ማሽን አገልግሎት መቋረጥ፣ የኃይል መቋረጥ፣ ጥራቱ ዝቀተኛ የሆነ የአሰራር ሁኔታ የመሳሰሉት					
6	ካልተጠበቁ ደንበኞች የሚሰጡ ትዕዛዝ (የፍላጎት በትክክል አለማወቅ)					
ሰ	**የቅብብሎሽ አቅራቦት ትብብር**					

ሰ1	**የፋብሪካው ከአቅራቢው ጋር ያለው የትብብር አሰራር**					
1	ፋብሪካው ከአቅራቢው ጋር ስትራቴጂካዊ በሆነ አቀራረብ የመስራት ሁኔታ					
2	አስቸኳይ ትዕዛዝ የማስተናገድ ስርዓት ዝርጋታ					
3	በመረጃ መረብ የታገዘ የተረጋጋ እቃ ግዢ ስርዓት					
ሰ2	**ፋብሪካው ከደንበኞቹ ጋር ያለው ትብብር**					
1	ከደንበኛዎች የሚሰነዘሩ ግብረ መልስ የመከታተል ሁኔታ					
2	የደንበኛ አገልግሎት ደረጃ መቆጣጠር እና መለካት ሁኔታ					
3	ከዋና ደንበኞች ጋር የገበያ መረጃ የመጋራት ደረጃ					
4	ከዋና ደንበኛዎች ጋር በተደጋጋሚ የመገናኘት ሁኔታ					
ሰ3	**ፋብሪካው ውስጥ የስራ መተባበር ሁኔታ**					
1	በፋብሪካው ውስጥ በመረጃ መረብ የመለዋወጥ ትብብር					
2	በፋብሪካው ውስጥ ባሉ የስራ ክፍሎች የመረጃ ልውውጥ ስርዓት					
3	የቡድን ስራ እና በድርጅቱ ውስጥ ያለ ትብብር					
4	በምርት እና ሽያጭ ክፍል መካከል ያለ የግንኙነት መረጃ					
5	በፋብሪካው ውስጥ ባሉ ንዑስ የስራ ክፍሎች በተደጋጋሚ የሚካሄዱ ስብሰባዎች					
ሸ	**የደንበኛ አገልግሎት እርካታ**					
1	የእቃ ትዕዛዝ ጊዜ/ፍጥነትን በተፋጠነ ሁኔታ የማስተናገድ ሁኔታ					
2	የደንበኞችን ትዕዛዝ በትክክል የማስተናገድ ብቃት					
3	የደንበኞችን ፍላጎት የማርካት ስኬት					
4	የምርት ተደራሽነት					
5	በማለቅ ላይ ያሉ እቃዎችን መልሶ					
6	ሂሳብ በጊዜው የመዝጋት አሰራር					
7	ከደንበኞቹ የሚቀርቡ ቅሬታዎችን የማስተናገድ ደረጃ					
8	ከሽያጭ በኋላ ያሉ አገልግሎት ሁኔታዎች					

Annex -iv

የቃለ መጠይቅ ጥያቄ ዝርዝር

የእቃ ግዢ እና እቃ አቅራቦት ስራ አስኪያጅ

1. የእቃ አቅራቢዎችን ችሎታ እንዴት ትመለከተዋለህ/ሽ በቋሚነት እቃ የሚያቀርቡ ናቸው?
2. በእርስዎ ፋብሪካ እና በእቃ አቅራቢ ድርጅቶች መካከል ያለው መረጃ ልውውጥ ሁኔታ እንዴት ይገመግሙታል?
3. በእርስዎ ፋብሪካ እና በእቃ አቅራቢ ድርጅቶች መካከል ያለው የስራ ትብብር ሁኔታ እንዴት ይገልጹታል?
4. በእቃ አቅራቢ በኩል እቃ አቅርቦት ከእምነት ጋር የተያያዘ ስጋት አለ?
5. የእርስዎ ፋብሪካ ከእቃ አቅራቢው ጋር የረጅም ጊዜ የንግድ ትስስር የመፍጠር እና ጠቀሜታ ያለው ስትራቴጂ መንደፍ እንዳለ አድርገው ይቆጥራሉ?

