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A Study of Supply Chain Management (SCM) Practices & Effects

on Performance at Ambassador Garment & Trade PLC

By

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## CHAPTER ONE

# **INTRODUCTION**

# 1.1 Overview of Ethiopian Manufacturing Sector - Background

Ethiopia has a long history of hand made garments which has been in progress in the form of cottage industry until this date. Inputs for the garments are mainly indigenous raw cotton, processed by hand in various forms so as to enable make traditional garments having very good workmanship to satisfy demand of customers. According to (Mulat *et al.*, 2004) in Ethiopia, spinning and weaving to make cloths from cotton is perhaps as old as the history of the country. Though written records are scarce, it is widely believed that Ethiopians wore clothes woven from cotton fibers centuries ago. Still about 85% of the total population living in rural areas of the country, produces a significant part of its textile needs from the traditional non-industrial sector. Clothes that are woven from cotton are popular also in urban areas of the country.

Although, having garment manufacturing history which traces back for years and coupled with modern technology, the sub-sector contribution to the country's economy until recent past was insignificant. (Loop, 2003) Ethiopia has a very long history of manufacturing handcrafts but Modern manufacturing has not yet contributed to the development of the country.

At the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> century, industry came into existence by foreigners producing consumer goods. This was due to the country's internal stability, establishment of Ethio-Djibouti railway and a sizeable foreign investment to the country (MOI, 2013).

Between the years 1928 and 1940 eleven factories were established and relative expansion of the sector was witnessed in 1941 and 1952 when the Imperial Government strengthened its foreign ties with U.S and Great Britain. Launching of foreign relation and provision of attractive

incentives to the manufacturing sector paved the way for the establishment of more factories for the production of ceramics, marble, glasses and other products. As stated in the publication, (MOI, 2013) the manufacturing industries from 1960 to 1972 increased from 1.9% to 4.5% in terms of Gross Domestic Product (GDP). The total value of Production of the factories increased from 219.7 million Birr in 1964 to 890.2 million Birr in 1973. It is worth mentioning here that the coming of various foreigners brought entrepreneurial concept to the country.

During the period 1973 – 1990 the policy of Military regime was for the expansion of foreign investment for medium and big industries and minimum attention was given to small industries. But the number of factories increased from 140 in 1975 to 166 in 1989. The system encouraged a central planned economy, depriving the private sector from market access, limiting capital ceiling and nationalizing all previous manufacturing private establishments. However, within the same period the number of workers engaged in the factories grew from 55,205 to 82,823 and this employment figure took 14 years showing such a slow development (MOI, 2013). On the other hand, the value of production of the industries was 738.6 million Birr in 1975; 1,450.8 million Birr in 1978 and 1.8 million Birr in 1989, respectively.

After1990, the socialist system of Government was replaced by the Government of FDRE. One of the primary responsibilities of the government clearly pointed out in the Industrial Policy and Strategy is creating conducive environment for industrialization. That includes: Stable macro-economic environment, development of conducive financial system, reliable infrastructure provision, and trained manpower, effective and efficient administrative structure.

Factors such as favorable investment and privatization of various industries have made significant contribution to an increase in number of the private industries and employment opportunities for workers (MOI, 2013). Consequently, the manufacturing sector has contributed

from 6 to 7% in Gross Domestic Product, 0.5% to 5.3% in creating job opportunities and 10% to 15% in export revenue.

As noted in (GTP, 2003-2006 EFY) among the manufacturing sectors Textile and apparel industries Leather and leather products industries, Metal and engineering industries, Meat and Dairy industries, Chemical industries (including cement industries), Pharmaceuticals industries, Food and Beverage industries are given special strategic emphasis.

The Textiles and Garments subsector is one of the best demonstrations of the industrialization stride and the success of the policy as it became to receive substantial interest from key global textile companies.

