



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
MBA PROGRAM**

**ASSESSMENT OF SUPPLY CHAIN MANAGEMENT PRACTICES: THE
CASE OF HILINA ENRICHED FOODS PLC**

BY

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**JANUARY 2019
ADDIS ABABA, ETHIOPIA**

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**A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY SCHOOL OF
GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION (MBA IN GENERAL MANAGEMNT)**

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Temesgen Belayneh (Dr). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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St. Mary's University, Addis Ababa, January, 2019

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor

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January, 2019

Acknowledgments

My gratitude goes to the Almighty God for granting me good health, guidance, and helping me this far in my education.

I would like to express my deep and sincere gratitude to my research Advisor Dr. Temesgen Belayneh for guiding my project. Especially I would like to thank him for the advice he gave me and the excellent and invaluable support he provided during the course of preparing this case study.

It also gives me pleasure to extend my gratitude to Hilina Enerich Food Company's employees; working in the sales and marketing department, procurement and supply department, Production and administrative section and in addition to this, customers' of the company for the support they showed during the preparation of this project.

I' m greatly indebted to my deep thanks for my uncle ,brother Alemu Kassaw Zeleke for his constant encouragement and support in all aspect of my life and especially building psychologically, morally and reason for coming this city. So I would like to thanks again.

At the end my most sincere thanks are addressed to my lovely wife mulu mekuria, my son Yohannes Sisay.

Acronyms

IS: -	Information system
IT: -	Information technology
SC: -	Supply Chain
SCM: -	Supply Chain Management
SCR: -	Supplier and Customer Relationship
SCC: -	Supply chain collaboration
SCI: -	Supply Chain Integration

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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. 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 i.e integration with supplier integration with customer integration with in the company. For the accomplishment of this, the study have employed through descriptive design in which the selections of the respondents were carried out by using judgmental, purposive and convenience sampling techniques. The total numbers of Hilina enrich food employees are 209 out these, 50 employees was considered as a sample unit furthermore, customers were interviewed. Both primary and secondary sources of data were used for this study. Likert scaled questionnaire and interviews were used as instruments for data collection. The data was analyzed by using descriptive statistics and presented in tables. The major findings indicate that, most SCM practices are moderately practiced with in Hilina Enrich Food company. Sales forecast information sharing with customers is poor that convey 2.7 mean value. Based on both quantitative and qualitative analysis the case company has poor relationship with its customers and suppliers and poor customers' services.

Key-words *Supplier and customer relationship, internal operations, information sharing Integration /collaboration with customer, with supplier and within the company.*

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The present economic situation in our country has been providing opportunities for the private sectors to participate actively in investment actions as compared to the previous regime which put investment activities under state control. Among these investment areas food sector is the one. Because of globalization, steep competition, change in market demand and the rapid adoption of outsourcing, today's organizations are operating in a networked business environment in order to succeed business operation.

Supply chain management (SCM) has raised the interest in the past years as organizations started to realize that, the actions taken by one member of the chain actually have an influence on the profitability of other members in the chain. This scheme generated the act of competing as a part of supply chain against the other supply chains instead of competing as a single firm against other individual firms .This is due to the fact that, nowadays the new source of business competition lies outside the walls of organizations, and it is determined by how effectively companies link their operations with their supply chain partners such as suppliers, manufacturers, distributors, wholesalers, retailers and end customers (Silver, A. Pyke, V. & Peterson, R. 1998).Therefore, Supply chain management offers a management philosophy to manage activities and integrate with down-streams, up-streams as well as firms internal supply chain operations (Ross, 1998). With the growth of inter-network competition, individual business may no longer compete solely as independent company but must do as supply chains.

Companies associated in the same network require efficient supply chain integration in order to optimize their collective performance. Moreover, numerous companies have started to appreciate that, as SCM plays a major role in building a sustainable competitive edge for their products in highly competitive markets (Jones, 1999). Because of the collaboration between members of the chain, supply chain management gives significant opportunities to the firms involved in terms of cost reductions, revenue enhancement, flexibility, customer satisfaction, speed and economy of time (Forrester, 1958 cited in Neeley, 2006).

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

Hilina Enriched Foods PLC was established in 1998 to undertake the manufacturing and processing of a range of food products specifically designed to combat the various forms of malnutrition and other micronutrient deficiencies affecting children and other vulnerable groups in Ethiopia. When it was initially established, the centre produced Vitamin A enriched sugar as well as iodized salt for UN agencies, non-governmental organizations and the general public. Know a days, Hilina has experienced significant growth in terms of both size and capital and has continued to install modern machinery and other equipment's. Hilina established an on-site food laboratory and has transformed itself into a state of the art and comprehensive food production facility. Hilina has been upgraded to specialize in the production of other nutritious and therapeutic foods for children to address the significant gap in the national food production system. The Amharic name for Plumpy' nut is "Nefis Aden," which literally means "life savor." While some might regard this as an exaggeration, those who have witnessed the beneficial effects of Plumpy' nut will attest that it is very much a reality. There is also Plumpy' Sup product which is also ready to use supplementary food for the rehabilitation of moderate acute malnutrition. Plumpy field products are working wonders for severely malnourished children throughout Ethiopia as it is a magic formula and one that we at Hilina are proud to promote. In addition to standing guard for the children of Ethiopia, the fact that 70% of the raw materials required for the production of these products are produced locally translates into many positive spin-off effects for the local economy.

1.2 Statement of the Problem

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 improve customer service and their profitability. Therefore, the primary goal of supply chain management is to improve 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).

Lazarevic P. Sohal, A. Baihaqi, I. (2007) disclosed that, in order to make the SCM effective there must be effective implementations of the supply chain management practices, namely good supplier and customer relationship, information sharing, internal operation, information-technology and training of employees among the upstream, internal and down streams of the supply chain. This would be applicable to the extent of expected degree when there is trust and honest among the supply chain. Therefore, food supply chain needs effective management, integration, knowledge, and due attention throughout the supply chain. If properly implemented SCM can improve the company's responsiveness, flexibility and efficiency (Olsson and Skjolde, 2008) .However, most of the researches related to the supply chain managements were carried out in developed countries which have different economic, political, technology, social, legal and cultural status. As compared to developing country like Ethiopia as a result, it may be difficult to directly apply and generalize that the same practices and collaboration as well as problems of SCM exists in Ethiopia. This is because of Ethiopia has different Economic, political, social, legal and cultural status than other countries. Study on Charles Mensah GhanaMarch (2014)African countries are suffering largely due to the non-application of the principles of supply chain management practices. A study by Julius Musau Mwilu Nairobi October, (2013) indicated that established the major hindrances to be collaboration during planning, lack of understanding of the Supply Chain Management Concept. When in Ethiopia particularly Hilina enriched foods plc the practice of integration, collaboration, and having willingness and the trend of managing the SC from supplier to the customer is traditional i.e., not more than just buy–sale/ transactional relationship. Even if there is SC by default it is not well managed, and implemented for getting the benefits resulted from effective SCM. So that, each partners with in the SC are using their

own individual efforts to improve their own competitiveness (like, quality, cost, delivery lead time, and etc) but it is not as such effective. Hilina enriched foods plc is one out of these companies. Therefore the overall intention this research paper is filling this gap by evaluating the practice and its performance of the company with regard to supply chain management dimensions.

1.3 Research Questions

Accordingly the following research questions are expected to be addressed with the study.

1. What is the collaboration/integration among key players of the SC?
2. To what extent the level of information sharing through SCM practice in the case company?
3. How the case company is working towards integrated internal operation for customer Service?
4. To what extent information technology use between customer and supplier with the case company?

1.4 Objective of the Study

1.4.1 General objective

The general objective of this paper was to study/look into the practices and orientation of the case company towards managing its SC in an integrated and effective way and assessing problems hindering its effectiveness.

1.4.2 Specific objectives

1. To assess the extent of collaboration/integration among the SC partners.
2. To examine the level of information sharing through SCM practice in the case company.
3. To study the case company's orientation of internal operation towards customer service.
4. To assess the information technology use between customer and supplier with the case company.

1.5 Significances of the study

Investigating the practices of supply chain management and barriers for its effective implementation in this complex and dynamic business world is believed to have the following importance's to the academicians, corporate managers, policy makers; and generally for business practitioners, and specifically, for the case company.

Specifically, this study has the following main significances:

- ✓ It helps to the way for educators or training institutions to consider when designing training on the issues relating to the SCM.
- ✓ It serves as a spring board to conduct further and more detail study in the area; this is because at the current situation there are only few researches were conducted in the related area in Ethiopia.

1.6 Scope of the study

Supply chain management (SCM) enables to see the members of the supply chain (SC) as an integrated whole and elicit synergy impact. In short, an effective and efficient SCM has the importance of cost minimization, reducing lead time, defect prevention, operational flexibility, system integration, resource utilization and ultimately customer satisfaction. SCM encompasses vast areas of managerial practices. However, it is difficult and unmanageable to conduct the study in all areas that summarizes SCM in terms of time, finance, and research manageability. Therefore, the scope of this study was delimited to specific context that is practices of SCM in the case of Hilina enriched foods plc. 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 customer services. The area of the study is also limited to the case company i.e, Hilina enriched foods plc and the down streams of the supply chain.

1.7 Definition of terms

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

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

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

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

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

1.8 Organization of the study

The paper consists of five chapters. The first chapter introduces the introductions of the study which includes background of the study, statement of the Problems, research question, definition of term and concept, objectives of the study, significance of the study, scope of the study and organization of the paper. The second chapter is devoted to the review of the related literature. The third chapter focuses on research design, methodology. The fourth chapter analysis of the data collected and interpretation. The fiveth chapter which is the closing chapter focuses on providing conclusions and recommendations based on the findings

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter entails to present a review of relevant theoretical and empirical literature in relation to the research questions being analyzed, that is,(i),what is the collaboration/integration among key players of the SC? (ii), to what extent the level of information sharing through SCM practice in the case company? (iii), How the case company is working towards integrated internal operation for customer service? (iv), Is there information technology use between customer and supplier with the case company?

2.1. Historical Development of Supply Chain Management

Before the term supply chain was started, the term used for management and movement of product and services was logistics. The development of logistics was originally undertaken by the military in ancient times (Britannica, 1994). Therefore Supply Chain Management is driven from Logistics concept. The term supply chain management was coined in, 1982 by Keith Oliver, a management consultant at Booz Allen Hamilton (Cortada, 2001). Oliver used the term to develop a vision for tearing down functional silos that separated production, marketing, and distribution. As Cortada stated the concept was enlarged upon efficiencies and mutual benefits associated with information sharing and decision coordinating to up and own a supply chain.

