ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE
LOGISTICS AND SUPPLY CHAIN MANAGEMENT UNIT

Assessment of Practice of Supply Chain Management: the case of K.O.J.J Food Processing Complex

A Thesis Submitted to the School of Graduate studies of Addis Ababa University School of Commerce in Partial Fulfilment of the Requirements for the Degree of Master of Arts degree in Logistics & supply chain management

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Assessment of Supply Chain Management Practice; The Case of K.O.JJ Food Processing Complex

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Declaration

I, Kaleab Mulugeta declare that, this paper prepared for the partial fulfillment of the requirements for the award of Master of Arts degree on Logistics and Supply Chain Management entitled "Assessment of Practice of Supply Chain Management: the case of K.O.JJ Food Processing Complex" is prepared with my own effort. I have made it independently with the close advice and guidance of my advisor.

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Certification

This is to certify that Kaleab Mulugeta has carried out this research work on the topic entitled "Assessment of Practice of Supply Chain Management: the case of K.O.JJ Food Processing Complex" under my supervision. This work is original in nature and it is sufficient for submission to the partial fulfillment for the award of masters of Arts degree in logistics and supply chain management.

Tariku Jebena (PhD)

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Bless You All!

Abstract

Supply chain management (SCM) is the means by which firms engaged in creating, distributing, and selling products, can join forces to establish a supply network with an unbeatable competitive advantage-has emerged as one of the most powerful business improvement tools around. 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. Here in Ethiopia very few researches are conducted in food supply chain industries and a lot of gaps are noticed in the area. The purpose of this paper is to study the practices of supply chain management from the five SCM practices perspectives i.e. Supplier and customer relationship, internal operations, information sharing, information technology and training and to see the integrations among SC partners. The study was employed through descriptive design in which the selections of the respondents were carried out by using judgmental and purposive sampling techniques. The major findings indicate that, most SCM practices are moderately practiced with in the K.O. JJ's SC. whereas SCR and training practices are poorly applied which represented with group mean value of 1.85 and 1.95 respectively. Based on both quantitative and qualitative analysis the case company has poor relationship with its customers and suppliers and poor customers' services. Manufacturing, supply and demand uncertainties are the major headaches or challenges of the case company's SC which prohibits effective implementation of SCM. Food processing industries are emerging in our country and future researches should conduct a more detailed study on the issue. Especially researches on supply chain management practices are advised to include all upstream and downstream supply chain members.

Key words: supply chain management practice, supply chain integration, K.O.JJ food processing complex, Ethiopia.

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Acronyms & Abbreviations

SCM - Supply Chain Management

SC - Supply Chain

IT - Information Technology

SCR - Supplier and Customer Relationship

Chapter One-Introduction

1.1-Background of the Study

Firms can no longer effectively compete in isolation of their suppliers and other entities in the supply chain. Interest in the concept of supply chain management has steadily increased since the 1980s when companies saw the benefits of collaborative relationships within and beyond their own organization. Nowadays, the world is seen as becoming increasingly interconnected by economic, political, sociological and cultural forces as a result of globalization. As a result of interconnectedness of firms, this day's multinational enterprises are being developed, and firms are competing in both domestically and at international market in order to defend international competitors, integration of firms in order to provide quality product at the required time and place, etc. Thus, for the sake of achieving competitiveness and satisfying customers, the new management philosophy called 'Supply Chain Management' is developed.

Donlon (1996) describes the latest evolution of SCM practices, which include supplier partnership, outsourcing, cycle time compression, continuous process flow, and information technology sharing. Tan et.al. (2001) use purchasing, quality, and customer relations to represent supply chain management practices.

Alvarado&Kotzab (2001) include in their list of SCM practices concentration on core competencies, use of inter-organizational systems such as EDI, and elimination of excess inventory levels by postponing customization toward the end of the supply chain. Tan et al. (2002) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, and geographical proximity and JIT capability.

Chen & Paulraj (2004) use supplier base reduction, long-term relationship, communication, cross-functional teams and supplier involvement to measure buyer–supplier relationships. (Perry & Sohl, 2000; Lazarevic, 2007) identify the basic dimensions/perspectives of supply chain

management practices which are supplier and customer relationship, information sharing, internal operation, information technology and training.

Supply chain practices are related to supply and materials management issues, operations, information technology and sharing (ICT) and customer service (Tan, 2002). Supply chain practice also includes: technology, cost competitiveness, inventory management and external regulation (McMullan, 1996). All those have to be managed effectively to realize supply chain's strategic position which allows competitive advantage. Joseph, Namusarge & Biraori (2014) conclude from their study that technology adoption is critical in determining effectiveness of the supply chain function.

Supply chain practice depends on business strategy and collaboration in the organization, plan and execution, logistic performance and information technology and its implementation in the organization and including five distinctive dimensions: strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and postponement (Li et al., 2006).

While managers in a SC involving external organizations have to deal with the people outside of its own company, in this situation mutual understanding have to be reached between the managers of departments inside the company itself. However, the term SCM has been used to describe the planning and control of materials and information flows as well as logistics activities not only internally within a company, but also externally between companies (Cooper et al, 1997).

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

From these definitions, a summary definition of the supply chain can be stated as: all the activities involved in delivering a product from raw material through to the customer including sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution across all channels, delivery to the customer, and the information systems necessary to monitor all of these activities. Supply chain management coordinates and integrates all of these activities into a seamless process. It links all of the partners in the chain including departments within an organization and the external partners including suppliers, carriers, third-party companies, and information systems providers.

1.2 Company Background

K.O.J.J food processing complex is a factory in Ethiopia that produces various products such as baby foods, breakfast cereals, snack foods, fortified foods, yeast and so on.

K.O.J.J food processing complex P.L.C is among the pioneering food item manufacturing companies in Ethiopia with the objective of reducing the risk of malnutrition among Ethiopian society by producing low-cost and high protein weaning food.

The company is divided in to four major departments. These are procurement and supply department, human resource department, marketing department and production department. All these departments share various resources, information, skills and human resources between them as needed. Their interaction from supply chain management view is traditional in the sense that mostly they react interdependently to perform an action.

Over the last five decades of its existence, this giant industry had been consistently mining a wealth of experience in industrial production of food items by providing low cost and high protein weaning food for the local market. Currently the company has a capacity to produce more than 30 thousand ton of food items per year. (company source)

1.3-Statement of the Problem

A firm's customer relationship practices can generate the organizational success in supply chain management practices efforts as well as its performance (Scott and Westbrook, 1991; Ellram, 1991; Turner, 1993). The success of supply chain management encompasses customer integration at the downstream and supplier integration at the upstream, considering that each entity in a supply chain is a supplier as well as a customer (Tan et al., 1999; Thatte, 2007). In the competitive business, better relationship management with customers is crucial for organization success (Wines, 1996). Good relationship with business partners, including key customers are important role to success of supply chain management practiced by organization (Moberg et al, 2002; Tathee, 2007). Customer relationship recognized as an internal component of an organization's market strategy to increase sales and profits (Bommer et, 2001; Thatte, 2007). Close customer relationship allow product differentiation from competitors, help sustain customer satisfaction and loyalty, and elevated the value provide to customer (Margaretta, 1998; Thatte, 2007).

Simatupang and Sridharan, (2002) defined information sharing as the access to private data between business partners thus enabling them to monitor the progress of products and orders as they pass through various processes in the supply chain. They identified some of element that comprise information sharing, consisting data acquisition, processing, storage, presentation, retrieval, and broadcasting of demand and forecast data, inventory status and location, order status, cost-related data, and performance status. They also add that information sharing pertaining to key performance metric and process data improves the supply chain visibility thus enabling effective decision making. Information shared in a supply chain is of use only if it is relevant, accurate, timely, and reliable (Simatupang and Sridharan, 2005;Tathee, 2007). Information sharing with business partners enables organizations making better decisions and making action on the basis of greater visibility (Davenport, et al, 2001; Tathee, 2007). Lumnus and Vokurka (1999, cited in Thatte, 2007) stated that in order to make the supply chain competitive, a necessary first step is to acquire a clear understanding of supply chain concepts and be willing to openly share information with supply chain partners. In business competitive world nowadays, business organization should to develop their supply chain in order to get customer responses.

In the business environment, information technology (IT) plays an important role for firms' performance. It provides information flow which makes the supply chain more robust and resilient without undermining its efficiency. In previous years, most companies are increasingly applying IT systems in practice in supply chain management (SCM) to improve their performance in global competitive markets (Bayraktar et al., 2009). Recent progresses in both information and technology and scientific management have enabled many industries practices of acquiring, sharing, and using information (Fu et al., 2010). There has been an increasing literature that either quantifies the value of information in SCM (Cachon and Fisher, 2000; Donohue, 2000; Lee et al., 2000; Moinzadeh, 2002) or studies the incentives of information sharing (Corbett and de Groote, 2000; Cachon and Lariviere, 2001; Ha, 2001; Özer and Wei, 2006). IT integration supports a better supply chain integration and flexibility (Eric et al, 2010).

Companies which have recognized opportunities that exist there in the supply chain management and directed their effort towards developing a competitive supply chain based on speed, flexibility, innovation, quality & responsiveness had significantly improved 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).

A studies by Ross (1998), confirm that, SCM practices considerably improve company's performance. Moreover, the results specifically highlight that IT and information sharing, supplier and customer relationship practice significantly improves performance.