According to Ethiopian Textile and Garment Manufacturing Association (ETGAMA), 2014 the establishment of garment industries is on increasing trend from time to time and currently the number has reached 80 composed of both foreign and domestic investors in the furtherance of the strategy set by the government.

Currently, Ethiopia is striving towards industrial development putting in place various policy measures and strategies more than ever before. These comprised of and manifested in Industrial Development Strategy and the Five Years Growth and Transformation Plan (GTP).

Both of them are intended to accelerate and bring about substantial contribution to economic growth of the country. In this respect, the manufacturing sector has been given prime importance in anticipation of structural shift in the whole economic life of the country. In the five year Growth and Transformation Plan, textile and clothing manufacturing sub sector has bee given prime importance and support with a view to upgrade modern technology, developing human resources and increasing the output both in terms of quality and volume and earn the planned foreign exchange from export trade so that the sub-sector can contribute substantial

amount of its share to the national economy. What to be highly considered and look for here is the strategic aspects of garment industries of supply chain management practices.

As stated in AJBMS, (Vol. 2 No. 8 [60-72]) the apparel industry stands out as one of the most globalized industries in the world and it is a supply driven commodity chain led by a combination of retailers, contractors, subcontractors, merchandisers, buyers, and suppliers; each plays an important role in a network of supply chains which spans from fibers to yarn, to fabrics, to accessories, to garments, to trading and to marketing. The peculiar characteristics of apparel supply chain are short product life cycle, high volatility, low predictability and high impulsive purchasing. These factors bring high pressure to apparel retailers to manage their supply chains.

Despite various evidences regarding performance improvements related to SCM, relatively few empirical study exist to measure the extent of performance improvements resulting from the SCM programs especially with respect to Ambassador Garment Factory & Trade PLC. The study will examine the practices of supply chain management practices and effects on competitive advantage and organizational performance of the firm.

# **1.1. Company Background**

Ambassador Garment and Trade is a company located in Addis Ababa, Ethiopia and is a Private Limited Company established and registered in 1980 in accordance to the laws of the Federal Democratic Republic of Ethiopia. It started the business from an experienced and skilled entrepreneur one man patching cloth to a level where it is now as one of the largest garment factories in the country. The company has an area of 12,456 square meters land with a total production facility of 2260 m/sq. The Factory is organized with new production equipment and machines imported from renowned foreign companies in the production and supply of worldwide

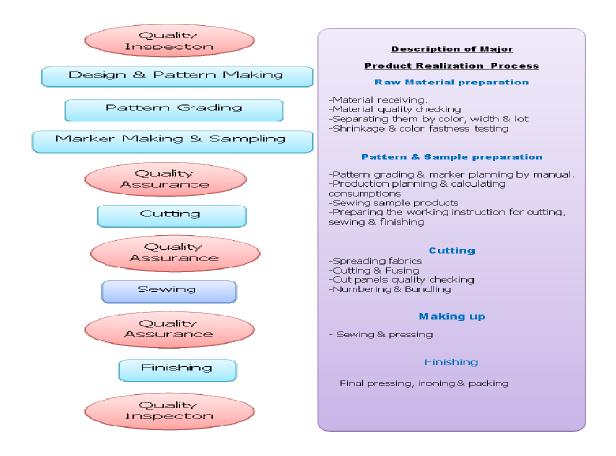
garment industry. The subsequent sections comprise products, technology, workforce, sales and distribution of the company.

#### **1.2.1.** Company Products

The production facility is designed and organized as to suit flexibility to satisfy customer demands and deliver customer–oriented products. Over the years, the company has been manufacturing a wide variety of basic products, such as: men suit 3pcsSuit, 2pcs Suit, Coat (Jacket) & Trousers, Ladies Suit, Kid's Suit using various fabrics. Assessing the market trends, it is now in the production of men's knit-wear using 100% wool, wool & polyester 50/50% and 65/35% respectively.