2.2. Definition of supply chain management

Lummus and Vokurka (1999,) described SCM 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. The whole supply channel includes the participants, such as the suppliers, manufacturers, distributors, and customers, linked together so they can fulfill the multi-functions which provide low-cost, high-quality, and rapidly delivery to the marketplace in order to offer the customers product or service satisfaction.

Serve *et al.* (2002,) defined supply chain management (SCM) as a procedure for linking a manufacturer's operations with those of all of its strategic suppliers and its key intermediaries and customers by establishing these supply based links, companies can build bridges and establish partnerships with suppliers, customers and carriers to more effectively reduce operating cost, improve customer service and expand into markets. In addition to this, most successful supply chains have devised approaches for the participants in the supply chain to work together in a partnering environment. Supply Chain Management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption (Hines, 2004).

According to Chan (2003) asserts that supply chain management is a set of synchronized decisions and activities utilized to efficiently integrate suppliers, manufacturers, warehouses, transporters, retailers, and customers so that the right product or service is distributed at the right quantities, to the right locations, and at the right time, to minimize system-wide costs while satisfying customer service level requirements. The objective of Supply Chain Management (SCM) is to achieve sustainable competitive advantage.

2.3. Components of Supply Chain Management

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

2.4. Supply chain collaboration and Integration

According to Mangan et al, (2008) "Supply chain integration is the alignment and interlinking of business processes, collaboration is a relationship between supply chain partners developed over a period of time". Supply chain integration comprises a set of firm's activities adapted to fostering

its relationships with suppliers and customers; these are designed to harmonize supply chain activities with suppliers on the upstream side and enhance customer satisfaction on the downstream side through offering superior products (Petrovic-Lazarevic et al., 2007). supply chain integration is a building block comprised of bricks of joint collaboration, high level of coordination, shared vision, shared information and technical infrastructure between manufacturer and distributors (Flynn et al., 2010).

Integration is now widely taken the central concept of successful supply chain management (SCM), because the implementation of SCM needs the integration of processes from sourcing, to manufacturing, and to distribution across the supply chain (Cooper et al., 1997; Ellram and Cooper, 1990; Mentzer et al., 2001). The scope of supply chain integration is not limited but it has wide scope ranging from supplier integration to customer integration covering central concept of internal integration also (Flynn et al., 2010; Zhao et al, 2010).

Internal integration is up to what extent departments and functions within an organization are working in close integration while external organization leads towards close strategic relationships with customers and suppliers. Van Hoek (1998) investigated the factor of internal integration and external integration in context of the research work on supply chain integration. It was evident that internal integration among all functional areas is one big mile stone towards achieving the stage of supply chain integration and then getting rewards of it in terms of increased organizational performance. Supply chain management focuses on integration, cooperation/collaboration and coordination throughout the value chain (Stank, Keller, and Daugherty 2001). The supply chain integration work on principles of collaboration, shared decision making, open communication, shared vision, shared technology and high level of trust between the producer and their customers (Flynn *et al.*, 2010). The objective of SCI is to achieve accurate, timely and smooth flow of goods and services, information, money and processes, to impart maximum value to the customer at low cost and minimum time in an efficient manner (Bowersox et al., 1999; Frohlich and Westbrook, 2001).

According to Christopher (1994), a supply chain is a network of institutions that have strong bonds from upstream to downstream in all processes and activities in such a cohesive manner that make a value for organization and for end customer.

Simatupang and Sridharan (2002) said that collaborative supply chain simply means two or more chain members working together to create a competitive advantage through sharing information, making joint decisions, and sharing benefits which result from greater profitability of satisfying end customer needs than acting alone. Therefore, collaboration, in the context of the supply chain, means sharing commitment, trust and respect, skills and knowledge, and intellectual agility between supply chain partners (Barratt, 2004). All of the members in the SCC have to integrate and act as a homogenous unit. In addition to this, the value is enhanced throughout the chain and the matching of supply and demand profits (Simatupang and Sridharan, 2005). Consequently, SCC members' joint decision making is preferable to create competitive advantage through mechanisms such as increased market access, better material sources, and cost-effective transportation. In order to achieve this, the SCC members must have a very close relationship. The strategy is to focus on the collaborative partners' relationship and improvements in the SCC process. Relationship orientation includes constructs such as trust (Sahay, 2003) and power (Cox, 1999) because most collaborative partners are not equivalent in terms of bargaining power and, if a partner is to be trusted, that partner cannot take advantage of a relatively stronger situation or behave opportunistically.

Min *et al.* (2005) point out that collaborative processes include information sharing, joint planning, joint problem solving, joint performance measurement, and the leveraging of resources and skills. Information sharing becomes a regular norm that encompasses multiple levels across firms. In addition to this, they stated the information technologies include electronic data interchange, database, data warehouse and data mining techniques, and the internet to illustrate the collaboration channels. Joint planning relies on the fact that collaborative partners must work together to solve supply chain problems. As a point, the success of collaborative efforts cannot be guaranteed until performance is correctly monitored and measured (Min *et al.*, 2005). This often involves jointly leveraging each other's resource and skills. The leveraging skill is made possible by specialization.

2.4.1. The motivation of supply chain collaboration

Supply chain lies no longer with an individual company. Either it will not be able to be managed separately. There is no doubt that the successful development of SCM performance has to focus on customers' needs and expectations (Svensson, 2003). Furthermore, the performance of the

supply chains can affect customer satisfaction. Therefore, the goal of SCM is to meet the needs of the customers by supplying the right product at the right place, time, and price. In other words, the customer satisfaction is the goal of supply chain management. In addition to this, one factor related to customer satisfaction, (Lee and Amaral , 2002) point out that SCM is anticipated to achieve well in terms of both costs and services from an operational perspective. That is why the best combination of operational activities has to be found, in order to ensure that the core objective of satisfying the customer requirements at the lowest possible cost is achieved. No single component can be seen disjointedly from the other; they have to be viewed through both the influence of the channel system and the critical effect. Nowadays, the customer services are to be a kind of goal of customer satisfaction.

Chung *et al.* (2007) referred to three approaches, the construct of a service system, after-sales service, and satisfaction investigation as a target for customer service. The after-sales services include service satisfaction with the product, questionnaire feedback, acknowledgment letter delivery, telephone interviewing, and sales interviews. In short, the management of customer complaints is very important for organizations and they also need to respond to their feedback. Even though, in today's internet age, some steps can be taken on websites, there is also a need for more after-sales services management. This can lead to greater customer satisfaction in order to acquire more benefits within supply chain collaboration. On the other hand, Aryee *et al.* (2006) said that the value to be gained from collaboration is manifested as enhanced business performance as a result. It is without doubt true that the performance improvement is the goal of supply chain collaboration but provides more opportunities in order to get more marketing fields, which is very important for supply chain collaboration. Recent work by (Millington *et al.* 2006,) pointed out that "In order to investigate the relationship between supplier adaptation to buyer requirements and ownership type, three measures of adaptation are defined: supplier investments, buyer control and buyer investments". The reason for requiring a supplier to relate to a buyer groups is to build a good relationship and maintain it in order to gain more value from the buyer parts. On the other hand, the important investments in transaction costs are based on the strategic value network. Buyer and supplier collaboration can be a good policy for supply chain members.

2.4.2. Elements of Supply Chain Collaboration

Elements of supply chain collaboration are categorized in three categories (see figure 2.1): cultural elements includes collaborative culture, internal and external trust, mutuality, information exchange, and openness and communication. Second category represents the needed elements for collaboration to succeed: cross functional activities, process alignment, joint decision-making, and true supply chain metrics. The last group presents a number of strategic elements for the collaboration to be sustainable resources and commitment, intra organizational support, the corporate focus, demonstrating the business case, and the role of technology

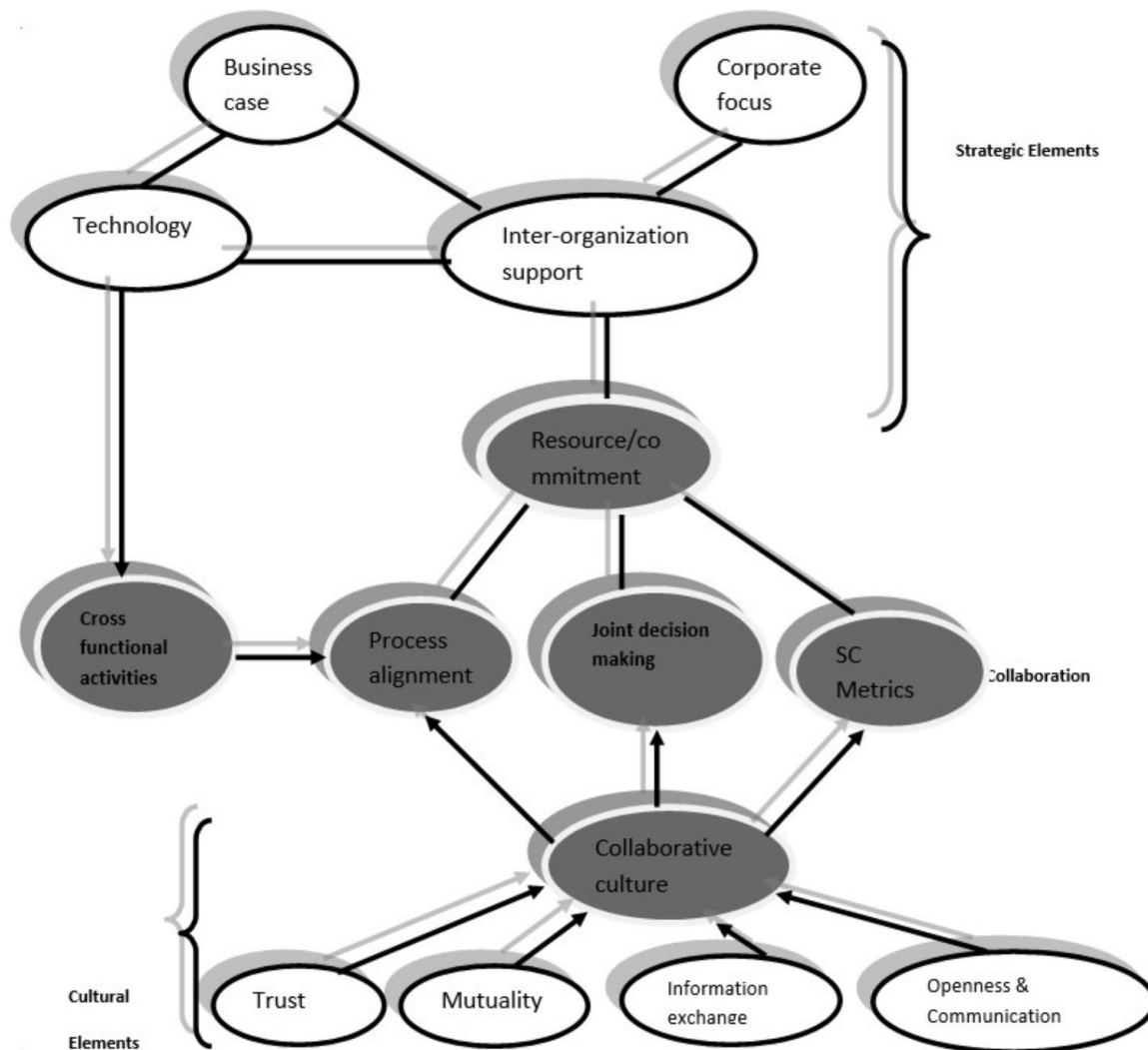


Figure 2-1 Elements of supply chain collaboration

Source: (Barratt, 2004)

2.5. Supply Chain Management practices

The practice of SCM is refers to complete set of actions which are done in organizations towards to improve effectiveness in the internal supply chain. It involves a set of activities undertaken in an organization to promote effective management of its supply chain. The short-term objectives of SCM are to enhance productivity, reduce inventory and lead time and the long-term objectives of SCM are to increase market share and integration of supply chain (Koh et al., 2007). SCM practices can be defined in various ways. Otto and Kotzab (2003) termed SCM practice as a special form of strategic partnership between retailers and suppliers.