Admaw (2010) studied the practice of SCM for Ethiopian textile firms. It was found that, SCM practices in Ethiopian textile firms are weak and not considering SCM as a strategic tool for competition. Business managers of the textile firms didn't give attention for SCM theories and practices. Also Dereje, (2012) studied the impact of SCM al performances in metal and engineering industries. The result of the study shows that the implementation of SCM in this industry is weak. Also the SCM practices don't have any relationship with organizational performances except internal lean practices. In addition, Belay, (2011) studied the practices of SCM in cement industries. The result of the thesis shows similar to other industries in the

country i.e. the practice of SCM in cement industry is almost poor. There seems that since the demand outweighs the supply of the cement, which contributes for not using SCM as a competitive strategy.

Therefore, this assesses the current practice of supply chain management of K.O.J.J food processing complex as the company is growing fast in today's competitive environment, and provides possible recommendations since less has been attempted on the supply chain management of food processors in Ethiopia.

1.4-Research Questions

The research answers the following questions;

1-How is the practice of supplier and customer relationship management practice in the company?

2-How the company shares information between the supply chains?

3-How is the company's internal operation practice?

4-How information technology practice applied in the company?

5-How is the training practice in the company looks like for successful implementation of SCM?

6-What are the major challenges the company faces in SCM?

1.5-Objective of the Study

1.5.1-General Objective

The general objective of this research was to assess the current practice of supply chain management of K,O,JJ food processing complex.

1.5.2-Specific Objectives

- To assess the SCR practice in the company?
- To assess information sharing practice in the company?
- To assess internal operation practice of the case company?
- To assess information technology practice in the case company?
- To assess the training practice in successful implementation of SCM?
- To assess major challenges, the company faces in successful implementation of SCM?

1.6-Significance of the Study

Findings from this study is helpful to K.O.J.J food processing complex to look in to the current practices of supply chain management from the perspectives of supplier & customer relation, internal operation, information sharing, IT and training to address the shortcomings and sustainably continuing the strengths to compete with the bests.

The output of the research will help other organizations who engage in food processing sector to compare their supply chain management practice with this one and to take positive lessons and inject some excellent findings in their process.

The study will serve as a baseline to conduct further and more detailed research in the area of supply chain management practice as the issue will get more attention in the future.

1.7-Scope of the Study

SCM encompasses a set of interdependent companies that work closely together to manage the flow of goods and services along with the value-added chain of agricultural and food products, in order to realize superior customer value at the lowest possible costs (Wood, 2004) as well as the associated information flow (Byrne 2006). The supply chain includes not only the processor and the suppliers but also the transporters, warehouses, retailers, and even the customers themselves (Chopra and Meindl, 2008).

The study is important in obtaining a lot of information if it covers all food item processing firms in Ethiopia. However, it is costly and time consuming to include all food item processing firms. Therefore, this study is delimited to one food item processing company.

The subject scope of this study is also limited to the company's point of reference towards collaboration, supplier and customer relationship, information sharing, information technology, internal operations of SCM and possible challenges in implementing supply chain management.

1.8-Limitation of the Study

Because of time and other resource limitations it is impossible to cover all food processing firms in Ethiopia. As the research is specified to the case company, it may affect generalizability of the research output.

The researcher tries to include some open-ended questions in the study (for non-managerial employees), but the respondents have no sufficient time to respond to these questions.

The research sample do not incorporate all the SC participants namely: the farmers, suppliers, consumers and so that it couldn't be generalized/applied to the complete SC of the company under investigation because including all these parties need abundant time, money and other resources.

1.9-Definition of Terms

Conceptual definitions

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 the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across business within the supply chain, for the purpose of improving the long term performance of the Individual companies and the supply chain as a whole (Mentzer et al 2001 pp 18).

Multinational Enterprises: - have operations and sales worldwide and which regard the home or host country as but one of many equally important market environments. (Stuart Wall et al, 2010, pp 343).

Supplier-are participants in supply chain that act as the link between producers, processors and markets. The distributors source either fresh produce or processed food from the processors and then distribute it through various channels to reach the final consumer. (Smithers, R (2014)

Customers-The consumer is the final entity in the food supply chain. The economic sustainability of the chain depends upon the consumers buying the products and providing the necessary cash to travel upstream through the supply chain. (Smithers, R (2014)

Information technology (IT)- As a supply chain spans many organizations in developing products to customers both up-stream, downstream and many functional areas within a company, the implementation of IT allows the companies to increase communication and coordination of various value adding activities with their partners and between functions within their own operation (Simchi- levi et al, 2000).

Operational definitions

Bullwhip effect- it is the distortion of information with in the supply chain which lead to an increment of inventory fluctuation than really expected.

Upstream activity in supply chains-includes suppliers of raw materials which are materials not processed. Transporting the raw materials to the plant is an example of upstream activity.

Downstream activity in supply chains-downstream from the assembly plant are distributors, shipping partners and point of sale stops along the way such as wholesalers and retailers. One important downstream activity is inventory management.

1.10-Organization of the Study

This project was organized into five chapters: Chapter one contains the introduction part dealing with back ground of the study, the research problem, research questions, objectives of the study, scope and significance of the study. The second chapter discusses the literature review about the subject matter along with the conceptual framework. In chapter three the research methodologies were presented. In chapter four results and discussion of the study presented and finally, chapter five presents the major findings, conclusions and forward suggestions.

Chapter Two -Literature Review

2.1-Supply Chain Management Definition and Benefits

The known authors Heizer and Render (2011) define SCM as the integration of the activities that procure 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. 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 cited in Tan (2001).

According to Awad and Nassar (2010), to success in such highly digitalized economy organizations must manage the integration of business, technology, people, and processes not only within the enterprise but also across extended enterprises. SCM system facilitates inter-enterprise cooperation and collaboration with suppliers, customers, and business partners. Although this system can bring benefits and competitive advantage to organizations, the management and implementation of this system pose significant challenges to organizations.

SCM has been growing in importance, from the early practice of concentrating on internal processes to the web-linking of supply chain partners. Firms have been pressed to increase their operational efficiencies to stay competitive. Companies have begun to see the value in effective supply chain relations. Benefits found resulting from electronic SCM include lower inventory levels, quicker response to problems, higher quality levels, higher customer satisfaction, and more diverse product offerings. As internal processes have been improved, external relationships have been examined as the next area of business improvement. Yet, the supply chain must also become more open with its information sharing, and supply chain partners will need to develop a greater degree of trust. Clearly, the benefits of a pull-based operation are there if companies are willing to collaborate. Electronic SCM allows for the entire supply chain to become a

community, dedicated to efficient operations and customer service (Lancaster *et al*., 2006). Kim, (2006) studied effect of SCM practices, integration and competition capability on performance. It was found that the role of supply chain integration as an intervening variable means that even if a firm has excellent SCM practices and competition capabilities, close strategic alignment and coordination with its supply chain partners are indispensable for linking such SCM practices and competition capability to firm performance improvement. Accordingly, the strategic integration approach which properly utilizes partners' existing facilities and technologies by the way of short-term lease or contract may be advisable rather than the new investments on transaction-specific assets with partners.

2.2-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 writer's 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).

2.2.1-Supplier and Customer Relations

The customer relationships include the complete range of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers & improving customer satisfaction (Tan *et al.* 1998; Claycomb*et al.* 1999).

Customer relationship management (CRM) is a key element of supply chain practices (Noble 1997; Tan *et al.* 1998). Committed relationships are the majority sustainable advantage because

of their inherent obstacles to competition (Day 2000). The growth of mass customization & personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival (Wines 1996).

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

Stank et al, (2001) asserted that, the industry leaders increasingly build competencies to integrate with suppliers and customers and find that, these competencies lead them to supply chain excellence. Coordinating operational activities through joint planning with suppliers results in inventory reduction, smoothing production, improve product quality, reducing supply uncertainty and lead time reduction (Lee, 2002).

2.2.2-Internal Operation

Internal operation summarizes all activities related to production system and internal, logistics flow (Handfield and Nichols, 1999). To judge the SCM practice as an effective and value adding the internal operation should be flexible in responding to changing market needs, which is expressed on the basis of agility principles. This means that, a production system must be able to perform rapid change over in both order patterns and mass customization (Lambert and Cooper 2000). Power and Soha (2001) find that technology utilization, continuous improvement and computer based automation in manufacturing are some of characteristics of agile/flexible organization.

Thus, the effectiveness of SCM can be examined by the ultimate effect it would have on customer satisfaction through responsiveness and lower price resulting from lean internal operations. Automated orders and automated productions are the key enablers to realize the quick response program (Perry and Sohal, 2000).

2.2.3- Information Sharing

Information sharing has two aspects: quantity & quality. Both aspects are fundamental for the practices of supply chain & have been treated as independently constructed in the past supply chain management studied (Choi *et al.* 1996). Level of information sharing refers to the extent to which critical & proprietary information is communicated to one's supply chain partner (Monczka*et al.* 1998).

Information sharing can vary from strategic to tactical included the operational in nature & from information about logistics activities to general market & customer information (Mentzer*et al.* 2000). Many researchers have suggested that the key to the seamless supply chain is making available undistorted & up-to-date marketing data at every node within the supply chain (Turner 1993; Balsmeier*et al.*1996; Towill 1997; Childhouse*etal.* 2003). By taking the data available &sharing it with other parties within the supply chain, information can be used as a source of competitive advantage (Novack*et al.* 1995; Jones 1998).

Sharing of information is one of five building blocks that characterize a solid supply chain relationship (Lalonde, 1998). Supply chain partners who exchange information regularly are able to work as a single entity (Stein *et al.* 1998). Together they can understand the needs of the end customer better & hence can respond to market change quicker. Moreover, the effective use of relevant & timely information by all functional elements within the supply chain as a key competitive & disguising factor (Tompkins *et al.* 1999). Another empirical research about the simplified material flow, including streaming & making highly visible all information flow throughout the chain, is the key to an integrated & effective supply chain (Childhouse*et al.* 2003).