#### 1.2.2. Technology

As mentioned above, the company is manufacturing various stylish and fashionable knit-wears with very flexible and popular brand technology, consisting of modern equipment and machines at every stage of functional sections - cutting, designing & pattern making, make up section, finishing, and quality control. At every functional section rigorous check-up is conducted to minimize or avoid any sort of production errors. It is worth mentioning, here that the company is awarded and given recognition of ISO 9001:2008 (QMS) for quality workmanship of supplies.



#### **Figure 1: Major Garment Production Processes**

Source: Company Leaflet, 2015.

#### 1.2.3. Capacity Utilization and Workforce

In its endeavor to utilize its full capacity, the company manufactures 600 pieces of men suits per day with combined workforces numbering 800 of whom 62% male and 38% female and carries out this production in a single shift. The market demand for the last couple of years indicates an increasing trend for the company's supplies; an expansion project plan is formulated to double the existing capacity in the near future.

With regard to safety, the company has organized clearly demarcated emergency routes & exits, smoke & fire detectors, consciously designed working lay-outs to ensure a safe workplace for workers. Besides, the company management has put in place various motivational incentives for

more productivity of employees and is discharging also its corporate social responsibility (CSR) from to time with a view to share societal development objectives.

#### **1.2.4.** Marketing and Distribution

One of the core values highlighted in the promotional leaflet of the company is "Customer Focus". The company's marketing and sales objectives are to operate locally for the moment and in the long –run building up its capacity in all aspects of requirements and to go for export marketing. There are 84 branches at different geographical locations of the country and through these outlets sales is carried out and performance is monitored, on regular basis. Hence, order lead time, inventory control, logistics and timely delivery are major activities for the company's management to achieve set objectives.

### **1.3. Statement of the Problem**

Textile and clothing has always been one of the requirements for human beings and it is also an age old industrial activity. According to IDE, 2007 spinning and weaving were the main activities that drove the Industrial Revolution in the 18<sup>th</sup> century. Since then the textile industry has been a leading industry in the initial phase of industrialization in many countries in different periods of time. This leading role of the textile industry in industrialization was also significant in high -and- middle countries in Asia, too.

With this understanding, the government of Ethiopia has defined a policy where one of the tasks identified is rapid export growth through production of high value agricultural products and increased support to export oriented manufacturing sectors such as textile and garment (Theo Van Der Loop, 2003). Indeed, this sort of creating favorable environment for the sector can also be seen in various countries development initiatives that the sector has been a strong base for

successful achievements of several industrial endeavors. Alem (2009) highlights this as many countries are exploiting this industry for reasons of economic growth.

In this respect, Ethiopia is among African countries that has potential for cotton production and export. ESTC, (2006) states that Ethiopia has an estimated area of 2,575,810 hectares that is suitable for cultivation of cotton. Until a decade ago, this potential has not been utilized as a competitive advantage to supply various products which have demand for international market. Again, Alem (2009), identifies the reason for this failure are manifold, and extend vertically through the supply chain from poor quality raw materials to poor finishing.

Several factors could potentially hamper performance of garment industries and supply chain management is one of them. Having understood its key role and benefits mainly for manufacturing firms, it has gained high popularity since the early 90s. Drucker (1998) went as far as claiming there was a paradigm shift within the management literature: "One of the most significant changes in paradigm of modern business management is that individual businesses no longer compete as solely autonomous entities, but rather as supply chains. Business management has entered the era of inter-network competition and the ultimate success of a single business will depend on management's ability to integrate the company's intricate network of business relationships."

In today's ever increasing competition and globalized business environment, manufacturers have been exploring innovative technologies and strategies to achieve and sustain competitive advantage. One of the strategies which has got wide acceptance and agreement among academicians and practitioners is supply chain management (SCM) Heriberto et al (2010). As a new way of doing business, however, a growing number of firms have begun to realize the strategic importance of modeling and improving the whole supply chains. According to Towil and Christopher, (cited in Thatte, 2007), the end customer in the market place today determined by the success or failure of supply chains management practices. They stated that getting the right product, at the right price, at the right time to the customer is not only improved competitive success but also the key to survival.