Alvarodo and Kotzab (2001) viewed SCM practices in terms of reducing duplication effects by focusing on core competencies and using inter-organizational standards such as activity-based costing or electronic data interchange, and eliminating unnecessary inventory level by postponing customizations towards the end of the supply chain. The modern evaluation of the SCM practices that comprises of partnership with the supplier, process of outsourcing, compression of cycle time, continuousness of process flow and sharing or technology and information (Tan, K. C., Kannan, V. R., & Handfield, R. B. 1998). Supply base management refers to how firms utilize their supplier's processes, technology and capabilities to enhance supply chain performance and competitive advantage and how the manufacturing, logistics, materials, distribution and transportation functions are coordinated within organizations (Billington, (1992).

Mentzer,(2001), state that SCM in practice means includes the involved companies planning and strategy for coordination of their supply chain , including collaboration between functions internally as well as across company .Many manufacturers and distributors are waking up to the potential for the major cost reduction and service improvements offered by implementing best practices in their supply chain. A number of literatures show many different perspectives of SCM practices (Tan et al., 2002; Chen and Paulraj 2004; and Li, 2002 and 2005). These different writers perspectives suggested a multi-dimensionality of SCM that covers set of activities and processes from upstream, firm's internal operations to downstream of the supply chain.

Supply Chain Management is now recognized as a critical business process for companies manufacturing or distributing products. This is because customers demand for most products are ever more demanding in response time, in choice and in seeking more competitive prices and

thanks to globalization, customers can choose from an increased number of suppliers (Lazarovic et al., 2007). 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)

2.5.1. Supplier and Customer Relationship (SCR)

Supplier and customer relationship is defined as a set of firms' activities in managing its relationships with customers and suppliers to improve customer satisfaction and synchronize supply chain activities with suppliers, leverage suppliers' capacity to deliver superior products to customers. This is due to the ultimate objective of SCM is to deliver products to the satisfaction of end customers (Tan, 2001).

Supplier involvement in product development allows firms to make better use of their suppliers' capabilities and technology to deliver competitive products (Handfield *et al.* 1999). Coordinating operational activities through joint planning with suppliers also results in inventory reduction, smoothing production, improve product quality, and lead time reductions (Ansari *et al.*, 1999). Lee (2002) argues that integration with suppliers throughout the product life cycle is an effective strategy in reducing supply uncertainty. Customer relevancy becomes a key strategic commitment of leading corporations (Bowersox *et al.*, 2000).

The ability to build a close relationship with customers will bring companies in to a long-lasting competitive edge (Bowersox et. al, 1999). 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). 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). Close customer relationship allows a company to be more responsive in fulfilling customers' demand and differentiate its product from competitors, sustain customer loyalty, & dramatically extend value to provides it's customer through improving customer satisfaction by proactively seeking customers' needs and requirements. SCM suggests that firms need to integrate with their suppliers and customers to achieve both financial and non-financial growth objectives (Tan, 2001).

Makweba & Xu, (2009) in their study, revealed that customers' need to be given its deserved weight. In today's competition, firms with a superior ability to provide services that customers perceive as valuable acquire to important competitive advantage. The food processors need to make commitments to learn what customers need and set strategies that implement customer friendly process relationship rather than the existing one buy-sell traditional relationship. This is because in most cases customers' base their purchasing decisions on the service they receive, not just on price. Therefore, quality and availability of the product that provides superior service to the customers is very important for the firm (Makweba & Xu, 2009).

2.5.2. Information sharing

Information sharing refers to ability of enterprises to share knowledge and information with supply chain partners with effective and efficient manner. Information sharing in interactive system of supply chain includes information between direct partners and all network of supply chain. For effective and efficient use of partners is needed sharing information. Effective information sharing is considered as one of the most important abilities of supply chain process and also information sharing is one of the most important tools for achieving an integrated and coordinated supply chain (Lee, H.L. 2002).Zailani, Suhaiza ,Premkumar ,Rajagopal, (2005),says that the technological wave of internet and e-commerce provides a new opportunity to create a "smart" integrated supply chain.

According to Simatupang, T. M. and Sridharan, R. (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 Internet, Intranet, and Extranet can be distinguished based on characteristics including access, users, and information. Internet is a public network accessed by general users. However, due to inconsistent format and diversified content, information available on the internet is fragmented.

Information sharing requires firms to exchange strategic supply chain information apart from transactional data, leading to improvement in the relationship and integration between the SC

partners (Hsu, Kannan, Tan & Leong, 2008). The strategic supply chain information allows supply chain partners in making strategic decision in their operations (Li et al., 2006). Information sharing becomes crucial in these turbulent economic times as it drives the firm into becoming a collaborative structure.

Klein and Rai (2009) have also established that buyer and supplier strategic information flows positively impact the relationship-specific performance of both sharing and receiving parties. In addition, quality of information sharing refers to the extent to which a firm shares a variety of relevant, accurate, complete and confidential information in a timely manner with its supply chain partners (Monczka, 1998). While information sharing is important impact of SCM depends on the quality which it shared (Holmberg, 2000). Given these predispositions, levels of information sharing as well as quality of information shared become critical aspects in deciding the supply chain success. Information sharing is an important aspect in achieving perfect integration in a supply chain. Cross functional integration and inter organizational integration requires the visibility of information across the supply chain. Poor information sharing between partners in a supply chain will result in poor coordination that will lead to many serious problems such as high inventory levels, inaccurate forecasts, low resource utilization, and high production costs. Indeed, information sharing is highly considered as the way to reduce demand uncertainty (Lee and Whang, 2000; Lee, 2002). Many studies have reported that information sharing can bring many benefits to both suppliers and buyers, such as inventory reduction, and reduced manufacturing costs (Yu et al, 2001; and Raghunathan, 2003). The way companies share information whatever the confidential level or not determines the success of the collaboration.

The nature of information to be across the supply chain differs based on the degree of integration, institutional trust and availability of infrastructure that facilitate the practice (Lazarovic, et al., 2007). Therefore, an informatics perspective is vital in the supply chain since information flow is an integral part of SCM and material flow is closely dependent on information flow.

2.5.2.1. Types of Shared Information

Sales Data: In the traditional supplier-buyer relationship, companies communicate demand information exclusively in the form of orders. Indeed, orders from downstream serve as critical source of information about future businesses. 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).

Sales Forecast: To exploit the vendors' superior forecasting capabilities, retailers including Wal-Mart formed an initiative called collaborative planning, forecasting and replenishment, which calls for the retailers and the manufacturers to exchange knowledge and jointly develop forecasts and replenishment plans. The common form of forecast sharing involves a downstream site sharing the information to the supplier, as it is closer to the market and better positioned to forecast future market demand (Tsay 1997).

Inventory information: 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)

Other Information Sharing: Other information often shared in a supply chain include may be performance metrics and capacity. Performance metrics include product quality data, lead times, queuing delays at workstations and service performance. By sharing this type of information, the supply chain can identify the bottlenecks of the chain and improve the overall performance (Tsay, 1997)

2.5.2.2. Level of Information Sharing

Level of information sharing refers to the extent to which critical & proprietary information is communicated to one's supply chain partner. Many researchers have suggested that the key to make supply chain effective and efficient is making available undistorted & up-to-date marketing data at every node within the supply chain (Balsmeier et. al. 1996; Childhouse and Towill, 2003) The impact of information sharing on SCM depends on what information is shared, quality on shared information, and company's capability in using and translating the information in to a supply chain strategy and operational activities (Moberg et al, 2002). Basically, Information

sharing can vary from strategic to tactical & from information about logistics activities to general market & customer information (Mentzer et al. 2004). The level of information sharing is closely linked with accountability and efficiency (Rahmanseresht and Afsar, 2008).

Furthermore, Alireza et al. (2011) stated integration and coordination across supply chain can be well provided through information sharing.

Lalonde (1998) considers sharing of information as one of five building blocks that characterize a solid supply chain relationship.

According to Stein and Sweat (1998), supply chain partners who exchange information regularly are able to work as a single entity. Effective use of relevant and timely information by all the functional elements in the supply chain is considered as a competitive factor and distinctive (Ahmadi, 2005). Failures can occur in case of information delays, shortage or distortion across the supply chain (Power, 2005). In this study supply chain information sharing is associated with the amount of information shared among supply chain partners in downstream and upstream side of the supply chain and also the information intensity.

2.5.2.3. Quality of Information Sharing

Information quality includes an aspect such as accuracy, timeliness, adequacy and information exchanged credibility (Tan *et al.* 1998). It appears that there is a built in reluctance within organizations to give away more than minimal information (Berry et al. 1994) since information disclosure is perceived as a loss of power. Given these predispositions, ensuring the quality of the shared information becomes a critical aspect of effective SCM (Feldmann and Muller, 2003). Based on Li *et al.* (2005), organization needs to review their information as a strategic asset and ensure that the information flows with minimum delay and distortion. In addition, (Li *et al.* 2005) also notes that information shared must be accurate so that the best SCM solution will be obtain. While information sharing is important, the significance of its impact on SCM depends on information by all functional elements within the supply chain as a key competitive and distinguishing factor. The empirical findings of Childhouse and Towill (2003) reveal that simplified material flow, including streamlining and making highly visible all information flow throughout the chain, is the key to an integrated and effective supply chain. Providing and transforms raw material to a product or service and delivers it to the customer is activities that is

done in the supply chain. Overall planning of supply and demand, raw material procurement, production planning, inventory control, warehousing, distribution of products and management of information is activities in the supply chain. Hence manufacturing organization in the supply chain should be able to consider inventory demand and according to the number products in stock identified a fraction number the product and do production planning. By determine production schedules, do raw material supply and the schedule of production, distribution of products as well is planned through sharing quality information (Chin *et al.*, 2010).