Information regarding sales data, forecast and inventory level must be shared in the chain. When the information is transferred in the form of orders tends to be distorted, can misguide upstream partners in their inventory and production decisions. It ultimately harms the efficiency of the supply chain in the form of excess raw material inventory, unplanned purchases of supplies, additional manufacturing expenses created by excess capacity, inefficient utilization and overtimes, excess warehousing expenses, premium shipping costs, and poor customer service level (Lee, et al. 1997).

The common form of forecast sharing involves a downstream site sharing the information to the supplier, as it is closer to the market and is thus better positioned to forecast future market demand Tsay (1997).

One of the most common data shared between supply chain partners is inventory level. Access to supply chain inventory status can contribute to lowering the total inventory level in the supply chain. If the retailer and the manufacturer independently manage their respective inventories without sharing inventory status information, they may end up having duplicate safety inventories or stock-outs at both locations (Milgrom and Roberts, 1998)

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Quality of information sharing includes such aspects as the accuracy, timelines, adequacy, & credibility of information exchanged (Monczka*et al.*1998; Moberg*et al.* 2002). For instance, the information sharing between beef producers and processors are such as the number of livestock, inventory levels, demand etc. While information sharing is vital, the major of its impact on supply chain management depends on what information is shared, when & how it is shared, & with whom (Chizzo 1998; Holmberg 2000).

2.2.4-Information Technology (IT)

In the business environment, information technology (IT) plays an important role for firms' performance. It provides information flow which makes the supply chain more robust and resilient without undermining its efficiency. In previous years, most companies are increasingly applying IT systems in practice in supply chain management (SCM) to improve their performance in global competitive markets (Bayraktar et al., 2009). Recent progresses in both information and technology and scientific management have enabled many industries practices of acquiring, sharing, and using information (Fu et al., 2010). There has been an increasing literature that either quantifies the value of information in SCM (Cachon and Fisher, 2000; Donohue, 2000; Lee et al., 2000; Moinzadeh, 2002) or studies the incentives of information sharing (Corbett and de Groote, 2000; Cachon and Lariviere, 2001; Ha, 2001; Özer and Wei, 2006). IT integration supports a better supply chain integration and flexibility (Eric et al, 2010). So, this study attempts to show out the kinds of firm performance be affected by IT in SCM.

The collaborative investment in IT among supply chain stakeholders has become a strategic thrust to achieve more transparent and supply chains (Corsten and Kumar, 2005; Zhou, 2009). With the increasing use of an integrated information systems and enabling technologies, it has become possible now to create seamless supply chains linking suppliers to customers in order to eliminate poor performance of the suppliers, unpredictable customer demands, and uncertain business environment (Bayraktar et al., 2009).

Nevertheless, the investment required among supply chain stakeholders to adopt new IT often does not occur as a desired, even though such collaborative efforts can create unique value that a single firm cannot attain independently (Dutta et al 2007).

Chae et al., (2005) proved that the existing relationships between the channel partners were moderated by the ability of IT to influence inter-organizational collaboration. The information sharing capability positively influences firm performance with higher levels of both connectivity and willingness to share information (Fawcett et al., 2008). Therefore, the implementing IT for promoting connectivity among SC partners requires a commitment to exchange information to realize better performance. A well-integrated IT system can provide a clear picture of supply

chain status, inventory status (of the manufacturers or its suppliers), and even the service capability of its logistic providers. IT allows suppliers to be able to access the inventory information of their customers and prepare for stock delivery on time (Ngai et al., 2010).

2.2.5-Training

Effective SCM requires managers to have an understanding of supply chain dynamic and ability to use information based tools. Lee and whang, (2000) argue that information visibility throughout a supply chain will bring significant impact if companies do not have a capability to utilize the information in effective ways. Hence companies need to consider the skills requirements and education when integrating their value-adding activities with their partners (Gattoma and Clark, 2003). 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).

The review literature of different studies indicates that, there are various complicated and sophisticated operations and decision making those primarily demand knowledge based employees. To this end, organizations are supposed to enhance and maintain existing skills and knowledge of employees. Continuous development and skill building activities demand are sources of competent employees (Lazarevic, et al., 2007).

2.3-Supply Chain Management Practice- Developed Country Experience

A study by Bagchi (2005) regarding supply chain integration in European firms show that many firms have adopted enterprise resource planning systems and also established some electronic links with their supply chain partners. Enterprise resource planning systems generally support internal coordination across functional activities; however, it is less supportive in decision-making across organizational boundaries. The results from the survey also confirm that supply

chain integration is more a rhetoric than reality in most industries in Europe. Regarding transparency of inventory and sensitive data, most companies are quite cautious when it comes to sharing such data. Very few companies have established joint decision-making with their key suppliers or customers. However, a majority of the respondents confirmed that some consultation took place with their supply chain partners.

Zailani and Rajagopal, (2005) study and compare the supply chain integration and performance of US and East Asian Companies. The variables used are information sharing, internal integration and external integration with suppliers. It was found that US companies tend to use various means in ensuring information sharing process is smooth and share the information to the extent production plans and systems. But East Asian firms are using internal integration via internal control primarily to reduce costs, but the US firms emphasized on operational integration of physical process flows between a company and its suppliers and customers. Regarding external integration both East Asian and US firms show long term partnership with suppliers and customers that lead to achieve competitive advantage.

According to the study on SCM practices of the Hong Kong manufacturing companies, it shows that there is little progress towards SCM implementation. SCM is immature and not fully recognized in the city. The main reason may be due to the application of information and communication technologies and insufficient skills (Chin *et al*., 2004).

McMullan, (1996) studied the SCM practice in Asia Pacific region. It addresses the SCM practice from four key areas namely; management issues, roles and responsibilities, competitive strategies and performance management. The result of the study shows that; many firms will be required to change their organizational structures, relationships with supply chain members and performance measurement systems to achieve this.

2.4-Supply Chain Management Practice-Developing Countries Experience

Msimangira, (2003) studied the SCM practices of Botswana companies. The result of the study shows that supply chain management is not as such a strategic rather it is a clerical and operational activities only. Top managers don't recognize its importance and also there are very limited trainings and education are available for SCM as a profession.

Voordijk (1999) studied obstacles and precondition of supply chain management and manufacturing as case study of the East African country of Eritrea, the result showed that each element of the supply chain network causes problems. The basic condition for logistics and manufacturing are well developed infrastructure: such as transport system and telecommunication network, enabling environment: such as sound industrial policy and educational system for skill development, and at firm level: such as purchasing materials, manufacturing capabilities and export and distribution. Such factors impede the efficient logistics and manufacturing of the country.

One study regarding logistics management of South Africa shows that there is still in the quarter of supply chain confusion. The position close to the center can possibly be explained by the fact that South Africa is still in the early phases of integration of logistics activities. Understanding for logistics has increased but the practice still lags behind. The fact that management in South Africa is primarily functionally oriented resulted in a lack of holistic management. In addition, there is lack of integrative systems. Owing to the lack of a holistic approach, integrative systems will naturally lag behind (Cilliers and Nagel, 1994).

2.5-Supply Chain Management Practice - Ethiopian Experience

Admaw (2010) studied the practice of SCM for Ethiopian textile firms. It was found that, SCM practices in Ethiopian textile firms are weak and not considering SCM as a strategic tool for competition. Business managers of the textile firms didn't give attention for SCM theories and practices. Also Dereje, (2012) studied the impact of SCM al performances in metal and

engineering industries. The result of the study shows that the implementation of SCM in this industry is weak. Also the SCM practices don't have any relationship with organizational performances except internal lean practices. In addition, Belay, (2011) studied the practices of SCM in cement industries. The result of the thesis shows similar to other industries in the country i.e. the practice of SCM in cement industry is almost poor. There seems that since the demand outweighs the supply of the cement, which contributes for not using SCM as a competitive strategy.

Mesfin (2007) studied the SCM and model development study as a case study of Mesfin Industrial Engineering plc. The result of this study shows that most of the employees of the company don't have awareness of SCM. The company also don't use supply chain cost analysis rather than using the traditional accounting system. Also there are problems in their warehouses. Besides to the above machine handling problem, ageing, poor preventive maintenance, lack of proper operation, and wear of spare parts are the main reasons for the breakage of machines in Mesfin industrial engineering.

Reta (2016) also studied the supply chain management practice of fertilizers in Ethiopia and the major conclusions from the study are the supply chain performance of fertilizers in Ethiopia is inefficient with regard to cost; when comparing farmers purchase price and world market price in 2012, there is 60% difference in between which is caused by many surcharges accumulate while fertilizers moves across the supply chain. The majority 92.3% of farmers in the study area complained with the high cost of fertilizers and it is too high to afford and unable to buy enough amount of fertilizer.

Hana (2016) also studied the effect of SCM practice on customer satisfaction in Ethiopian Sugar Corporation and concludes that the case company's orientation towards SCM is traditional that lacks substantial indicators of an integrated, efficient and effective SCM. From SCM practices the case company has a great problem on information sharing and IT practices in supply chain. 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. On the other hand, supply chain management need effective internal operation for creating integration with external partners. For making internal operation

effective, the human resource is a critical factor and in order to have skilled, committed, and capable employees and managers, to utilize resources effectively and efficiently training plays a significant role.

2.6-Challenges of Supply Chain Management Practice

Supply chain management executives face distinctive challenges, with respect to integrating supply chain strategies (Hussain and Mohammad, 2010 pp 52). The implementation of SCM is not an easy task. As Handfield and Nichols (2002 pp 32-33) explained, managers who decided to do so will most likely to face at least three challenges as categorized into several categories i.e. information systems, inventory management, and in establishing trust between SC members.