A clear understanding of supply chain concepts and a willingness to openly share information between supply chain partners is a necessary first step to taking the supply chain a competitive force for a business.

Coming back to the company under study, inputs such as quality fabrics and accessories are imported from foreign suppliers with an increased order lead time. As it is learnt from the company, importation of these inputs require 120 and more days with all problems at sea port, customs and until it is delivered to the warehouse of the company. The company imports the mentioned inputs due to the unavailability of the required fabrics and accessories production locally.

According to Ageazi, (2014) Garment enterprises use inputs such as fabrics, accessories, and packaging materials to produce apparel both for domestic and export market. At present local textile industries are not in a position to supply the fabrics and other inputs are not locally available in the right quality, quantity, and delivery time. As a result, more than 80% of the inputs needed by garment enterprises are imported from abroad.

As modern garment industries are of recent past in Ethiopia, supply chain management is not in practice in many of these industries and Ambassador Garment & Trade PLC is indifferent to these. This calls for the experiences of many garment industries in Far East countries Such as china, India, Bangladesh, to mention a few those, where supply chain management strategies are given prior

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importance as per their own respective requirements to develop the sector and the return is high in terms of employment and foreign exchange earnings from export trade of the items.

To Cite an example from Ijmvsc (2013), currently Indian textile Industry contributes about 14% to industrial production 4% to the country's GDP and 17% to country's export earnings. It provides employment to more than 35 million people in the country and is the second largest employment provider sector after agriculture.

In this regard, this study will examine the effects of the current supply chain practices (strategic partnership with suppliers, customer relationship, level of information sharing and quality information sharing) on competitive advantage and organizational performance.

Moreover, the purpose of this study is to understand the level at which the manufacturing is involved in SCM practices as well as to determine the effects of these practices on SCM performance of the company will be analyzed.

For continuous and sustainable performance improvement program that involves the entire supply chain, it is necessary to put in place a well designed supply chain models that consider the company's business objectives. That is, the existing successful process - oriented models are highly dependent on the current business practices of the firm.

## **1.4. Research Questions**

In view of the above facts, this study sought to address this apparent gap in literature by examining the performance implications of implementing SCM in the context of the manufacturing company.

The purpose of this study is also to understand the level at which the manufacturing is involved in SCM practices as well determine the effect of these practices on SCM performance.

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Accordingly, the opportunities and challenges in supply chain management practices of the company will be analyzed in the light of the following questions:-

- What measures of performance the firm follows for suppliers' delivery of raw materials?
- What can be expressed about customers' levels of satisfaction for the firm's products?
- How the practice of level and quality of information sharing is conducted with suppliers, customers?
- Does the firm flexible to changing customers need?
- Do SCMPs have an effect on competitive advantage and organizational performance?

For continuous and sustainable performance improvement program that involves the entire supply chain, it is necessary to formulate supply chain models that consider the firm's business objectives.

#### **1.5.** Hypothesis

It is proposed that supply chain management practices that consist of strategic supplier partnership, customer relationship, level of information sharing and quality information sharing have an effect on competitive advantage and organizational performance of the firm.

Based on the above statements, the researcher will carry out a hypothesis that SCM practices have positive effect on SCM performance of the manufacturing firm.

Accordingly, the following hypotheses will be tested:-

H1 : Strategic supplier partnership is positively related to supply chain performances

Ho : Strategic supplier partnership is negatively related to Supply chain performance.

- H1 : Customer relationship is positively related to supply chain performance
- Ho : Customer relationship is negatively related to Supply chain performance.

- H1 : Level of Information sharing is positively related to supply chain performance
- Ho : Level of Information sharing is negatively related to Supply chain performance
- H1 : Quality of Information sharing is positively related to supply chain performance
- Ho: Quality of Information sharing is negatively related to Supply chain performance
- H1: The firm's flexible to changing customers need is positively related to supply chain performance
- Ho: The firm's flexible to changing customers need is negatively related to supply chain performance
- H1: SCM practices are positively related to competitive advantage and organizational performance.
- H0: SCM practices are negatively related to competitive advantage and organizational performance.