2.5.3. Internal Operation

In addition to the upstream and downstream integration, SCM also emphasize on the importance of both effectiveness and efficiency of firm's internal operations on its performance. This is due to a significant element of SCM practice is an internal operations and they are the basis for developing a competitive advantage before embarking into external integrations. Poor internal operations can lead to failure in coordinating with external partners (Handfield and Nichols, 1999). 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).

2.5.4. Information Technology (IT)

Information Technology has demonstrated that companies obtain large benefits from IT application. Uncovered significant productivity gains from flow of information (Barua and Lee 1997). Nowadays, IT is involved in every step of operation in each company, therefore it is not surprising that organizations' Supply Chain Management supported by adopting IT.

Talluri, (2000) makes the comment that the advances in IT systems have given opportunities for organizations' to transform the way they manage their business. In SCM, IT is highly regarded as a major enabler in achieving effective SCM. 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). In addition, to advance development of the internet technology offers significant opportunities for cost reduction, increasing flexibility, increasing response time, and improving customer services (Lee and Whang, 2001).

The benefits of IT in SCM do not come from the capabilities of IT itself; instead the significant benefits come from the combination of its application with corporate strategy and the nature of relationship between companies. IT will improve collaboration and coordination between supply chain members in the environment where trust and long-term commitment between partners exist (Chae, 2005).

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

2.5.5. 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 (Lazarovic, et al., 2007). Therefore, effective training and knowledge based learning is essential in developing and maintaining these new SCM skills.

2.6. Challenges /Barriers of Supply Chain Management

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

Fawcett, (2001) identified top ten barriers to supply chain management these are: Inadequate information sharing, Poor/conflicting measurements, Inconsistent operating goals, Organizational culture or structure, Resistance to change- lack of trust, Poor alliance Management practices, Lack of supply chain vision (understanding), Lack of managerial commitment, Constrained resources, no employee dedication/ empowerment. Currently, companies are striving for lower cost so that they will be competitive in the market while they have to maintain their service level. The key factor to offering the features that the customers want at the level of service they are willing to pay for is to minimize the lead time. One approach suggested to solve this problem is synchronized material movement where all parts of the supply chain have access to the information at the same time (Waters, 2003).

2.6.1. Uncertainty

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

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

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

(3) Supply uncertainty: Normally, suppliers fail to commit to promised dates, possibly due to poor material quality, machine breakdowns or deficiency in natural resources and so forth. Wilding, (1998) states one key issue known to impact on the effectiveness of supply chain is that of uncertainty. The major source of supply chain uncertainty is the demand forecast, which may be influenced by several factors such as competition, prices, technological development, customers' general confidence, and more. Other uncertainties exist in delivery times which depend on many factors ranging from machine failures to road conditions and traffic jams that may interfere with shipments.

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

2.6.2. Bullwhip Effect

Another barrier that different companies have been facing in their supply chain is bullwhip effect. The Bullwhip Effect is an observed phenomenon in forecast-driven distribution channels. This phenomenon has been observed across most industries resulting in increased cost and poorer service (http://en.wikipedia.org/wiki/Bullwhip_effect).

Hau, et al., (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 chains. The major Consequences of bullwhip effects are:

- Inefficient production or excessive inventory.
- Low utilization of the distribution channel.
- Necessity to have capacity far exceeding average demand.

- High transportation costs.
- Poor customer service due to stock outs

2.7. Conceptual Framework

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

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

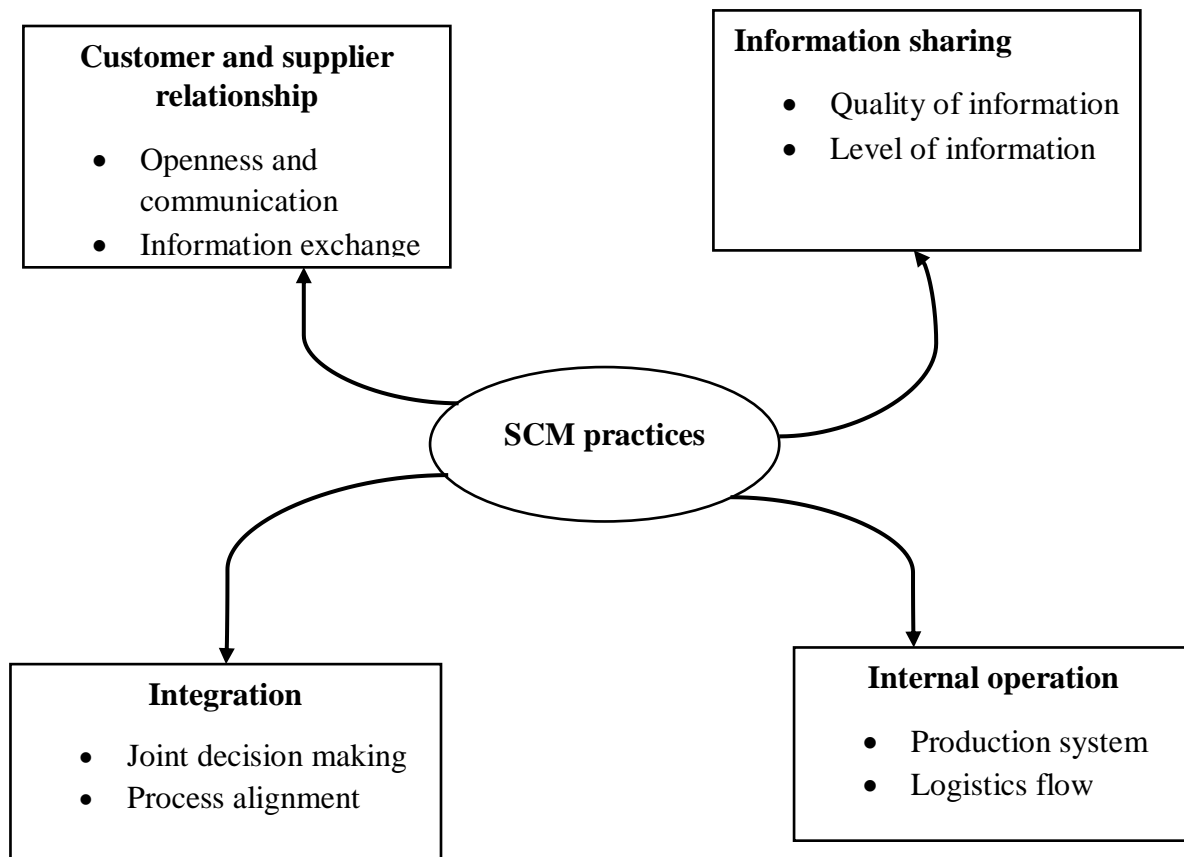


Figure 2.2: Conceptual Framework Developed for this study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Research Design

Designing a study helps the researcher to plan and implement the study in a way that should help the researcher to obtain intended results, thus increased the chances of acquire information that could be associated with the real situation (Burns & Grove 2001). This study intended to investigate SCM practices based on fundamental theories, Principles and management philosophies that are supposed to be effective parameters just to evaluate the actual performance of the case company's key business activities.

The purpose of this research is to find out the underlying facts and /or actual circumstances existing within the case company with regard to SCM practices and describing the facts. Therefore, the researcher prefers to use descriptive research design.

3.2. Research approach

There are two basic approaches to research quantitative approach and the qualitative approach (Kothari C 2004).

According to Singh K (2006) the quantitative data are collected by administering the research tools. These should possess the following characteristics: i. the quantitative data should be collected through standardized tests. If self-made test is used it should be reliable and valid. ii. They are highly reliable and valid. Therefore, generalization and conclusions can be made easily with certain level of accuracy. iii. The obtained results through quantitative data can be easily interpreted with scientific accuracy. The level of significance can also be determined. iv. The scoring system of quantitative data is highly objective. v. The use of quantitative data is always based upon the purpose of the study. The specific psychometric tests are used in difficult investigation. vi. The inferential statistical can be used with the help of quantitative data. Qualitative approach is data that are not characterized by numbers, and instead are textual, visual, or oral; focus is on stories, visual interpretations, meaningful characterizations, interpretations, and other expressive descriptions (Zikmund,-Babin, jon-c.carr 2009).

3.3. Sources of Data

The source of data for this study would be involved both primary and secondary sources.

3.3.1. Primary data Sources

Primary data are generally information gathered or generated by the researcher for the purpose of the project immediately at hand. When the data are collected for the first time, the responsibility for their processing also rest with the original investigator. the advantage of primary data include: allowing the investigator to observe the phenomena as it takes place; ensuring reliability because the researcher collects the data himself and also the primary data's are the only way of finding the opinion, personal quality, attitude, feeling(Shajahan, 2004).

3.3.2. Secondary data Sources

According to Zikmund G, Babin J, Carr C, Adhikari A and Griffin M, 2013) secondary data are gathered and recorded by someone else prior to (and for purpose other than) current project. Secondary data usually are historical and already assembled. The primary advantage of secondary data is their availability, the money and time saving. As well secondary data are important when the data cannot be obtained using primary data collection procedures.

3.4. Population of the study

Population in research is defined as complete set of elements (persons or objects) that possess some common characteristic defined by the sampling criteria established by the researcher. Population (universe) is any complete group that share some common set of characteristics. It is important to note that whether a census or a sample is used, both provide information that can be used to draw conclusions about the whole population (Zikmund G, Babin J, Carr C, Adhikari A and Griffin M, 2013).

3.5. Sampling Technique

Even though supply chain management is necessary for both manufacturing and service companies, this study was targeted on the food processing company particularly Hilina Enriched Foods PLC. Furthermore, the exact sample units of respondents were considered from company's

management and employees on the basis of judgmental/ Purposive sampling technique. Purposive sampling technique was used to interview managers who are directly related with the topic under investigation. The researcher preferred convenience sampling to contact the major customers who are located in with infrequent visit to the case company. Therefore, these respondents were addressed as per their arrival or availability at the case company.

3.6. Sample size determination

Malhortra and Peterson (2006) and Zikmund (2003) stated that, the larger the sampling size of a research, the more accurate the data generated. However, due to time and financial limitations and the nature of the population, sample determination. Thus, to determine the sample size the researcher preferred to use a method developed by Carvalho (1984), as cited in Malhorta Naresh, K. (2007).