2.6.1-Uncertainty

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

2.6.2-Bullwhip Effect

The bullwhip effect is one of key areas managed in applications of administration with chains of supplies of examinations. It is representing the phenomenon where orders are trending to deliverers for being more diversified than what is being sold to buyers but consumer demand is deformed. This distortion of demand is being spread too for higher stages in the amplified form. High levels of provisions and the weak level of using of the client are posing standard symptoms of the bullwhip effect in the chain of supplies. Keeping production costs and provisions stable and the increase in main times are proving it additionally while margins of the profit and availability of products are falling. Chopra, (2001)

Presented empirical examinations carried out in literature of the subject is resulting that the total elimination of the bullwhip effect is able to raise product profitability of about 10%- 20%,

however decrease in the bullwhip effect is making the possible profitability height of about 5%-10%. Linking the elimination or decrease in the bullwhip effect to the reduction of the other property (e.g. of seasonality) is possible to obtain profitability higher of about 15%- 30% in dependence on the specificity of the business environment. Chen, (2000)

The bullwhip effect was determined for the simple chain containing the one retailer of supplies and the one producer in the other study, as applying for the correlation of the baulk with current demand but its earlier values while the retailer is fulfilling orders relying only on earlier demand. What's more, delivering size of the bullwhip effect to information to every level of the supply chain about consumer data perhaps to lessen but it will be existing still if information is centralized at every stage about demand. Matters, (1997)

Hau, (2004), concluded as, one of the most common problem that hamper 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 chain.

2.7-Conceptual Framework

After going through tremendous literatures, the researcher organizes the conceptual framework in supply chain management practice and challenges as essential parts. The supply chain management practices namely, supplier and customer relationship management, information sharing practice, information technology practice, internal operations and training practice.

According to Eyong, (2009) having this practices in a typical organization is not sufficient to judge an enterprise's SCM as integrated and efficient or generally poor. He states that each practice should be measured for their appropriate level of integration and efficiency. Accordingly, 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.

Chapter Three-Research Methodology

This part describes the methodologies that were used in the study: the choice of particular research designs, sampling techniques, sources of data and data collection tools along with an appropriate justification associated with each approach.

3.1-Research Approach

The key concept in the quantitative approach is the quantity, expressed as information about the world in form of numerical data (Punch, 2000). A survey is an example of research approach providing a quantitative or a numeric description of trends or opinions of a population by studying a specific sample of the population and as a conclusion generalize the sample result to the whole population. The possibility to generalize results is the strength of the quantitative method. Usually questionnaires or structured interviews are applied to collect data. Experiments are another example of strategy to gather data (Creswell, 2002).

Qualitative research has its strength in showing the total situation. Such an overall picture makes it possible to explore and increase the understanding of social processes (Holme& Solvang, 1997). According to Merriam (1998) the key concept is to understand the phenomenon of interest from the participants' perspective, not the researcher's. By definition, qualitative data is empirical information about the world, mostly expressed in words (Punch, 2000). In the broadest sense, qualitative refers to research that produces descriptive data such as observable behavior or people's written or spoken words. Qualitative studies are characterized by a flexible research design in opposite to the quantitative studies which follow a structured research design (Taylor & Bogdan, 1984).

A mixed method of research approach was used in this study. It is a procedure for collecting, analyzing, and mixing both quantitative and qualitative methods in a single study or a series of studies to understand a research problem (Creswell 2011). The basic assumption is that the uses

of both quantitative and qualitative methods, in combination, provide a better understanding of the research problem and question than either method by itself. The researcher believes that for a better understanding of the issue covered in the study, this type of approach is appropriate. Because this method enables to assess and interpret the supply chain management practice of K.O.J.J food processing complex.

3.2-Research Design

Research Design is an arrangement of conditions for collecting and analyzing data which will be relevant to the researcher in the most economical manner. It is the program that guides the researcher in the process of collecting, analyzing and interpreting an observation. It also defines the domain of generalization; that is, it indicates whether the obtained interpretation can be generalized to different situation or not (Amoani, 2005). The research design that will be used in the study was descriptive type. According to Avoke (2005), descriptive research is designed to portray accurately the characteristics of particular individuals, situations, or groups.

Therefore, the purpose of this study was to assess the current practice and challenges of SCM system of the case company. That means the purpose of this research is to reveal the underlying facts and /or actual circumstances existing within the case company regarding SCM practices and describing the facts.

3.3-Unit of Analysis

The unit of analysis is the major entity that is being analyzed in a study. It is the what or who that is being studied. Typical unit of analysis include individuals (most common), groups, social organizations and social artifacts.

Therefore, the unit of analysis for this study is K.O.J.J food processing complex which engage in production of biscuits, baby foods, breakfast cereals, fortified foods, bread improver, yeast and powders.

3.4-Target Population

According to Ngechu (2004), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated.

From the company's source of data, the total number of employees working in the organization are 328 and this study consider these employees particularly those who have a direct relation with supply chain management practice.

3.5-Sampling Technique and Sample Size

There are two types of sampling techniques probability and Non-probability sampling Techniques: Non-probability sampling is that sampling procedure which does not afford any basis for estimating the probability that each item in the population has of being included in the sample. Non-probability sampling is also known by different names such as deliberate sampling, purposive sampling and judgment sampling. In this type of sampling, items for the sample are selected deliberately by the researcher; his choice concerning the items remains supreme. In other words, under non-probability sampling the organizers of the inquiry purposively choose the particular units of the universe for constituting a sample on the basis that the small mass that they so select out of a huge one will be typical or representative of the whole (Creswell, 2009).

Therefore, the sample units of the research are chosen based on the non-probability sampling method of judgmental sampling. The reason why the researcher prefers to use judgmental sampling method is aiming to collect comprehensive and reliable information from the sources having relevant knowledge and/or experience directly related to the subject of the study.
Accordingly, to determine the sample size the researcher prefer to use a method developed by Carvalho (1984), as cited in MalhortaNaresh, K. (2007).

Table 3.1-Sample Size Determination

population size	**sample size**		
	Low	**Medium**	**high**
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**
3021-10,000	**80**	**200**	**315**
10,001-35,000	**125**	**315**	**500**
35,001-150,000	**200**	**500**	**800**

*(*Source: MalhortaNaresh, Marketing Research: an applied approach, 2007)

The total number of K.O.J.J food processing complex employees are 328 and those who have a direct relation with supply chain management practice be considered as a sample respondent. In this case, respondents between 50-80 were enough to conclude the current practice of SCM in the case company to forward possible recommendations. In addition, an interview will be held with management bodies and some customers of the company.

3.6-Data Collection Tools

The study uses both primary and secondary data collection methods to achieve the intended objective of analyzing the supply chain practice of the case company. The primary data in the form of personal interviews with department heads of procurement, supply chain, product manager, marketing and human resource managers and through questionnaires which is distributed to employees of the company. As the secondary data; books, articles, journals, magazines, and broachers will be reviewed.

Questionnaire: close ended questionnaire in a 5 point Likert scales was used to collect data from the sample respondents. The questionnaire has 5 rating scales ranging from 1- very low to 5- very high. Data gathered through questionnaires were therefore be simple and clear to analyze and allows for tabulation of responses and quantitatively analyzed.

The questionnaire is adopted from Assefa B.(2011) with some modifications and contains items from supply chain management practice parameters such as supplier customer relationship (7 items), internal operation (10 items), training (5items), information technology (4 items) and information sharing practices (7 items). Additionally, the challenges of implementing effective supply chain management system (6 items), collaboration level in the company, with customers (5 items), cross functional collaboration (5 items).

Items of the questionnaire were prepared in simple English language since all the selected respondents are believed to be familiar with the language and there is no difficulty when responding.

Interview-in order to obtain sufficient information, the researcher uses personal interview by management bodies of the case company. Research issues like awareness, practices of SCM, strategic view and logical justifications of the case company were addressed through interviews which are difficult to obtain trough questionnaire in as much detailed as required.

3.7-Validity and Reliability

3.7.1-Validity

Validity is the accuracy of a measure or the extent to which a score truthfully represents a concept. It refers to the extent to which an instrument measures what it is supposed to measure. Good measures should be both consistent and accurate. If a measurement is valid, it is also reliable (Joppe, 2000). The validity of the data collection instrument was determined through discussing the research instrument with the research experts in the field of study, academicians,

and especially the researcher's supervisor. The valuable comments, corrections, suggestions given by them definitely assists the validation of the instrument.

3.7.2-Reliability

Reliability is the degree to which an assessment tool produces stable and consistent results where validity refers to how well a test measures what it is purported to measure. The researcher tasted the reliability of the criteria by using alpha coefficient. Alpha reliability is regarded as a measure of internal consistency of the mean of the items at the time of administration of the questionnaire. Cronbach's is a reliability coefficient that indicates how well the items in a set are positively related to one another.

According to the stability coefficient Cronbach's alpha (which measures consistency and internal stability elements measure the independent and dependent variables of the study) if the coefficient is less than 0.60, the consistency and internal stability is considered weak, if the coefficient varies between 0.60 and less than 0.80 it is considered as accepted. And if the coefficient varies between 0.80 and 0.85 it is considered as good.in case the coefficient is higher than 0.85 to 1.00, it is considered excellent. (saved soliman,2011). As it is indicated the test result is between 0.71 and 0.889. Therefore, based on the test, the result for the items are reliable and acceptable.