#### **1.6.** Objectives of the Study

#### 1.6.1. General Objective

The overall objective of the study is to carry on a study and analyze the supply management practices and their effects on competitive advantage and organizational performance of Ambassador Garment &Trade PLC with academic and programmatic findings and to provide an insight for further research, readers and above all to the firm under consideration.

#### **1.6.2. Specific Objectives**

The study sought to achieve the following specific objectives:-

- To examine measures of performance of the firm with respect to follow-up of suppliers' delivery of raw materials lead time.
- To evaluate customers' levels of satisfaction for the firm's products.

- To examine the firm's practice of information sharing to suppliers, customers, distributers and retailers.
- To examine the firm's practice of quality of information to suppliers, customers, distributers and retailers.
- To assess the firm's flexibility to changing customers' need.
- To study SCM practices effect on competitive advantage and organizational performance.

#### **1.7.** Scope of the Study

Although supply chain management practices include various forms, this research scope is mainly on examining the existing factory practices and analyses the effect on competitive advantage and organizational performance through strategic supplier partnership, customer relation and information sharing practices. The study will be conducted on the main manufacturing firm and its branches within Addis Ababa, Ethiopia.

#### **1.8.** Definition of Terms

**SCM**- Supply chain management (SCM) is "a key strategic factor for increasing organizational effectiveness and for better realization of organizational goals such as enhanced competitiveness, better customer care and increased profitability" (Gunasekaran et al.2001, p. 71)

**SCMP-** SCM practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain. Tan et al. (2002) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, geographical proximity and JIT capability.

**Performance Measurement -** Performance measurement is defined as the information regarding the processes and products results that allow the evaluation and the comparison in relation to goals, patterns, past results and with other processes and products (Petrovic-Lazarevic and Sohal 2002).

#### **1.9.** Significance of the Study

Empirical research provides that SCM contribute to organizational performances. Tan et al (1998) found that customer relation and purchasing practice impacts the effectiveness of SCM strategies and lead to the financial and market performances. Could this problem be due to lack of adequate SCM practices? This study therefore seeks to investigate the effectiveness of SCM practices on competitive advantage and organizational performance at Ambassador Garment & Trade PLC.

The question however is, to what extents do supply chain management practices affect or influence the performance of the firm? Is there a recognized and standardized framework for assuring business success through the application of the practices of supply chain management? This study, therefore, will attempt to find some answers to these questions particularly from the firm's perspective and to establish whether supply chain management practices have an effect on competitive advantage and organizational performance or not.

In addition, the purpose of this study is, therefore, to test a framework identifying the relationships among SCM practices and these will be proposed to be a multi-dimensional concept, including the upstream downstream sides of the supply chain.

SCM practices are defined as the set of activities undertaken by an organization to promote effective management of its supply chain. Operational measures for the constructs are developed and tested empirically, using data collected from respondents to a survey questionnaire.

It is expected that this research, by addressing SCM practices simultaneously from both upstream and downstream sides of a supply chain, will help researchers better understand the scope and

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the activities associated with competitive advantage and organizational performance and SCM and will allow to test the antecedences and consequences of SCM practices.

## 1.10. Limitations of the Study

The study should have covered the entire manufacturing firm sales outlets to give adequate grounds for generalization of the research findings, but limited time frame, cost and unable to reach many of these outlets due to distant locations, and researcher will be limited to the manufacturing firm and its branches within Addis Ababa .

#### **CHAPTER TWO**

# LITERATURE REVIEW

## 2.1. Concept and Definition of Supply Chain Management

SCM is a concept, "whose primary objective is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple functions and multiple tiers of suppliers" (Monczka, Trent and Handfield, 1994). Stevens (1989) stated the objective of SCM was to synchronize the customers' requirements with materials flow to strike a balance among conflicting goals of maximum customer service, minimum inventory management, and low unit costs.