Table 3.1 Sample Size Determination

Population size	Sample size		
	Low	Medium	Large
51-90	5	13	20
91-150	8	20	32
151-280	13	32	50
281-500	20	50	80
501-1200	32	80	25
1201-3200	50	125	200
3021-10,000	80	200	315
1001-35000	125	315	500
35001-150000	200	500	800

(Source: Malhorta Naresh, Marketing Research: an applied approach, 2007)

The total numbers of Hilina Enriched Foods plc employees are 209 out of this about 9 employees are not educated. therefore from the remaining 200 employees 50 considered as a sample respondents as per the Malhora Naresh's sample determination method, considering the heterogeneity of sample respondent on the basis of position within the organization. In addition to this an interview was held with management bodies of the company and interview customers of the company those customers are four big international companies and also the researcher interview purchasing department of each company.

3.7. Methods and Instruments of Data Collection

As methods of data collection survey method is applied to obtain data from the population. To this effect, a questionnaire will be used for the sake of making the survey. The researcher mainly use pre-structured questionnaire (close ended questions) and also use interview as managerial level for different department of the company and customer of the company.

Basically there are two sources of data namely, primary and secondary source. In this research both primary and secondary sources of data were utilized through Questionnaires, interview, and literature review. The primary data conducted in the form of personal interviews with customers, procurement and supply manager, 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 brochures were reviewed. On the other hand, the collection of relevant to validate the investigation demands appropriate and convenient techniques of data collection. Accordingly, in this study both questionnaire and interview were used together.

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, 2-Low, 3-Average, 4-High and 5 -Very High*. Data gathered through questionnaires is simple and clear to analyses and it allows for tabulation of responses and quantitatively analyzes certain factors. Furthermore to this it is time efficient for both the respondents and researcher. The questionnaire was structured in such a way that it includes all relevant parts of and information to clearly acquaint the respondents.

Interview: in order to obtain sufficient information the researcher has used personal interview by management bodies of the case company and customers. 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 through questionnaire in as much detailed as required.

3.8. Validity and Reliability Testing

Establishing the validity and reliability of the instrument is an important aspect of instrument development and testing. Validity and reliability are the benchmark for assessing the quality of the instrument (Saunders, 2002).

The researcher took different steps to ensure the validity of the study. Accordingly, before the administration of the instrument for the subject, survey questionnaires were made based on literature review and frame of reference to ensure the validity of results. And then, the questionnaire has been pre-tested by advisor to see the content and construct validity. Following the advisor recommendation, the modified draft questionnaire have been develop and distributing to the target respondents.

Reliability: Reliability measures the tendency of the instrument to consistently give the same result with the same group of people under the same condition (Sanders, 2002). In other words, reliability is to mean accuracy, dependability, consistence and stability. According to Getachew (2016) cited Hair and others (1992) the reliability of all the constructs exceeds the recommended cut-off value (0.7).

3.9. Method of data analysis

Analysis of data means studying the tabulated material in order to determine inherent facts or meanings. It involves breaking down existing complex factors into simpler parts and putting the parts together in new arrangements for the purpose of interpretation (Singh K 2006 p 203). Consequently, in data processing, after collection of data, the questionnaires will be edited to determine the degree of response and the number of usable questionnaires. The data will be coded and then entered into a computer data sheet for analysis. The data analysis will be done in the computer application known as, the Statistical Package for Social Sciences (SPSS) version 20. Therefore, as determined in the data collection tool for this study, data were collected in both questionnaire and interview. Accordingly, the collected data were analyzed quantitatively and qualitatively. Particularly, statistical tools like: mean and standard deviation were employed.

3.10. Ethical Considerations

The research will conduct in line with the organizations policy and relation to any intellectual property rights of the organization. Regarding privacy of the respondents, their responses are strictly confidential and only used for academic purposes. It cannot be ethical to access some confidential documents of the organization. So the organization's code of ethics taken in to account without significantly is compromising the findings of the study. Concerning references, all the materials and sources are properly acknowledged.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. Introductions

This chapter presents analysis, interpretation and findings of information collected through self-administered questionnaires and interview on manager level employee of Hilina Enriched Foods. Out of the total 50 copies of the questionnaire distributed, 45(90%) of them were properly filled in and returned to the researcher. According to Mugenda (2003) a response rate of 60% is good and a response rate of 70% and over is very good and interview. The results of this chapter and the discussions are based on the data collected from those respondents through questionnaire and interview. For the sake of making analysis descriptive statistics, techniques were used. But, before conducting the actual analysis, demographic characteristics are summarized by using frequencies and percentages for all variables including age, gender, educational background and work experience. The presentation, analysis, and interpretation of the interview and questionnaires were done simultaneously whereby the findings obtained from the interview were presented in parallel by substantiating against the result obtained from the questioners.

4.2. Demographic information of the respondents

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

Table 4.1 Demographic respondents

Variable	Frequency	Percent
Gender		
Male	31	68.9
Female	14	31.1
Total	45	100
Age		
20-25	2	4.4
26-30	9	20
31-35	8	17.8
36-40	11	24.4
above 40	15	33.3
Total	45	100
Services Year		
1-3 year	8	17.8
4-6 year	9	20
7-11 year	12	26.7
above 11 year	16	35.6
Total	45	100
Educational Qualification		
Grade 10 Completed	6	13.3
Certificate	8	17.8
Diploma	15	33.3
First Degree	13	28.9
Second Degree and above	3	6.7
Total	45	100

(Source own survey 2018)

As reflected in table 4.1, (68.9%) of respondent are participation answers the questionnaire male and (31.1%) were female. This shows that most of the study participants are male. That means male respondents are more double than female respondent.

Regarding to age shows that 33.3% of respondents are age of above 40, followed 24.4% of respondents are age of 36-40 next, 20.0% of respondent are age of 26-30, 17.8 of respondents are age of 31-35 and last one is 4.4% of respondents are age of 20-25. This implies that majority of respondents are above 40 ages. It results the company difficult to competent because youngest employees have not highly recruit.

According to working experience, the largest of the respondents 35.6 % have more than eleven (11) years of work experience. In the same case, 26.7% of respondents have from 7-11 years of work experience and followed by 4-6 years of experience, which accounts 20% and 17.8 % respondents having 1-3 years of experience. This implies that in total more than 82.3% of the respondents have above 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.

Regarding to education level attained by most of the respondents was college diploma holders which represent 33.3% out of the valid respondents, first degree holders which accounts 28.9%. and also 17.8% certificate , 13.3% of respondents are grade 10 and 6.7% of respondents are second degree.

4.3. Descriptive Statistical Analysis

As it were revealed in the methodology part, the designed method is descriptive statistical analysis to analyze the four components of the conceptual framework developed for this study. In addition to the quantitative analysis, the qualitative information obtained through interviews from both managers and customers of Hilina enriched food company is used to analyze the following issues. The analyses on: Supply chain management practices, Collaboration /integrated supply chain management, Customer and supplier relationship, internal operation and information sharing. 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 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 1 indicates very poor (very low) ,2 indicates the poor (low)performance, 3,average/moderate while 4 and 5 indicates higher and very high/excellent respectively performance of the company on that particular item and variable respectively.

4.4. Supply chain management practices

As it was briefly mentioned in the literature part of this study, the most common supply chain management practices are supplier and customer relationship, internal operation, information sharing, and coordination/integration SC (Perry and Sohal 2000; Lazarovic et al., 2007). This study focused on the case company's SCM practices from these perspectives. For each practice, different items were developed and measured based on their mean and group mean values.

4.4.1. Suppliers and Customers Relationship (SCR)

According to Sunil, (2004) the most commonly known characteristics of suppliers and customers relationships are joint product planning, with customer and supplier level of information exchange, supplier with customer and others. To measure Hilina Enrich Food Company's orientation concerning the SCR, six items were developed by the researcher. Table 4.2 below indicates the extent of relationship that exists between suppliers, Customers and the case company. Accordingly, the group means of suppliers and customers' relationship is 3.0555, which is average/moderate 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 2.8889, and 2.5778 respectively. These mean values imply that Hilina Enrich Food Company has a poor relationship with its customers and suppliers, particularly, on joint product planning. In line with this analysis, Tan et al., (1998) and Claycomb et al., (1999) states that customer relationships include the complete range of practices that are employed for the purpose of building long term relationships with customers & improving customer satisfaction.

Table 4.2 Suppliers and Customers Relationship Practice of SCM

Statement	1	2	3	4	5	Mean	Std. Deviation
Joint product planning with major customer	0(0)	19 (42.2%)	14 (31.1%)	10 (22.2%)	2 (4.4%)	2.889	0.9101
Compliance with customers delivery in full requirement	1 (2.2%)	18 (40.0%)	9 (20.0%)	12 (26.7%)	5 (11.1%)	3.0445	1.1069
Customer delivery adherence requirement	0(0)	9 (20.0%)	7 (15.6%)	19 (42.2%)	10 (22.2%)	3.667	1.0447
Level of information exchange supplier with customer	0(0)	21 (46.7%)	7 (15.6%)	11 (24.4%)	6 (13.3%)	3.0445	1.127
Joint product planning with major supplier	2 (4.4%)	24 (53.3%)	12 (26.7%)	5 (11.1%)	2 (4.4%)	2.579	0.9167
Frequently measure and evaluate customer satisfaction	0(0)	19 (42.2%)	8 (17.8%)	12 (26.7%)	6 (13.3%)	3.111	1.1124
Overall						3.0558	

(Source own survey 2018)

According to table 4.2 response to the questions of supplier and customer relationship is describes as follow regarding to item 1st in the company is there joint product planning with major customer majority of respondents are 19(42.2%) low, 14(31.1%) of respondent average, 10(22.2%) of respondent are high and 2(4.4%) of respondents are very high the mean value is 2.89 and the standard deviation is 0.91.Regarding to the 2nd item compliance with customers delivery in full requirement majority of respondent 18(40.0%) of respondents are low ,12(26.7%) of respondents are high ,9(20.0%)of respondent average/moderate, 5(11.1%)of respondent is very high and 1(2.2%) of respondent is very low .The mean is 3.044 and standard deviation 1.101.Regarding 3rd item where the company customer delivery adherence requirement majority of respondents are 19(42.2%) high, 10(22.2%)of respondent are very high ,9(20.0%) of respondent are low and 7(15.6%) of respondent are average /moderate .the mean is 3.667 and standard deviation 1.04.Regarding the 4th item level of information exchange supplier with customer is the majority of respondent 21(46.7%) low,11(24.4%) of respondent are high ,7(15.6%)of respondent are average, 6(13.3%) of respondent are very high .the mean 30.044 and the standard deviation 1.127.Regarding the 5thitem joint product planning with major customers majority of respondent

24(53.3%) are low, 12(26.7%) of respondents are moderate, 5(11.1%) of respondents are high, 2(4.4%) of respondents are equal, respond very high and very low. The mean is 2.57 and standard deviation 0.92. Regarding the 6th item frequently measure and evaluate customer satisfaction majority of respondents are 19(42.2%) low, 12(26.7%) of respondents are high, 8(17.8%) of respondents are moderate and 6(13.3%) of respondents are very high. The mean is 3.11 and standard deviation 1.11.