Table 3.2- Reliability of supply chain management practice

SCM Elements	**Cronbach's Alpha**
Supplier and Customer Relationship Management	0.826
Internal Operation	0.742
Information Sharing	0.710
Information Technology Practice	0.853
Training Practice	0.889

(Source: Researcher's Survey)

3.8-Method of Data Analysis

In general, there are two types of data analysis techniques namely: qualitative and quantitative where by the choice of these methods greatly depends on the type of information the researcher has at hand. If most of information collected contains numerical, the analysis calls for quantitative tools and descriptive statistics can be used to characterize the data. On the other extreme, if most of the data collected are in words which mean data gathered using individual interviews, open –ended questions and focus group discussion, it is logical enough to apply qualitative data analysis tools Nunnery et al., (1994).

Therefore, as stated in the data collection tool for the study, data were collected in both questionnaire and interview. Accordingly, the collected were analyzed quantitatively and qualitatively.

3.9-Variables of the study

- Customer supplier relationship-is the business relation between the customers and the suppliers in terms of product quality, service, complaint handling and deliveries
- Internal operation-a generic term given to how a company runs its business within itself-and not what is shown or displayed to external people including customers, media, etc.
- Information sharing-describes the exchange of data between various organizations, people and technologies.
- Information Technology- is a set of tools and technologies such as coding, programming, data communication, data conversion, storage and retrieval and so on.

- Training-is an organized activity aimed at imparting information and/or instructions to improve the recipient's performance attain a required level of knowledge and skill.

3.10 -Ethical Consideration

Ethics as applied to research generally refer to considerations to protect and respect the rights of participants and other parties associated with the activity (Reynolds, 1982). Similarly, special attention will be given for ethical issues of this research starting from problem identification up to interpretation stage using the ethical guide lines specified by Creswell (2003 pp.93-97). Respondents will be informed also clearly about the purpose of the study, the right to participate voluntarily, the right to ask questions including personal address of the researcher, the right to get the copy of the study, and the right to have their privacy respected; the right not to respond to question that they didn't want to respond too. On top of these, every necessary care will be taken not to put participants at risk of social, psychological, physical and economic harm.

Chapter Four- Result, Discussions and Interpretation of Findings

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

Out of Seventy (70) questionnaires distributed to respondents (respondents who are potentially identified as directly related with SCM practice) Sixty-two (62) were returned (accepted). From the accepted responses one was found invalid whereas the remaining Sixty-one (61) responses were found valid and used for the analysis. This accounts for 87.14% of response rate. Thus, based on the responses obtained from the respondent's data presentation and analysis were made as follows.

4.1-Analysis of the Respondents' Profile

The researcher conducted an interview with four department managers. These are procurement and supply manager, Human resource manager, Marketing Manager and Production Manager. All managers except the Human Resource manager (who has Second Degree) have first degrees. And their work experience in the organization is three, Eight, Four and Seven Years respectively. All these managers are Male. Therefore, in the organization even though the education level and tenure of managers is good, women are not found in managerial level.

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. The demographic distribution of respondents such as sex, age, years of experience in the organization and educational qualification of respondents are discussed in table 4.1 below along with possible discussion of each items.

Table 4.1-Demographic Frequency Distribution of Respondents

S.N	Variables		Frequency	Percentage	Valid percent	Cumulative percent
1	Sex	Male	48	78.7	78.7	78.7
		Female	13	21.3	21.3	100
2	Age	20-25	11	18.0	18.0	18.0
		26-30	16	26.2	26.2	44.3
		31-35	10	16.4	16.4	60.7
		36-40	6	9.8	9.8	70.5
		Above 40	18	29.5	29.5	100
3	Experience (years)	1-3	18	29.5	29.5	29.5
		4-6	10	16.4	16.4	45.9
		7-10	5	8.2	8.2	54.1
		>11	28	45.9	45.9	100.0
4	Educational Qualification	10 complete	1	1.6	1.6	1.6
		12 complete	4	6.6	6.6	8.2
		Diploma	26	42.6	42.6	50.8
		1st degree	25	41.0	41.6	91.8
		2nd Degree and above	5	8.2	8.2	100

(Source: Questionnaire, 2018)

Gender frequency of the respondents shows that the numbers of male respondents were almost three times as female respondents. This is 78.7% of the respondents were male, while 21.3 % were female respondents referring that the company has more male employees than females.
The above table shows that the age category of respondents starts from the age of 20-25 up to more than 40 years. Respondents above the age of 40 constitutes the higher percentage of 29.5% followed by respondents between the age of 26-30 constituting 26.2%. Respondents from the age of 36-40 have the least percentage of 9.8% from the category. Ages between 20-25 and 31-35 constitutes 18% and 1.4% respectively. The table indicates that most of the respondents are in the highest age category so that they can understand the issues in their company.

Table 4.1 also clearly shows the frequency distribution of respondents work experience, the largest of the respondents 45.9 % (28) have more than eleven (11) years of work experience. In the same case, 29.5% (18) of respondents have between 1-3 years of work experience and followed by 4-6 years of experience, which accounts 16.4% and 8.2% (5) respondents represents having 7-10 years of experience. This implies that in total more than 70.5% of the respondents have more than 4 years of work experience with in the case company 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.

As shown above in table 4.1 the highest education level attained by most of the respondents were college diploma holders which represents, (18) 29.5% out of the respondents and closely followed by first degree holders which accounts (26) 42.6%. Respondents who complete grade 10 and 12 accounts 1.6% and 6.6% respectively. Respondents who have second degree and above accounts for only 8.2%. The table implies that respondents are quailed enough to be included in the study of the supply chain management issue.

4.2 Descriptive Statistical Analysis

As it were revealed in the methodology part, the designed method is descriptive statistical analysis to analyze the five components of the conceptual framework developed for this study. In addition to the quantitative analysis, the qualitative information obtained through interviews from managers used to analyze the following issues. The analyses were on: Supply chain management 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 paper. Therefore, the discussion of the above conceptual framework components will answer the basic research questions and meets the stated objectives of this study. For the analysis of all these variables, mean, variance and standard deviation is used. Particularly mean value of the respondents has considered as an important indicator to the extent of the company's practices on each items. To conclude, the overall performance of the case company's practices on each variable, group mean was calculated and used.

The mean and group mean statistical values approaching to 2.00 and less indicates the poor performance, 3.00, average/moderate while 4.00 and 5.00 indicates higher and very high/excellent performance of the company on that particular item and variable respectively.

4.2.1-Supply Chain Management Practices

This study focused on the case company's SCM practices from these five perspectives. For each practices different items were developed and measured based on their mean and group mean values.

A-Suppliers and Customers Relationship (SCR)

Customer and Supplier relationship have the same goal i.e. to satisfy end user. The better the supplier quality, the better the supplier's long term position, because the customer will have better quality. Because both the customer and the supplier have limited resources, they must work together as partners to maximize their return on investment. (own thought)

Under this part joint product planning, level of cooperativeness and compliance is discussed as follows in table 4.2.

4.2-Suppliers and Customers Relationship Management Practice

S/N	Items	N	Mean	Standard Deviation
1	Joint product planning with suppliers	61	1.92	0.737
2	The level of cooperativeness with suppliers	61	1.75	0.675
3	Customers' delivery adherence requirement	61	1.59	0.559
4	Compliance with customers delivery in full requirement	61	1.85	0.771
5	Compliance with customers delivery on time requirements	61	1.74	0.630
6	The level of cooperativeness with customers	61	2.34	0.629
7	Joint product planning with major customers	61	1.80	0.511
	Group Mean		1.85	

(Source: Questionnaire, 2018)

Table 4.2 above indicates the extent of relationship that exists between suppliers, Customers and the case company. Accordingly, the group means of suppliers and customers' relationship is 1.86 which is low performance with respect to the overall measures taken into consideration. Specifically, joint product planning with major customers, and joint product planning with suppliers, shows the mean value of 1.80, and 1.92 respectively. These, mean values imply that K.O.JJ food processing complex has poor relationship with its customers and suppliers particularly, on joint product planning.

Whereas Compliance with customers' delivery in full requirement and Compliance with customers' delivery on time requirements represents mean values of 1.85 and 1.74 respectively. This implies the case company is not meeting the full requirements of the customers as per their desire. From the items used for customers and supplier's relationship, Customers' delivery adherence to requirements relatively represents the lower result which is 1.59. This implies that there is a gap between the customers' adherence requirement and company's actual performance.

The level of cooperativeness with suppliers scored mean value of 1.75. In order to experience successful relationship with customers and suppliers, there has to be a joint production and product planning. This is because, according to Lee, (2002) Coordinating operational activities through joint planning with suppliers and customers results in inventory reduction, smoothing production, improve product quality, reducing supply uncertainty and lead-time.

Therefore, the mean value of joint product planning with major customers reveals poor performance of such practice (1.80). The group mean value result implies that SCM practice from the perspective of suppliers and customers' relationship of the case company is poor that is 1.86.

Along with this issue the procurement and supply manager says that most of the time the company the uncertainty in the market leads to change of plans and directions which is because sometimes suppliers are incapable to supply the full need of the company. The manager also underlines that establishing strategic and long term relationship with suppliers have the following advantages, reduced costs, increase efficiency and communication, pricing volatility mitigation, supply chain consolidation, outsourcing and continual improvement but the current practice of K.O. JJ is not that much satisfactory with this respect according to him even though the company is enacting new policies to alleviate these discrepancies.

He continues by saying that supplier's incapability is measured by on time delivery of goods or other information (timeliness), delivery in full (completeness), low defect rate or unplanned failure (quality), yield output and process efficiency (productivity) working with in legal standards (regulatory compliance), sustainability and community initiatives (social

responsibility) and improves outcomes (innovation). But he says supplier who pass all this measurement are rare and at least miss one criteria.