The supply chain is viewed as a single process. Responsibility for the different divisions in the chain is not fragmented and transferred to functional areas such as manufacturing, purchasing, distribution, and sales. SCM calls for, and in the end depends on, strategic decision-making. "Supply" is a shared objective of practically every function in the chain and is of particular strategic importance because of its impact on overall costs, profits and market share. SCM calls for a different point of view on inventories that are utilized as a balancing mechanism of last, not first, resort. A latest approach to systems is required integration rather than interfacing (Houlihan, 1988).

According to Christopher (1994), a supply chain is "a network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate customer."

Some authors defined SCM in operational terms involving the flow of materials and products, some viewed it as a management philosophy, and some viewed it in terms of a management process (Tyndall et al., 1998), some viewed it as integrated system. Authors have even

conceptualized SCM differently within the same article: as a management philosophy on the one hand, and as a form of integrated system between vertical integration and separate identities on the other hand (Cooper and Ellram, 1993).

This definition implies that SCM involves management of flows of products, information, and finance upstream and downstream in the supply chain. In the course of time, the most considerable benefits to businesses with advanced SCM capabilities will be radically improved customer responsiveness, developed customer service and satisfaction, increased flexibility for changing market conditions, improved customer retention and more effective marketing (Horvath, 2001).

Supply chain includes suppliers, manufacturers, distributors, retailers, and customers. The customers are the main focus of the chain, since the primary purpose of the existence of any supply chain is to satisfy customer needs, in the process generating profit for itself (Chopra and Meindl, 2001). SCM was initially related to the inventory management within a supply chain. This concept was later broadened to include management of all functions within a supply chain. According to Chopra and Meindl (2001), "SCM engages the management of flows between and among stages in a supply chain to minimize total cost".

(GIRT, 2013) Commonly accepted definitions of supply chain management include:-

- The management of upstream and downstream value-added flows of materials, final goods, and related information among suppliers, company, resellers, and final consumers.
- The systematic, strategic coordination of traditional business functions and tactics across all business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole.

- A customer-focused definition is given by Hines (2004:p76): "Supply chain strategies require a total systems view of the links in the chain that work together efficiently to create customer satisfaction at the end point of delivery to the consumer. As a consequence, costs must be lowered throughout the chain by driving out unnecessary expenses, movements, and handling. The main focus is turned to efficiency and added value, or the end-user's perception of value. Efficiency must be increased, and bottlenecks removed. The measurement of performance focuses on total system efficiency and the equitable monetary reward distribution to those within the supply chain. The supply chain system must be responsive to customer requirements."
- The integration of key business processes across the supply chain for the purpose of creating value for customers and stakeholders (Lambert, 2008).
- According to the Council of Supply Chain Management Professionals (CSCMP), supply chain management encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management. It also includes coordination and collaboration with channel partners, which may be suppliers, intermediaries, third-party service providers, or customers.

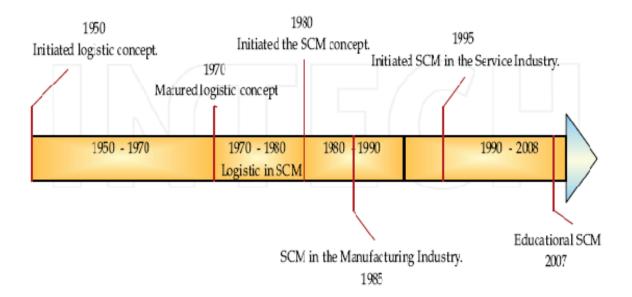
#### 2.2. Evolution of SCM

Before the 1950s, logistics was thought of in military terms (Ballou, 1978). It had to do with procurement, maintenance, and transportation of military facilities, materials, and personnel. The study and practice of physical distribution and logistics emerged in the 1960s and 1970s (Heskett et al., 1973). The logistics era prior to 1950 has been characterized as the "dormant years," when logistics was not considered a strategic function (Ballou, 1978). Around 1950s changes occurred that could be classified as a first "Transformation." The importance of logistics increased

considerably, when physical distribution management in manufacturing firms was recognized as a separate organizational function (Heskett et al., 1964).