In general as compliance with customers' delivery in full requirement and level of information exchange similar mean value 3.04 this implies the case company is not meeting the full requirements of the customers as per their desire. On the other hand, customers are not fully satisfied in getting the amount of product they required. From the items used for customers and suppliers relationship, Customers' delivery adherence to requirements relatively represents the higher result which is 3.66. This implies that there is a gap between the customers' adherence requirement and company's actual performance. The reason for this gap is the case company is not able to deliver the required amount of products to the customers' due to shortage of raw materials. The shortage of raw materials is because of the Hilina enriched food company weak relationship with its customers on joint product planning as it was presents in table 4.2 above. 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, even the mean value of joint product planning with major customers reveals poor performance of such practice (2.88). The groups mean value result implies that SCM practice from the perspective of suppliers and customers' relationship of the case company is moderate, that is 3.05. On the other hand, customers' delivery adherence requirement replies that the customers are more dependent on full quantity and timely delivery of their requirement. So that, this can adds pressure on the case company to meet its customers' requirement. But the current performance of the company to meet this is moderate. If the case company is not in a position to improve this and other supplier and customer relationship practices, without any doubt the case company's customers' have an opportunity to go to its competitor companies those provide services in a better way than the case company. And the case company has also a great possibility to loss its major customer. Therefore, simple sale-buy and weak relationship of the case company

with its suppliers resulted in not fully satisfy its customers adherence requirement on time due to shortage raw materials.

4.4.2. 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). With respect to the above theoretical justification, this study tried to investigate the practices of information sharing among the supply chain participants of the case company. Accordingly, seven items related to information sharing practice were used by the researcher. Table 4.3 below 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.

Table 4.3 Information sharing

Statement	1	2	3	4	5	Mean	Std. Deviation
Adequate and quality of information sharing throughout the supply chain	0(0)	16 (35.6%)	14 (31.1%)	10 (22.2%)	5 (11.1%)	3.089	1.018
Sense of trust and confidence along the supply chain	0(0)	5 (11.1%)	15 (33.3%)	21 (46.7%)	4 (8.9%)	3.533	0.8146
Other product related information sharing with customers	1 (2.2%)	18 (40.0%)	16 (35.6%)	6 (13.3%)	4 (8.9%)	2.867	0.991
Information exchange between our trading partners and us is timely	0(0)	8 (47.8%)	18 (40.0%)	15 (33.3%)	4 (8.9%)	3.333	0.879
Level of information sharing though supply chain	2 (4.4%)	18 (40.0%)	13 (28.9%)	10 (22.2%)	2 (4.4%)	3.178	0.8604
Sales forecast information sharing with customer	0(0)	11 (24.4%)	17 (37.8%)	15 (33.3%)	2 (4.4%)	2.711	1.1406
Sales forecast information sharing with supplier	6 (13.3%)	16 (35.6%)	11 (24.4%)	9 (20.0%)	3 (6.7%)	2.822	0.984
Overall						3.076	

(Source own survey 2018)

According to table 4.3 response to the questions of information sharing is describes as follow regarding to item 1st Adequate and quality of information sharing throughout the supply chain majority of respondents are 16(35.6%) low, 14(31.1%) of respondent average, 10(22.2%) of respondent are high and 5(11.1%) of respondents are very high the mean value is 3.08 and the standard devotion is 1.01 .Regarding to the 2nd item Sense of trust and confidence along the supply chain majority of respondent 21(46.7%) of respondents are high ,15(33.3%) of respondents are moderate ,5(11.1%)of respondent are low, and 4(8.9%)of respondent are very high .The mean is 3.533 and standard devotion 0.814. Regarding 3rd item where the Other

product related information sharing with customers majority of respondents are 18(40.0%) low, 16(35.6%)of respondent are moderate ,6(13.3%) of respondent are high, 4(8.9%) of respondent are very high and 1(2.2) of respondent is very low .the mean is 2.866 and standard deviation 0.991.Regarding the 4th item Information exchange between our trading partners and us is timely is the majority of respondent 18(40.0%) moderate,15(33.3%) of respondent are high ,8(17.8%)of respondent are low, 4(8.9%) of respondent are very high .the mean 3.333and the standard deviation 0.879.Regarding the 5th item level of information sharing though supply chain majority of respondent 18(40.0%) are low, 13(28.9%) of respondents are moderate,10(22.2%) of respondents are high ,2(4.4)of respondent are equal respond very high and very low .the mean is 3.177 and standard deviation 0.860.Regarding the 6th item Sales forecast information sharing with customer majority of respondents are 17(37.8%) moderate,15(33.3%) of respondents are ,11(24.4%) of respondents are low and 2(4.4%)of respondents are very high. The mean is 2.711and standard deviation 1.14.Regarding the 7th item Sales forecast information sharing with supplier majority of respondents 16(35.6%) are low,11(24.4%) of respondents are moderate ,9(20.0%) of respondent are high,6(13.3%) of respondents are very low, and 3(6.7%) of respondent are very high. the mean is 2.822 and standard deviation 0.984 . In general relatively, the high and the lowest mean values are scored by sense of trust and confidence along the SC and sales forecast information sharing with customers that is 3.53 and 2.71 respectively. On the other hand, the Sales forecast information sharing with suppliers scored mean value of 2.82. This implies that the case company has poor information sharing practice with its customers than with its suppliers particularly on sales forecast. In SCM, information sharing is important practice that should have to be given due attention in order to make the SC strong. Because, when there is distortion, inadequacy and lack of accuracy in information flows within the SC partners, it will negatively affect the SC participants. The mean value of the respondents on adequacy and quality of information sharing throughout the SC implies that, there is information sharing among the SC partners but it is not sufficient and it lacks accuracy.

From the above presented data, the researcher can conclude that the information sharing practice between Hilina food factory and its customers is poor. This is based on the mean value obtained with respect to sales forecast with customer information sharing which scored 2.71 relatively low. In fact, customers like whole sellers, distributors, agents and retailers are closer to the end customers. They have better opportunity for understanding the end customers' demand. Sharing

forecast information with such customers would help the case company and consolidate its market demand forecasts. So that, having poor relationship with such partners is a cause for poor information sharing practices which make the forecast of the case company weak and unrealistic. According to Lee and Whang, (2000) poor information sharing between partners in SC would lead to many serious problems such as high inventory level, high demand uncertainty, inaccurate forecasts, low resource utilization, and high production costs. Furthermore to the above theory, many studies have reported that information sharing can bring many benefits to both suppliers and buyers, such as inventory reduction, and reduced manufacturing costs (Yu et al, 2001; and Raghunathan, 2003). However, the information sharing practice of the case company with its customers particularly on sales forecast is poor the groups mean value of SCM practice from information sharing perspective shows 3.076, which is moderate.

The empirical study of Lazarovic et al., (2007) states that efficiency in meeting customers' requirement is significantly differentiated by the level and quality of information sharing among SC partners. Therefore, based on the analysis, empirical study and the 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.

4.4.3. Internal operation

Internal operation is the starting point to make the environment favorable for integration with the external partners. Handfield and Nichols (1999), states that Poor internal operations can lead to failure in coordinating with external partners. As table 4. 4 which illustrates that eight items were used in order to see the extent of the internal operation of the case company.

Table 4.4 Internal operation practices of SCM

Statement	1	2	3	4	5	Mean	Std. Deviation
Efficient and effective utilization of resources	0(0)	14 (31.3%)	19 (42.2%)	9 (20.0%)	3 (6.4%)	3.0222	0.8916
Flexible production system to market change	3 (6.7%)	19 (42.2%)	18 (40.0%)	4 (8.9%)	1 (2.2%)	2.5778	0.83907
Management know-how regarding supply chain effectiveness	0(0)	16 (35.6%)	19 (42.2%)	8 (17.8%)	2 (4.4%)	2.9111	0.84805
Internal logistics flow	0(0)	8 (17.8%)	25 (55.6%)	10 (22.2%)	1 (2.2%)	3.1333	0.75679
The extent of continuous and instantaneous product and services improvement	0(0)	9 (20.0%)	21 (46.7%)	10 (22.2%)	1 (2.2%)	3.1556	0.64745
Up- to datedness of production	1 (2.2)	20 (44.4%)	11 (24.4%)	12 (26.7%)	1 (2.2%)	2.8222	0.93636
Flexibility of production system to handle order pattern	0(0)	19 (42.2%)	15 (33.3%)	7 (15.6%)	4 (8.9%)	2.9111	0.97286
The extent of production process automation	0(0)	12 (26.7%)	23 (51.1%)	8 (17.8%)	2 (4.4%)	3.111	0.79772
Overall						2.955	

(Source own survey 2018)

According to table 4.4 response to the questions of internal operation is describes as follow regarding to item 1st efficient and effective utilization of resources result majority of respondents are 19(42.2%) moderate, 14(31.1%) of respondents are low, 9(20.0%) of respondent are high and 3(6.4%) of respondents are very high the mean value is 3.0222 and the standard deviation is 0.89160.Regarding to the 2nd item flexible production system to market change majority of respondent 19(42.2%) of respondents are low,18(40.0%) of respondents are moderate ,4(8.9%)of respondent are high, 3(6.7%)of respondent are very low and 1(2.2%) of respondent is very high .The mean is 2.577 and standard deviation 0.839.Regarding 3rd item where the Management know-how regarding supply chain effectiveness majority of respondents are 19(42.2%) moderate , 16(35.6%)of respondent are low ,8(17.8%) of respondent are high, and 1(2.2%) of respondent are very high. the mean is 2.9111 and standard deviation 0.84805Regarding the 4th item internal logistics flow result majority of respondent 25(55.6%) moderate,8(17.8%) of respondent are low

,10(22.2%)of respondent are high, 1(2.2%) of respondent are very high .the mean 3.1333 and the standard deviation 0.7569.Regarding the 5th item The extent of continuous and instantaneous product and services improvement majority of respondent 21(46.7%) are moderate, 10(22.2%) of respondents are high,9(20.0%) of respondents are low and ,1(2.2)of respondent is very high. the mean is 3.1555 and standard deviation 0.76739.Regareding the 6th item Up- to datedness of production the majority of respondents are 20(44.4%) low, 12(26.7%) of respondents are high ,11(24.4%) of respondents are low,1(2.2%) of respondents are very low and 1(2.2%) of respondent are very high . The mean is 2.8222 and standard deviation 0.94.Regarding the 7th item flexibility of production system to handle order pattern majority of respondents 19(42.2%) are low, 15(33.3%) of respondents are moderate, 7(15.6%) of respondent are high, and 4(8.9%) of respondents are very high the mean is 2.9111 and standard deviation 0.97286.Regarding the 8th item is the extent of production process automation results majority of respondents 23(51.1%) are moderate, 12(26.7%) of respondent are low and 2(4.4%) of respondents are very high. the mean is 3.111 and standard deviation 0.797.