Thus, weak relationship of the case company with its suppliers resulted in not satisfy its customers adherence requirement on time.

The researcher intends to look at the integration between the case company with its suppliers and customers hereunder,

Effective collaboration with supply chain partners requires that your organization share valuable information in real time. You are trying to create, through near transparent communication, a network of collaborators to act as an extension of your efforts to get the right product to the right customer in the right market at the exact time they want and need it. Based on this, the researcher has tried to see the extent of integration of the case company with suppliers, customers and cross functional units within the company.

Integration with suppliers

Supplier integration is a close alignment and coordination within a supply chain, often the use of shared management information system. A supply chain is made up of all parties involved in fulfilling a purchase, including raw materials, manufacturing the product, transporting completed items and supporting services.

In this part the researcher reveals the integration of the case company's practice with the suppliers as follows;

Table 4.3- Company Integration with Suppliers

S/N	Item	N	Mean	Standard Deviation
1	The level of strategic partnership with suppliers	61	2.98	0.940
2	The establishment of quick ordering system	61	2.85	0.492
3	Stable procurement through network	61	2.69	0.786
	Group Mean		2.84	

(Source: Questionnaire, 2018)

As illustrated in the above table 4.3 the researcher prepares three items to analyze the company's integration with its suppliers. As the table reveals the level of strategic partnership with suppliers has the highest mean value which is very close to moderate i.e. 2.98. The establishment of quick ordering system comes next with a mean value of 2.85 and stable procurement through network has a mean value of 2.69.

Furthermore, the group mean shows that 2.84 mean value. The group mean value approximately reveals as, moderate integration between K.O. JJ food processing complex and its suppliers. In addition to this, an interview was conducted with procurement and supply manager of the case company to consolidate the information obtained through questionnaire. According to the interview response, the company has common suppliers from abroad but domestically the company apply a procurement method of bidding i.e any supplier who fulfills the specification and requirement set by the company can come up with its products.

According to the response of procurement and supply manager, managing relationships with suppliers is an essential component of obtaining a long lasting supply advantage and the supplier's incapability has contributed a lot for making long term relationship with suppliers. The reason from suppliers no to work at the highest level is inflation, government laws, seasonal fluctuation of production and so on.

Integration with Customers

Customer always expects great service. They are giving money to a company to perfectly satisfy their needs to get a product on time. If a problem does arise, they want the company to have the transparency to show why it occurred and the necessary measures to fix the problem.

Table 4.4 depicted below reveals the level of the case company's integration with its major customers. To analyze the issue, the researcher prepares four questions for the respondents to that can generally expresses the practice customer integration.

Table 4.4- company's integration with customers

S/N	Item	N	Mean	Standard Deviation
1	Follow-up customers for feedback	61	2.59	0.716
2	Monitoring and measuring customer service level	61	2.33	0.539
3	The level of market information sharing with major customers	61	2.52	0.536
4	Frequency of contacts with major customers	61	2.39	0.613
	Group Mean		2.46	

(Source: Questionnaire, 2018)

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On following-up customers' feedback the company achieves low/moderate performance with a mean value of 2.59. this clearly shows that even though fixing problems is a must for the company when feedback comes from major customers. The figure shows the company is alleviating the concern of some customers that is not enough and still needs amendment from the company officials.

Monitoring and measuring customer service level has a mean value of 2.33 which is the lowest rate amongst the options. In understanding the level of customer service the company scores low. According to the marketing manager of the company monitoring and assessing customer service level has advantage of increased customer satisfaction, increased customer retention, customer loyalty, efficiency in service delivery and so on. But the response shows that the company is poor in this aspect.

The level of market information sharing has a mean value of 2.52. in sharing market information about product demand and supply, market prices, new government regulations and others are barely shared by the company. A value in the middle of low/moderate performance is therefore a clear indicator that the company do almost worse in communicating with customers in conditions that directly concern them.

And lastly, frequency of contact with major customers has a mean value of 2.39 the next less performance registered by the company according to respondents. A strong bond between major

customers and manufacturers is vital in business, since every business needs a customer who purchase products in larger quantity. Taking major customers in to consideration in every activity has a lot of advantage as pointed out by functional managers of the company. Even though the company is striving to fill the information gap between them and major customers the response rate is not good. The group mean value of 2.46 also shows there are problems in the company when integrating customers.

B- Internal Operation

As table 4.5 below illustrates that ten items were used in order to see the extent of the internal operation of the case company.

The mean value of respondents' reveals that Management Know-how regarding supply chain effectiveness and extent of automated quality control is 2.43 and 2.49, respectively.

Table 4.5- Internal Operation Practice of SCM

S/N	Items	N	Mean	Standard Deviation
1	Up-to-datedness of production	61	2.51	0.69
2	Flexibility of production system to handle order pattern	61	2.54	0.72
3	The extent of production process automation	61	2.51	0.67
4	The extent of innovation in product	61	2.57	0.64
5	The extent of continuous and instantaneous product and service improvement	61	2.56	0.74
6	Management Know-how regarding supply chain effectiveness	61	2.43	0.67
7	Flexible production system to market change	61	2.46	0.69
8	Efficient utilization of resources	61	2.52	0.69
9	Extent of automated quality control	61	2.49	0.70
10	The extent of internal logistics flow	61	2.54	0.69
	Group Mean		2.52	

(Source: Questionnaire, 2018)

Up-to-datedness of production system, flexible production system to market change and flexibility of production system to handle order patterns shows 2.51, 2.46, and 2.54 respectively. Efficiency on resource utilization of internal operation has scored mean value of 2.52 which nearer to average performance. The intention of efficiency is to minimize overall cost of production, wastage of materials, time and effort, which ultimately ensures productivity and profitability.

Furthermore, continuous and instantaneous product and service improvement and internal logistics flows have almost similar mean value that is 2.56 and 2.54 respectively. In order to make an internal operation effective and efficient, logistics flow plays an important role. Thus the current performance of the case company in product and service improvement is not poor, 2.56. It implies that, K.O. JJ has to take corrective actions to meet the customers' preferences. Finally, the overall group mean value of K.O. JJ's SCM practice from the perspective of internal operation is 2.52 which is not poor.

Based on the overall analysis of the case company's internal operation practice the researcher concludes that it is not poor. However, this does not mean sufficient, because of the internal operations criticality for creating integration or relationship with external participants or supply chain partners. According to lazarevic et al., (2007) internal operation is the most critical factor to measure organization's potential to go for external integration. These writers state that companies should be internally efficient and effective before embarking on external integration. Therefore, it implies that, the case company has an assignment to improve its internal operation to create effective relation with external partners.

To support these, issue the researcher looks in to the integration between each functional units in the case company as follows;

Eng (2005) reported that a 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 (Kenneth and Brian 2006). To realize an effective internal operation functional integration plays a great role.

Table 4.6-Cross Functional Integration with in the Company

S/N	Item	N	Mean	Standard Deviation
1	Data integration among internal functions through network	61	2.39	0.613
2	Information system integration among internal functional unit	61	2.34	0.602
3	Team work and intra-organizational coordination	61	2.79	0.710
4	Extent of integration between production and sales department	61	2.82	0.671
5	Periodic intra departmental meetings	61	2.69	0.593
	Group mean		2.61	

(Source: Questionnaire, 2018)

As illustrated in the above table Team work and intra-organizational coordination, Extent of integration between production and sales department and Periodic intra departmental meetings have a mean score of 2.5 i.e. 2.79, 2.82. and 2.69 respectively.

Information system integration among internal functional units has the lowest mean value with 2.34 followed by data integration among internal functions trough networks with a mean value of 2.39. from IT perspective the company's performance of integration between different functional units is low and that is disastrous. Technology based integration always allow to have a positive impact.

Relatively, integration between production and sales department has the highest mean value with 2.82. this shows that sales department gather information from production department and work together for success. Thus this figure also needs closer look at even though has high value than others.

The case company 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 company is also highly related with IT application so that, even if its mean value approaches to moderate it is not as such sufficient. This implies that poor IT application practice also affects other factors like the extent of integration. On the other hand, the overall group mean of internal integration is, 2.61 which reflects the internal integration of the case company is low/moderate.

C. Information Sharing

The 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, seamless and instantaneous information flow should exist across the value chain (Russell, 2006).

Table 4.7-Information Sharing Practice

S/N	Items	N	Mean	Standard Deviation
1	Sales forecast information sharing with customers	61	1.76	0.691
2	Sales forecast information sharing with suppliers	61	2.08	0.759
3	Other product related information sharing with suppliers	61	2.72	0.878
4	Other product related information sharing with customers	61	2.77	0.864
5	Adequacy and quality of information sharing throughout the SC	61	2.57	0.884
6	Over all efforts of inter-organizational coordination and information sharing	61	2.46	0.697
7	Sense of trust and confidence along the supply chain	61	3.00	0.632
	Group Mean		2.48	

(Source: Questionnaire, 2018)

Table 4.7 above indicates, the mean value of each items and group mean that can generalize the information sharing practice of the case company with its up and down-stream supply chain partners.

The sales forecast information sharing with customer status of the case company accounts for a mean of 1.76. This indicates that the company is not doing great in information sharing with

customers in determining the sales forecast. A mean value of represents 2.08 is the company's performance towards sales forecast information sharing with suppliers. This implies that the company has poor sales forecast information sharing practice particularly with customers.
It can be noted that the company's product information sharing practice with supplier's accounts 2.72 which is to the extremes of average performance.