The SCM concept was coined in the early 1980s by consultants in logistics (Oliver and Webber, 1992). The authors emphasized that the supply chain must have been viewed as a single entity and that strategic decision-making at the top level was needed to manage the chain in their original formulation. This perspective is shared with logisticians as well as channel theorists in marketing (Gripsrud, 2006).

The term "supply chain management" (SCM), according to Van der Vorst (2004) is relatively new. It first appeared in logistics literature in 1982 as an inventory management approach with an emphasis on the supply of raw materials (Oliver and Webber 1982). By 1990, academics first described SCM from a theoretical standpoint to clarify how it differed from more traditional approaches to managing the flow of materials and the associated flow of information (Cooper and Ellram 1993).



## **Figure 2: Evolutionary Timeline of SCM**

Source: Habib and Jungthirapanich, 2008.

SCM has become one of the most popular concepts within management in general (LaLonde, 1997) since its introduction in the early 1980s (Oliver and Webber, 1992). A number of journals in manufacturing, distribution, marketing, customer management, transportation, integration, etc. published articles on SCM or SCM-related topics. The evolution of SCM continued into the 1990s due to the intense global competition (Handfield, 1998). Berry (1994) defined SCM in the electronics industry.

# 2.4. Supply Chain Management Strategy

SCM is delivering major economic benefits to businesses as diverse as manufacturing, retail, and service organizations, etc. (Horvath, 2001). The scope of SCM was further expanded to include re-cycling (Baatz, 1995). SCM deals with the total flow of materials from suppliers through end users (Jones and Riley, 1985). It highlights "total" integration of all stakeholders within the supply chain, a realistic approach is to consider only strategic suppliers and customers since most supply chains are too complex to attain full integration of all the supply chain entities (Tan et al., 1998).

Supply chain strategy includes "two or more firms in a supply chain entering into a long-term agreement; the development of mutual trust and commitment to the relationship; the integration of logistics events involving the sharing of demand and supply data; the potential for a change in the locus of control of the logistics process" (La Londe and Masters,1994). Manufacturers are able to develop alternative conceptual solutions, select the best components and technologies, and assist in design assessment by involving suppliers early in the design stage, (Burt and Soukup, 1985).

SCM incorporates logistics into the strategic decisions of the business (Carter and Ferrin,1995). Eventually, the philosophy developed and combined into a common body of knowledge that encompassed all the value-adding activities of the manufacturers and logistics providers (Tan, 2001). Many SCM strategic models have been investigated to link its vital role in overall strategic corporate planning (Frohlich et al., 1997; Watts et al., 1992).

Experts agree that a formal supply chain strategy will be critical to both manufacturing and service industries (Kathawala, 2003). Such ambiguity suggests a need to examine the phenomena of SCM more closely to define clearly the term and concept, to identify those factors that contribute to effective SCM, and to suggest how the adoption of SCM approach can affect corporate strategies, plans, operations and performance.

The growing interest in SCM, according to Lummus and Vokurka (1999) is attributable to three basic factors, thus, growing specialization or focus on core activities by many firms, intense competition from both local and international sources, and the realization by firms that maximizing performance of one department or function may lead to less than optimal performance for the whole company. Agreeing with this assertion, Cooper et al. (1997) in their research concluded that, the concept of SCM arose over the recognition that sub-optimization occurs if each organization in a supply chain attempts to optimize its own results rather than to integrate its goals and activities with other organization to optimize the results of the chain.