ለሰው ኃይል አስተዳደር

1. የእርስዎ ፋብሪካ ውስጥ ሰራተኞችን እና የአስተዳደር ሰራተኞቹ ብቁ ለማድረግ የሚያስችል የስልጠና ፕሮግራም አለው ብለው ያምናሉ?
2. የሰራተኛው የፈርጀ ብዙ ክህሎት ስልጠና ዝግጅት እንዳለው ያስባሉ?
3. የእርስዎ ፋብሪካ የሰራተኞቹን ቅሬታ እንዴት ነው የሚያስተናግደው?
4. ፋብሪካው ተለዋዋጭ የሆነ የሰው ኃይል ስምሪት አሰራር አለው?
5. የሰራተኛው የአፈጻጸም ሁኔታ እና የስራ ተነሳሽነት እንዲሁም ለመማር ያለውን ዝግጁነት እንዴት ይገልጻሉ?
6. የፋብሪካው የውስጥ አሰራር ሁኔታ እንዴት ይመለከቱታል።

ለግብይት አስተዳደር ክፍል ኃላፊ

1. የእርስዎ ፋብሪካ ተያያዥ የእቃ አቅራቦት ምን ይመስላል?
2. የእርስዎ ፋብሪካ ነባር እና አዲስ ደንበኞችን ለመያዝ ያለው ጥረት እንዴት ይመለከቱታል?
3. የእርስዎ ፋብሪካ የደንበኞችን ቅራኔ እንዴት ያስተናግዳል?
4. የእርስዎ ፋብሪካ ለደንበኛዎች የምርት ተደረሽነት በብዛት እና በጥራት ለማቅረብ ያለውን ሁኔታ እንዴት ይመለከቱታል?

5. በእርስዎ ፋብሪካ እና በደንበኛዎች መካከል ያለውን የመረጃ ልውውጥ ደረጃ እንዴት ይመለከቱታል?
6. የምርት ፍላጎት አጣራጣሪነት በፋብሪካችሁ ውስጥ አለ?
7. የቡድን ስራ ተለዋዋጭነት በገበያ ውስጥ ያለውን ለውጥ አስመልክቶ ፋብሪካ የሚወስደው የመተባበር በትብብር የመስራት ሁኔታን እንዴት ይመለከቱታል?
8. በእርስዎ ፋብሪካ እና በደንበኛው መካከል ያለውን አጠቃላይ የትብብር መንፈስ እንዴት ይመለከቱታል?

ለምርት ሥራ አስኪያጅ

1. የእቃ አቅራቦት አጣራጣሪነት ሁኔታ እንዴት ይመለከቱታል?
2. የውስጥ እቃ አቅራቦት ሂደቱን እንዴት ይመለከቱታል?
3. ትዕዛዝ እና የገበያ ለውጥን ለማስተናግድ የሚስችል ተለዋዋጭ የምርት ስርዓት አለ ብለው ያምናሉ?
4. በአሁኑ ጊዜ የሚገኙ ምርቶችን እና የማሻሻል እና አዲስ ምርት ፈጠራ አስመልክቶ ያለው ምን ይመስላል?
5. የምርት አጠራጣሪነት ደረጃን እንዴት ይመለከቱታል?
6. የእቃ አግባቡ የመጠቀም ስኬትን እንዴት ይገልጻሉ?

ለዋናው ማናጀር የቀረበ ቃለ-መጠይቅ

1. በካ.አ.ጀ.ጀ.የቅብብሎሽ አቅራቦት እንዴት ይተገበራል?
2. በካ.አ.ጀ.ጀ.የቅብብሎሽ አቅራቦት ክትትል ከቅብብል አቅራቦት አስተዳደር ዋና ተዋዮች ጋር እንዴትይተገበራል?
3. በካ.አ.ጀ.ጀ. ለደንበኛዎቹ አገልግሎት የድርጅታዊ ውስጥ ትብብር አሰራር ምን ይመስላል?
4. በካ.አ.ጀ.ጀ.የምግብ የተለያየ ምግብ ማቀነባበሪያ ኃላፊነቱ የተወሰነ የግል ኩባንያ የቅብብሎሽ አቅራቦት አስተዳደርን በውጤታማ ሁኔታ እንዳይፈጽም ተጽእኖ የሚያሳድሩ ተግዳሮቶች ምንድን ናቸው?

ለቀና ትብብራችሁ በጣም አመሰግናለሁ!!!