In SCM, information sharing is another important practice that should have to be given due attention in order to make the SC robust. Because, when there is distortion, inadequacy and lack of accuracy in information flows with in the SC partners, it will negatively affect the SC participants. The mean value of the respondents on adequacy and quality of information sharing (2.57) throughout the SC implies that, there is information sharing among the SC partners but it is not sufficient and it lacks accuracy.
Parties involved in the supply chain includes producers, suppliers, wholesalers, retailers, agents and so on. As the above table reveals the Sense of trust and confidence along the supply chain is average that is a good performance. If there is trust and confidence among the SC participant's information will flow freely between them that can help the successful implementation of sound SCM practice.

Therefore, based on the analysis, empirical study and the current (21th) century real practice and importance of information sharing and its impacts on any kind of organization, even if the group mean value shows moderate mean value, with respect to these stated issues the result is not sufficient to create effectiveness and efficiency in SCM activities.

D. Information Technology Practice

As table 4.8 reveals that, four items were used to measure IT application of the case company. Out of four items developed to see the extent of IT application in K.O.JJ food processing complex, surprisingly all of the items scored the mean value approximate to 2.

The adequacy of IT throughout the supply chain accounts a mean value of 2.15 and the level of IT-based automated ordering from major customers represent mean value of 2.00. On the other

hand, the mean value of Up-to-datedness of IT throughout the supply chain, and IT-based automated ordering to major suppliers revealed that 2.23, and 2.21 mean value respectively.

Table 4. 8-Information Technology Practices of SCM

S/N	Items	N	Mean	Standard deviation
1	The level of IT-based automated ordering from major customers	61	2.00	0.483
2	The level of IT- based automated ordering to major suppliers	61	2.21	0.551
3	Up-to-datedness of IT throughout the supply chain	61	2.23	0.716
4	The adequacy of IT systems throughout the supply chain	61	2.15	0.573
	Group Mean		2.15	

(Source: Questionnaire, 2018)

As per the above table, the researcher can conclude that the Level of information technology in facilitating different tasks such as ordering, information exchange and up-to-datedness is to the extreme of poor performance. The group mean also reveals IT application of the company in the process of supply chain management is poor (2.15).

In addition to the data collected through questionnaire, interview was held with the general manager and marketing manager of the case company. According to the interview there are poor information technology facilities within the company. But, now the company is implementing intra-network connection facilities (outlook) to connect marketing, purchasing, production and administration departments. However, it does not give real time and comprehensive reports, due to absence of supportive IT instruments or information system.

Therefore, based on the mean value of each items, group mean and interviews, the SCM practice of IT in the case company is poor and conveys that a lot has to be done to bring about change in the IT system.

E. Training practice

Training is the fifth dimension to be discussed for this specific thesis. Under this heading, five questions were treated to be rated by the respondent and come up with the following analysis.
Firstly, Adequacy of training and development for management has a mean value of 2.72 this implies the management access to diversified skills of various tasks is low even if the figure shows to the nearer of average.

Secondly, Employees training in supply chain concepts and management is very low which accounts for a mean value of 1.79. This shows that employees training to update their knowledge, to cope up with the requirement of their job, to upgrade them know how and to be competitive is very poor. Even though trainings are arranged, most of the employees are not benefited. This clearly implies that, there is a great problem with the human resource management area of the case company. 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 nothing. These all practices of SCM require the human resources to make SCM effective.

Thirdly, the overall adequacy of employees training has a mean value of 1.82 which is also low performance. It needs plenty of effort from the company's human resource development department to afford employees the necessary knowledge and skill.

Provision of diversified skill training to employees is also low i.e 1.84. The way to provide different skills and knowledge is training and the mean score shows the company needs many more efforts in the area of employee development in skills.

Finally, giving training to downstream SC members has the least of score of 1.60. For the company to be successful all the parties surrounding have to be well aware of the current

conditions. After training the internal employees the company should also afford diversified trainings to all participants especially about supply chain. The average mean score (1.95) also shows that the company is not doing great in the area of training practice to facilitate the Supply Chain Management Practice.

Table 4.9 Training Practice of SCM

S/N	Items	N	Mean	Standard deviation
1	Adequacy of training and development for management	61	2.72	1.240
2	Employees training in supply chain concepts & management	61	1.79	0.487
3	The overall adequacy of employees training	61	1.82	0.619
4	Provision of diversified skill training to employees	61	1.84	0.688
5	Giving training to down-stream SC members	61	1.60	0.362
	Group Mean		1.95	

(Source: Questionnaire, 2018)

In addition to the responses obtained through questionnaire, there is an interview conducted with human resource manager and human resource officer. According to their response, still now there is no well-organized training program within the company to the employees and managers. Even when some invitations come from government and other training institutions simply some managers or employees have been sent to the training without consideration of the relevancy of the trainee to the company's real problem.

Therefore, based on the above analysis the researcher finds out inconsistency between the theory and the real practices that is going on in the case company. And there is consistency between qualitative and quantitative information collected from the respondents. So that, the SCM practice from the training perspective of the case company at hand is poor. If it continues in such

a way, the company will be at risk in the future to achieve its objectives and to satisfy its customers.

4.3- Challenges of Supply Chain Management

The third part of the conceptual framework developed for this study is challenges of SCM that consists of uncertainties, bullwhip effect. As illustrated in table 4.7 below, out of six items used to determine the extent of challenges in supply chain management: willingness to share risks and benefits shows the lowest mean value, which is 2.3. This implies that the participants in the SC of K.O.JJ food processing complex are not willing to share risks and benefits associated with their supply chain. This conveys that there is poor integration of SC partners and partners are unwilling to take any risks related to the SC. The institutional trust to share confidential data is the next lowest mean value (2.75). Even though the figure falls in the category of low performance, it is to the extreme of an average performance so that confidential information of the institution needs effort to be successful.

Table 4.10-Challenges / Barriers of SCM

S/N	Item	N	Mean	Standard deviation
1	Supply uncertainty (supplier inability to carry out the promise)	61	2.79	0.755
2	Institutional trust to share confidential data	61	2.75	0.567
3	Willingness to share risks and benefits	61	2.20	0.679
4	Inventory fluctuation due to bullwhip effect	61	2.80	0.679
5	Manufacturing uncertainty	61	3.44	0.696
6	extent of demand uncertainty	61	2.98	0.826
	Group Mean		2.83	

(Source: Questionnaire, 2018)

Inventory fluctuation due to bullwhip effect has a mean value of 2.80. This indicates that due bullwhip effect i.e. the distortion of information with the supply chain which lead to an increment of inventory fluctuation that really expected. Here information distortion or bullwhip effect has an impact of nearly average.

On the other hand, manufacturing uncertainty is the greatest challenge for the case company, followed by demand uncertainty, which represents 3.44 and 2.98, mean values respectively. The groups mean value for challenges of supply chain management of the case company are moderate which is, 2.83**.** The reason for manufacturing uncertainty weighted more than other challenges is that, 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 victimized with these factors.

For further, consolidating quantitative analysis and qualitative information were collected through interview from procurement, marketing and production managers. These management bodies also confirmed that manufacturing, supply and demand uncertainties are their major problems. According to the production manager's response, there are greater possibilities of stoppage of production due to shortage of inputs and absence of orders from customers. Particularly, for pasta and macaroni products, there is shortage of supply. Sometimes, there is also system failure and power interruption, which enforces to stoppage of production. They underline that most of the raw materials for the company's production are agricultural outputs that are highly dependent on natural rain fall.

For triangulating 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 the reason is that domestically there are few sources of supplies for such products (i.e. pasta and macaroni). Furthermore, importing these inputs from abroad at the current situation is costly. In addition, the case company has no common sources supplies or long term suppliers. This is because, the company buys its inputs through bidding and always the company that wins the bid will supply the items.

Finally, the marketing manager replied as, the demand is always changing. ''Sometimes, there is decrease in demand and at another day; the demand may be greater than expected''. Due to this, the customers may not get the full quantity when they need it. Out of these challenges manufacturing, supply and demand uncertainties are major problems that the case company has

been facing. Next to these problems, inventory fluctuation due to bullwhip effect is also another challenging factor that prohibits effective supply chain management. So that, these all challenges are mostly effected from the existence of poor relationships between SC partners, weak information sharing, poor IT and weak internal operation practices of SCM.

CHAPTER FIVE - SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter presents summary, conclusion and recommendations of the study on assessment of the supply chain management of the case company as follows.

5.1-Summary of Findings

The K.O. JJ's orientation of SC was evaluated through five SCM practices and numerous challenges or barriers of efficient SCM implementation such as demand and supplier uncertainty, manufacturing uncertainty, sense of trust between the involved parties and so on. Based on the quantitative and qualitative data analysis, discussion of results with respect to the basic questions,

the following are the summary of major findings of this study.

- The degree of relationship across the supply chain of K.O. JJ is levelled 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 prevalence of these characters of traditional relationship.
- With regard to internal operation, the descriptive data and interview analysis conveys that, the extent of continuous and instantaneous product and service improvement and extent of innovation in product has good mean values of 2.56 and 2.57 respectively. Management Know-how regarding supply chain effectiveness and flexibility of production due to market change the lowest mean values.
- Sense of trust and confidence along the supply chain and other information sharing practice with customer has a mean value of 3.00 and 2.77 which is moderate. but the company's information sharing practice regarding sales forecast is poor represented by a mean value of 1.76.
- Regarding the information technology practice of the case company it is summarized as being poor. The level of IT-based automated ordering from major customers, the level of IT- based automated ordering to major suppliers, Up-to-datedness of IT throughout the supply chain and the adequacy of IT systems throughout the supply chain have a mean

values of between 2.00 and 2.15. Especially information technology systems are rarely distributed throughout the supply chain with a mean value of 2.15.