In general as stated by Lambert and Cooper (2000) a production system must keep pace with rapidly change in both order patterns and mass customization. In view of this theory, from the mean values presented above in table 4.4, the extent of flexibility of Hilina enrich food company to market change and handling order pattern is moderate, and it clearly reveals that there are problems prohibiting flexibility to handle these changes. In fact, the customers' preferences and the marketing environments are changing very rapidly over time. This change enforces organizations to adopt flexibility to meet the changing market and order patterns. Efficiency on resource utilization of internal operation has scored mean value of 3.022 which approximates to moderate 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 3.1. 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 moderate. It implies that, Hilina enrich food company has to take corrective actions to meet the customers' preferences. Based on the overall analysis of the case company's

internal operation practice the researcher concludes that it is moderate. 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 (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.

4.4.4. Collaboration/Integration in supply chain

As companies transfer toward more extended supply chains, collaboration is becoming their most strategic activity. Collaboration may be with customers, suppliers and even within organization's functional units. Some of the features which many participants anticipate when entering in to collaboration are: joint planning, management and measurement, sharing goals, objectives, resources, information, risks and benefits with partners (Sunil, 2004). When the level of collaboration is becoming more and more strong it leads to integrated and efficient SCM. Based on this, the researcher has tried to see the extent of integration of the case company with suppliers, customers and cross functional units within the company.

4.4.4.1. Company's integration with supplier

In this part, the researcher tried to see the level of integration between Hilina enrich company its suppliers. Integration is the process of combining or coordinating separate functions, processes, or producers and enabling them to interact in a seamless and continuous manner (Kenneth and Brian 2006).

Table 4.5 Company integration with supplier

Statement	1	2	3	4	5	Mean	Std. Deviation
Stable procurement through network	0(0)	19 (42.2%)	20 (44.4%)	6 (13.3%)	0(0)	2.7111	0.69486
The establishment of quick ordering system	0(0)	17 (37.8%)	19 (42.2%)	6 (13.3%)	3 (6.7%)	2.8889	0.88478
The level of strategic partnership with suppliers	0(0)	18 (40.0%)	14 (31.1%)	9 (20.0%)	3 (6.7%)	2.9556	0.9524
Overall						2.852	

(Source own survey 2018)

According to table 4.5 response to the questions of company integration with supplier is describes as follow regarding to 1st item Stable procurement through network result majority of respondents are 20(44.4%) moderate, 19(42.2%) of respondents are low, and 6(13.3%) of respondent are high the mean value is 2.711 and the standard devotion is 0.695. Regarding to the 2nd item The establishment of quick ordering system majority of respondents are 19(42.2%) of respondents are moderate, 17(37.8%) of respondents are low,6(13.3%)of respondent are high, and 3(6.7%)of respondent are very high. The mean is 2.889 and standard devotion 0.889.Regarding 3rd item where The level of strategic partnership with suppliers majority of respondents are 18(40.0%)low, 14(31.1%) of respondent are moderate, 9(20.0%) of respondent are high, and 3(6.7%) of respondent are very high. the mean is 2.956 and standard deviation 0.953.In general Accordingly, relatively to other items the high mean value was scored on the level of strategic partnership with suppliers which are 2.956, followed by the establishment of quick ordering system, 2.89. The mean value of stable procurement through networking indicates 2.71.Furthermore the group mean shows that 2.85 mean value.

The group mean value approximately reveals as, moderate integration between Hilina enrich food company 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, Hilina enrich food company has no common supplier both in domestic and foreign cases. This is due to the procurement method the case company follows is bidding. And any supplier who fulfils the specification and requirements of the company wins the bid and the company buys the materials from those winner organizations.

According to the interview there is no stable procurement through networking. Due to the inconsistency between the response of the procurement and supply manager and the respondents of questionnaires, the researcher interviewed both local and foreign purchasers to clearly understand the level of integration with suppliers. They also assure the same point as the procurement and supply manager. They replied that the company has no strategic/planned relationship with its suppliers. But, sometimes the company made contracts with the winner suppliers for three or four months. Therefore, the researcher tried to identify the area for the respondents' difference through triangulated analysis. Even if the group mean value of company integration with suppliers reveals as moderate it is not convincing. Because it is inconsistent with qualitative information of the responses found through interviews from procurement and supply department. The respondents of the questionnaire assumed the three to four month contractual relationship as a strategic alliance which does not actually exist. Therefore, based on information obtained from both sources (qualitative and quantitative) the level of integration between the suppliers and the case company is poor.

4.4.4.2. Cross-functional integration with the company

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 the company

Statement	1	2	3	4	5	Mean	Std. Deviation
Periodic interdepartmental meeting	0(0)	13 (28.9%)	17 (37.9%)	11 (24.4%)	4 (8.9%)	3.134	.9438
Information system integration among internal functional units	0(0)	13 (28.9%)	18 (40.0%)	4 (8.9%)	2 (4.4%)	2.711	.8152
Data integration among internal functions through network	0(0)	19 (42.2%)	18 (40.0%)	6 (13.3%)	4 (8.9%)	2.800	.8412
Extent of integration between production and sales department	0(0)	6 (13.3%)	13 (28.9%)	18 (40.0%)	8 (17.8%)	3.556	1.0357
Overall						3.394	

(Source own survey 2018)

According to table 4.6 response to the questions of Cross-functional integration with the company is describes as follow regarding to 1st item periodic interdepartmental meeting result majority of respondents are 17(37.9%) moderate, 13(28.9%) of respondents are low, 11(24.4%) of respondent are high and 4(8.9%) of respondents are very high the mean value is 3.134 and the standard devotion is 0.9438. Regarding to the 2nd item information system integration among internal functional units majority of respondent 18(40.0%) of respondents are moderate, 13(28.9%) of respondents are low, 14(8.9%) of respondent are high, and 2(4.4%) of respondent are very high . The mean is 2.711 and standard devotion 0.8152.Regarding 3rd item where data integration among internal functions through network. Majority of respondents are 19(42.2%) low, 18(40.0%) of respondent are moderate, 6(13.3%) of respondent are high, and 4(8.9%) of respondent are very high. the mean is 2.800 and standard deviation 0.8412. Regarding to the 4th item extent of integration between production and sales department result majority of respondent 18(40.0%) high, 13(28.9%) of respondent are moderate, 8(17.8%) of respondent are high, and 6(13.3%) of respondent are low .the mean 3.556 and the standard deviation 1.035.

In general above represents the extents of information integration Hilina enrich food company functional units. Accordingly, almost all items except the 2nd item: information system integration among internal functional units, the rest items score the mean value greater than 2.8, namely data

integration among internal functions through network ,Periodic intra-departmental meeting and extent of integration between production and sales department the mean value scored 2.8,3.13 and 3.556, respectively. Relatively, the extents of production and sales department have scored better mean value than other is 3.556.

Information system integration among internal functional units is the least mean value which is 2.71. This is really, the reflection of poor SCM practice from IT perspectives. 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 or group mean value which 3.39 which reflects the internal integration of the case company is moderate.

4.4.4.3. Company Integration with Customers

SCM suggests that, firms need to integrate with their suppliers and customers to achieve both financial and none financial growth objectives (Tan, 2001).

Table 4.7 Company Integration with Customers

Statement	1	2	3	4	5	Mean	Std. Deviation
Monitoring and Measuring customer service level	0(0)	20 (44.4%)	16 (35.6%)	8 (17.8%)	1 (2.2%)	2.778	0.8223
Follow-up customers for feedback	0(0)	15 (33.3%)	10 (22.2%)	18 (40.0%)	2 (4.4%)	3.156	0.9524
Frequency of contact with major customers	0(0)	22 (48.9%)	9 (20.0%)	8 (17.8%)	6 (13.3%)	2.956	1.1069
The level of market information sharing with major customers	0(0)	6 (13.3%)	26 (57.8%)	12 (26.7%)	1 (2.2%)	3.178	0.6838
Overall						3.017	

(Source own survey 2018)

According to table 4.7 response to the questions of company Integration with customers is describes as follow regarding to 1st item monitoring and measuring customer service level result

majority of respondents are 20(44.4%) low, 16(35.6%) of respondents are moderate, 8(17.8%) of respondent are high and 1(2.2%) of respondents are very high the mean value is 2.778 and the standard deviation is 0.8223. regarding to the 2nd item Follow-up customers for feedback majority of respondent 18(40.0%) of respondents are high ,15(33.3%) of respondents are low ,10(22.2%) of respondent are moderate, and 2(4.4%)of respondent are very high . The mean is 3.156 and standard deviation 0.9524.Regarding 3rd item where Frequency of contact with major customers majority of respondents are 22(48.9%) low, 9(20.0%) of respondent are moderate, 8(17.8%) of respondent are high, and 6(13.3%) of respondent are very high. the mean is 2.956 and standard deviation 1.1069. Regarding to the 4th item the level of market information sharing with major customers majority of respondent 26(57.8%) moderate,12(26.7%) of respondent are high,6(13.3%)of respondent are low, and 1(2.2%) of respondent are very high .the mean 3.178 and the standard deviation 0.6838.As table 4.7 above depicts, four items were used to evaluate the case company's integration with its customers or downstream of the SC. Accordingly, the item: follow-up customers for feedback and the level of market information sharing with major customers scored mean value of 3.1556 and 3.1778 respectively which is approximates to moderate level of integration. Monitoring and measuring customers service level and frequency of contacts/meeting with major customers' indicates mean value of, 2.778 and 2.956 respectively.