- The company's supply chain practice from the training and development angle has low performance. Especially training for downstream supply chain members is the lowest of the other parameters among others. This adversely affects good SCM implementation even though adequacy of training and development for management is moderate with a mean value of 2.72.
- Among the possible challenges of SCM, manufacturing, and demand uncertainties appeared as the major headache of the case company with mean values of 3.44 and 2.98 respectively. Inventory fluctuation due to in accurate information (bullwhip) effect is also another challenges of the case companies SC. even though there is a risk in sense of sharing risks and benefits which is has low mean value i.e.2.2. This implies that the employees and management bodies of the case companies has no major problem in sharing risks and benefits in the Supply chain path.
- In addition, supporting elements for internal operation (Cross Functional Integration with in the Company) and SCRM (company's integration with customers) practices identified by the researcher are summarized hereunder;
- Integration between production and sales department and extent of team work and intra-organizational coordination have the highest mean values. Data integration among internal functions through network has the lowest mean value.

- Company's integration with customers are assessed via four parameters and the company's performance on them is low/moderate. Follow-up customers for feedback, and monitoring and measuring customer service level has extreme mean scores of 2.59 and 2.33 respectively.

5.2-Conclusions

Based on the results of the study obtained and summary of findings the following conclusions are given

- With respect to supplier and customer relationship management practice K.O.JJ has performed poorly. Especially Customers' delivery adherence requirement and customers on time delivery requirement needs are highly overlooked.
- From the angle of internal operation, the descriptive and interview analysis reveals that the company thrives to be innovative as much as possible by looking the market needs. But there is a strong gap from the management body in addressing these needs by noticing the external environment.
- The primary reason for poor performance in information sharing practice is that the company barely invests in information technologies that can simplify communication between different functional units in the case company like portal and outlook addresses.
- Viewing the companies experience from the angle of information technology practices, as mentioned earlier the performance is poor. Low investment on IT infrastructures together with small number of IT professional employees hampers the company to achieve the desired need of efficient supply chain management.
- Training practice is the other parameter the company assessed by the researcher. Here training to downstream members of the supply chain such as customers regarding the services and other information of the company is low. Training to management bodies is affordable to some extent but that is not sufficient to implement successful supply chain management system.
- Regarding the challenges and barriers of supply chain management practice challenges such as Supply uncertainty (supplier inability to carry out the promise), Institutional trust to share confidential data, Willingness to share risks and benefits, Inventory fluctuation due to bullwhip effect, Manufacturing uncertainty and extent of demand uncertainty are all experience in the company among others.

5.3 Recommendations

Depending on the findings and conclusions reached, the following recommendations were forwarded in order to improve the Supply Chain Management of the case company.

- ✓ The company is recommended to follow four tips for improving relationships with its suppliers and customers. Firstly, creating channels for consistent communication. Communication is the key to any healthy relationship, and it's a good point to keep this in mind when dealing with suppliers and customers. Secondly, when communication isn't clear and dilemmas occur, it's important to look at the situation from both sides of the transaction critically. Thirdly, mutual understanding will create natural rapport and motivate suppliers and customers to spend more time working with the company. In critical times of enacting strategies and directives considering these parties as well as letting them to participate in the issue should be underlines by the company. Finally, Procurement managers have to establish favorable relationships with their suppliers and customers to ensure quality services and efficient processes. By having the right tools in place and practicing consistent communication, responsibility and patience.
- ✓ Up-to-datedness of production, flexibility of production system to handle order pattern, the extent of production process automation and management Know-how regarding supply chain effectiveness all these and other operational issues must be updated by the case company to reach at a sound supply chain management system.
- ✓ Anticipating future needs, understanding and managing market information, tracking productivity discrepancies, upgrading inter-organizational coordination and enacting effective method of transforming data in to information is expected from the company. Since the company has a good performance in sense of trust and confidence along the supply chain this is a good experience and needs further increment.

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- ✓ The current information technology practice of the case company is poor and affects effective communication and integration of data within the company. The case Company should improve and invest on IT facilities to enhance information sharing both internally and externally. This can be done through hiring IT professionals and investing highly in the area of information technology.

- ✓ In controlling the challenges and barriers especially Supply and demand uncertainty, Institutional trust to share confidential data, and manufacturing uncertainty all these needs immediate alleviation from the company. Generally, risks in the supply chain can be minimized and eliminated by identifying and assessing current risk, identifying supply and delivery alternatives, empowering partners and members, jointly plan and collaborate with members and being proactive can enable the company to control challenges and barriers in the supply chains.

5.4-Suggestions for Future Researches

For future research studying assessment of the practices and challenges of supply chain management system of a company, it's better to include all upstream and downstream members of

a supply chain. These enables them to make sure that the output of the study can reflect the thoughts and views of all these members leading to generalizability. Supply chain management challenges are many in nature starting from government directives and bureaucracy to manufacturer's complexity. Therefore, future researches should also consider these challenges as well since they have a strong impact on successful implementation of supply chain management practice.

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Appendix I-Questionnaire

Addis Ababa University

School of Commerce

Department of Logistics and Supply chain management

Graduate program

I am a MA student in Logistics and Supply Chain Management in Addis Ababa University School of Commerce and I am conducting a study on **Assessment of Supply Chain Management Practice and challenges of K.O.J.J Food Processing Complex.** The objective of this project is to assess the current practices of SCM in the company. The study is purely for academic purpose and thus not affects you in any case. 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
- ✓ circle only one number of your choice after reading the variables

Contact Address

If you have any query, please do not hesitate to contact me and I am available as per your convenience at (Mobile: 09-79-24-93-25 and redkop2015@gmail.com)

Thank you for scarifying your precious time in advance!

Part -1

Respondents Profile

1-Sex: A-Male B-Female

2-Age: A-Below 20 years C-26-30 years E-36-40 years
B-20-25 years D-31-35 years F-Above 40 years

3-Years of service in the organization:
A-1-3 Years C-7-11 Years
B-4-6 Years D-More than 11 years

4-Educational Qualification:

A-Grade 10 complete B- Diploma
C-First Degree D-Grade 12 complete
F-Second Degree and Above

5-Field of your specialization----------

6-Your current position ----------

Part -II-Profile for Supply Chain Management Practices

Using the following Rating Scales under the columns, ‘‘circle only on one number from the given numbers in the box after reading the variable on the left hand.’’

The numbers represent: 1- Very Low, 2-Low, 3-Average, 4-High and 5 -Very High

S/N	Variables	Rating Numbers				
A	**Supplier and customer relationship**	**very low**	**Low**	**Average**	**High**	**Very High**
1	Joint product planning with suppliers	1	2	3	4	5
2	The level of cooperativeness with suppliers	1	2	3	4	5
3	Customer’s delivery adherence requirement	1	2	3	4	5
4	Compliance with customer’s delivery in- full requirements	1	2	3	4	5
5	Compliance customer’s delivery on time requirements	1	2	3	4	5
6	The level of cooperativeness with customers	1	2	3	4	5
7	Joint product planning with major customers	1	2	3	4	5
B	**Internal Operation Practice**					
1	Up- to- datedness of production	1	2	3	4	5
2	Flexibility of production system to handle order pattern	1	2	3	4	5
3	The extent of production process automation	1	2	3	4	5
4	The extent of innovation in product	1	2	3	4	5
5	The extent of continuous and instantaneous product and service improvement	1	2	3	4	5
6	Management know-how regarding supply chain effectiveness	1	2	3	4	5
7	Flexible production system to market change	1	2	3	4	5
8	Efficient utilization of resources	1	2	3	4	5
9	Extent of automated quality control	1	2	3	4	5
10	Internal logistics flow	1	2	3	4	5
B1	**Company’s integration with suppliers**					
1	The level of strategic partnership with suppliers	1	2	3	4	5
2	The establishment of quick ordering system	1	2	3	4	5
3	Stable procurement through network	1	2	3	4	5
B2	**Company’s Integration with Customers**					
1	Follow-up customers for feedback	1	2	3	4	5
2	Monitoring and measuring customer service level	1	2	3	4	5
3	The level of market information sharing with major customers	1	2	3	4	5
4	Frequency of contacts with major customers	1	2	3	4	5

B3	**Cross functional integration within a company**					
1	Data integration among internal functions through network	1	2	3	4	5
2	Information system integration among internal functional units	1	2	3	4	5
3	Teamwork and intra-organizational coordination	1	2	3	4	5
4	Extent of interaction between production and sales department	1	2	3	4	5
5	Periodic interdepartmental meetings	1	2	3	4	5

C	**Challenges/ Barriers for effective SCM implementation**					
1	supply uncertainty (supplier inability to carry out the promise)	1	2	3	4	5
2	Institutional trust to share confidential data.	1	2	3	4	5
3	Willingness to share risks and benefits.	1	2	3	4	5
4	Inventory fluctuation due to inaccurate information sharing (bullwhip effect	1	2	3	4	5
5	Manufacturing uncertainty like, breakdown of machineries,	1	2	3	4	5
	interruption of power, poor process design etc	1	2	3	4	5
6	Irregular orders from inconsistent customers (Demand uncertainty)	1	2	3	4	5

Appendix 2-Interview

List of interview questions:

For Procurement and Supply Manager

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

For Human Resource Manager

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

For Marketing Manager

1. What look like your supply chain system?
2. How do you see, your company's effort to maintain and develop existing and new customers?
3. How your company manages customers' complaints?

4. How do you see making your products accessible for your customers both in quantity and quality?
5. How do you see the extent of information sharing practice between your company and customers?
6. Is there demand uncertainty?
7. How do you see team work, flexibility, integration with in the company for meeting changes in market condition?
8. How do you see the general integration between your company and customers?

For Production Manager

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