When the level of collaboration between SC partners is becoming strong and strong, it leads them to integration, which in turn makes the SC more effective. So as to make integration with customers' follow-up customer for getting feedback, monitoring and measuring the service level, good market information sharing, and frequent meeting with customers are some of the attributes to be considered. The mean value of Follow-up customers for feedback and the level of market information sharing with major customers are 3.156 and 3.178 mean values each which conveys that it is moderate. Therefore, based on the above data the mean value of both monitoring and measuring customers' service level and frequency of contacts/meetings with major customers indicates poor result which is 2.78 and 2.956 respectively. This implies that the case company is not in a position to pay attention for measuring the extent of customers' service level and to make an improvement to satisfy the customers. On the other extreme, for doing so, meetings should have to be made with major customers to discuss on what is going on in their supply chain. But, these attributes scored poor mean values which is 2.78. Whereas the group mean result shows 3.017 which implies that the case company's integration with its customers is not enough strong.

In addition to the mean value obtained through questionnaire, an interview was conducted with customers; marketing manager and sales man of Hilina enrich food company.

According to their response customer of the company replied that as they do not have such a strong integration because the company have not enough amount of product they produce and delivered especially the time of emergency purpose and we compiles for packaging system as compared to outside packaging system for this reason not strong relationship. The marketing manager says, the customers are not only buying and selling to the case company's products, they also buy and sale other companies products. So that company very weak follow-up of customers for feedback, poor contacts/ meetings with customers. Therefore, the total implication of the Hilina enrich food company integration with its customers is poor. This will lead to the dissatisfaction of its customers and in a long-run there may be a chance losing its customers. If it is so, it may be difficult and dangerous to the company to survive and compete in this intensive competitive market environment. In addition to the interview held with marketing and production managers of the case company reveals that in lead time reduction, there are problems resulted from both external and internal factors. As their response the external factor is related with suppliers when the time of some inputs are bought from abroad it takes up to four months to reach to the company which may increase lead time. Whereas from the internal factors there is in efficiency sometimes due to shortage of materials, power interruption, break down of machines; the production department do not produce the required amount and make it ready to the customers. But, to minimize the delay resulted from shortage of input materials as much as possible the case company has materials stock with in warehouse which pushed inventory cost up. In the case of meeting customer's requirement, at the time of shortage in input materials the company gives priority to some major customers. And the level of flexibility is an average. In the case of effectiveness in managing customers' complaints, at the very beginning the company checks the quality and other requirements before issuing the products. The main reason for doing this is in order not to take any risk. If any complaints come from customers the company could manage it as its rationality. With respect to compliant management, major customers replied as, the case company is not responding their complaints immediately, to solve this complain at least it took two weeks. Therefore, the above analysis of both quantitative and qualitative with different management bodies, and customers conveys that the company's orientation towards customers' service is poor.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

This chapter summarizes the purpose of the study, the major findings and conclusions, the study implication for theory and practice, and makes recommendation.

5.1. Summary of Findings

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 Hilina enrich food company is leveled 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.

Information sharing practices of SCM in the case company is generally moderate. But there is poor information sharing on sales forecast with customers and suppliers which revealed mean value of 2.71 and 2.82 respectively. Again the overall efforts in coordinating and sharing information across the supply chain partners are weak. Even the shared information lacks adequacy and quality.

With regard to internal operation, the descriptive data and interview analysis conveys that, there is moderate automated quality control system, and flexible production system for handling order patterns and market change, and internal logistics flow. Relatively the cases company is weak in innovation of new products, efficient resource utilization, and up-to datedness of production.

Regarding to integration among the SC partners the group mean of Hilina enrich food company integration with its customers shows 2.85 which approximate to low level in addition to the qualitative analysis reveals poor integration. The quantitative analysis of supplier's integration conveys group mean value of 3.01 and it is really poor even if it approaches to moderate the customers have no strong integration with the Hilina food company than buy-sale transition.

Concerning to the internal integration, data integration through network and information system integration among internal functional units are moderate and would not support external integration. But, the overall internal integration is moderate represented by mean value of 3.39. With respect to orientation towards integrated superior customer service, both qualitative and quantitative analysis revealed that, the company's effectiveness and efficiency in meeting customers' requirement is poor and effectiveness in handling customers' complaint is poor and customers were dissatisfied with the company's complaint management. At the time of shortage of materials the case company gives priority to major customers and this dissatisfies other customers. In general the case company's orientation towards customers' service is poor.

5.2. Conclusions

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

The ultimate conclusion of this study is that generally, the case company's orientation towards SCM is traditional that lacks substantial indicators of an integrated, efficient and effective SCM and also based on qualitative and quantitative analysis the investigator comes up with conclusion that the case company's orientation towards customer service is poor and SCM practices have direct impact on customers' service. The primary reason mentioned for poor level of customer service is the internal operations that have direct effect on the company's ability (potential) to embark on external integration. In other words, its effect is clearly reflected on customers not getting what they need when they need it, long lead time, and poor complaints management, poor integration with suppliers, not having effective flexible production system that could respond to the changing market and customer's preference.

From SCM practices the case company has a great problem on training and IT practices. These two practices play a decisive role for creating effective and efficient SCM. Poor IT facilities lead to poor information sharing and poor information sharing practices makes a supply chain management ineffective. 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. But the case company's training practice to make both employees and managers competent is the poorest out of the five SCM practices. Therefore, the case company's poorness in training and IT leads to poor/ weak integration both in internal and external partners. The main concept of SCM is creating a relationship with other partners through the SC to provide products and services in order to satisfy the customers. The relationship of the Hilina Enrich Food Company with its customers and suppliers is not strong, in sharing sales forecast, cooperativeness, joint product planning, is moderate. Therefore, the relationship shows between Hilina Enrich Food Company participants are traditional, that is buy-sale relationship. The researcher concludes that the great challenges that prohibit effective SCM of Hilina Enrich Food Company like, manufacturing; supply and demand uncertainties and fluctuation of inventories due to distorted information (bullwhip effect) are because of poor relationships between SC partners.

5.3. Recommendation

On the basis of the findings and conclusions reached, the following suggestions were forwarded in order to improve the supply chain management of the case company.

- It is noticeably explained that internal integration is vital in increasing the potential of the company to get external integration. Hilina Enrich Food Company is suggested to integrate the internal operational units, so as to bring about flexible, responsive and efficient production. This can be done first, by networking the functional units of the organization with appropriate IT and integrated information system. Secondly, breaking functional silos to encourage coordination and interdependent work design accompanied with agile work force and multipurpose machineries to improve flexibility and responsiveness to market and customers requirements.
- The human resource is the essential factor that performs all activities to make supply chain management effective and efficient. At the current situation marketing competition, customer preferences, and everything is changing rapidly. Therefore, this change enforces companies to change their strategies, and operations. Out of these changes having skilled, agile, and lean man power is the one. So that, Hilina Enrich Food Company is highly suggested that to prepare training program for its employees and managers in order to enable them to be competent, committed, responsive, finally which improves internal

operation and customers service. This can be done through creating relationship with training institutions, strengthen the internal human resource department, internal sourcing. Using appropriately the opportunities given by the government through sending the right person to the training program.

- 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 specialists or out sourcing.
- More importantly, the case company is suggested to improve its relationship with suppliers from simply buy-sale relationship to a modern supply chain relationship through establishing strategic or long term relationship, contract, and continuous information sharing in order to minimize supply uncertainty which resulted in demand and supply unmatched and dissatisfaction of customers of the case company. Because, this could help the case company to obtain the inputs at the right time and quantity from these suppliers and provide the required quantity by the customers when they need it. So that, this will minimize the dissatisfaction of customers due to shortage of materials.
- Another important issue that is recommend to the case company's marketing department is improving the relationship with customers through a continuous information sharing, follow-up them and get feedback, monitoring customers' perceptions towards service of the company, improving its compliant management through conducting market research for better responsiveness.

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APPENDIX
ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
MBA PROGRAM
QUESTIONNAIRE

Dear respondent, the purpose of this questionnaire is to gather data on the Practices of Supply Chain Management in **Hilina Enriched Foods PLC**. 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. I kindly request you to respond to each items of the question very carefully.

General Instructions

- There is no need of writing your name
- Where answer options are available please tick (✓) mark in box in the appropriate box for part

Contact Address

If you have any query, please do not hesitate to contact me and I am available as per your Convenience

at (Mobile: 09-10-52-43-04 or e-mail: sisaybelay21@gmail.com)

Thank you for scarifying your precious time in advance!

Part I. Respondents Profile

1. Sex: Male Female
2. Age: Below 20 years 20-25 years 26-30 years 31-35 years
36- 40 years above 40 years
3. Year of work experience in the organization:
1-3 years 4- 6 years 7-11 years above 11 years
4. Educational Qualification:
Grade 10 completed certificate College diploma first Degree 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, tick (✓) mark, in the box under those columns *Very Low, Low, Average, High and Very High* after reading the variable on the left hand.

No	Variables	Rating Scales				
		Very low	Low	Average	high	very high
	Suppliers and customers relationship					
1	Joint product planning with major supplier					
2	Compliance with customer’s delivery in- full requirements					
3	Customer’s delivery adherence requirement					
4	Level of information exchange supplier with customer					
5	Joint product planning with major customers					
6	Frequently measure and evaluate customer satisfaction.					
	Information Sharing					
1	Adequacy and quality of information sharing throughout the supply chain					
2	Sense of trust and confidence along the supply chain					
3	Other product related information sharing by customers					
4	Information exchange between our trading partners and us is timely					
5	Level of information sharing through supply chain					

6	Sales Forecast information sharing with customers					
7	Sales Forecast information sharing with suppliers					
	Internal Operation					
1	Efficient and effective utilization of resources					
2	Flexible production system to market change					
3	Management know-how regarding supply chain effectiveness					
4	Internal logistics flow					
5	The extent of continuous and instantaneous product and service improvement					
6	Up- to- datedness of production					
7	Flexibility of production system to handle order pattern					
8	The extent of production process automation					
	Integration					
	Company's integration with suppliers					
1	Stable procurement through network					
2	The establishment of quick ordering system					
3	The level of strategic partnership with suppliers					
	Cross functional integration with in a company					
1	Periodic interdepartmental meetings					

2	Information system integration among internal functional units					
3	Data integration among internal functions through network					
4	Extent of interaction between production and sales department					
	Company's Integration with Customers					
1	Monitoring and measuring customer service level					
2	Follow-up customers for feedback					
3	Frequency of contacts with major customers					
4	The level of market information sharing with major customers					

Part III

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?

- **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?

- **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?

- **For Customers**

1. How would you see your relationship with Hilina Enriched Foods Company?
2. Does Hilina Enriched Foods Company provides the quantity you need at the promised date?
3. How do you see information sharing practice between you/your company with Hilina Enriched Foods Company? What about the level of integration with your company and Hilina Enriched Foods Company?
4. How do you see the accessibility Hilina Enriched Foods Company?
5. What about the willingness to share risks and benefits with Hilina Enriched Foods Company?

Thank you again very much!!!