#### 2.5. SCM in Manufacturing Sector

SCM, as applied to manufacturing, has been defined differently. These varieties of definitions often carry through to the extent that the key people in the same organization are not speaking about the same things, when they discuss the concept of SCM (Monczka and Morgan, 1997).

First, there are definitions characterized by the simplest concepts of SCM, one is "the ability to get closer to the customer" (Weil, 1998). Another is that the supply chain is the flow of information and material from suppliers to customers (Crom, 1996). A company's supply chain,

either internal or external, is a resource to be exploited for better market position and enhanced competitive advantage. Strategic use of this resource requires that companies do the following (Monczka and Morgan, 1997):-

- 1. Gain a closer understanding of their customer' and future customers' needs, both nationally and internationally;
- 2. Understand their suppliers' core competencies in meeting customer needs;
- 3. Determine where redundancies and inefficiencies lie within the supply chain in relation to current and future competitive needs;

4. Develop relationships and alliances with suppliers who have key competencies that strengthen, supplement, and enhance internal core competencies nationally and internationally.

Scott and Westbrook (1991) described SCM as the chain linking each element of the manufacturing and supply process from raw materials to the end user. This management philosophy focused on how firms utilized their suppliers' processes, technology, and capability to enhance competitive advantage (Farley, 1997), and the coordination of the manufacturing, materials, logistics, distribution and transportation functions within an organization (Lee and Billington, 1992). SCM is an integrative philosophy to manage the total flow of a distribution channel from supplier to the ultimate user (Cooper et al., 1997).

SCM, from the viewpoint of a manufacturing sector, may be defined as "taking control of all goods within the supply chain, all materials, no matter how to handle or manage (Sandelands, 1994)." In particular, SCM is the process of effectively managing the flow of materials and finished goods from retailers to customers using the manufacturing facilities and warehouses as potential intermediate steps (Sengupta and Turnbull, 1996).

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

# 2.6. Concept of Supply Chain Management Practices

SCM practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain. Tan et al. (2002) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, geographical proximity and JIT capability.

According to Muhammad (2004) this variable refers to several activities or practices related to operational function of firms. It is used to measure the SCM adoption and its level of practices. Related practices are divided into six dimensions namely strategic supplier partnership, customer relations practices, information sharing, information quality, lean system and postponement.

In reviewing and consolidating the literature, five distinctive dimensions are selected for measuring SCM practice. The five constructs cover upstream (strategic supplier partnership) and downstream (customer relationship) sides of a supply chain, information flow across a supply chain (level of information sharing and quality of information sharing), and internal supply chain process (postponement). Gunasegaram, et al. (2001) explored that SCM needs to be assessed for its performance in order to evolve an efficient and effective supply chain.

Conceptual framework of SCM practice on the performance of Ambassador Garment & Trade PLC is defined according to synthesis of analyzed theoretical findings. Consequently, researcher has developed the conceptual framework on the basis of Li et al. (2006) model. The model have four major components; (1) Level of information sharing, (2) Quality of information sharing, (3) Customer relationships, (4) Strategic supplier partnerships. The researcher, however, outlines what a SCM practice is and performance effects of SCM practice.

## 2.6.1. Strategic Supplier Partnership

It is defined as the long term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing benefits (Stuart, 1997; Balsmeier and Voisin, 1996; Monczka et al. 1998; Sheridan, 1998, Noble, 1997). Strategic partnerships with suppliers enable organizations to work more effectively with a few important suppliers who are willing to share responsibility for the success of the products. Suppliers participating early in the product design process can offer more cost effective design choices, help select the best components and technologies, and help in design assessment (Tan et al, 2002). strategically aligned organizations can work closely together and eliminate wasteful time and effort (Balsmeier and Voisin, 1996). An effective supplier partnership can be a critical component of a leading edge supply chain (Noble, 1997).

#### 2.6.2. Customer Relationship

It comprises the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction (Claycomb et al. 1999, Tan et al. 1998).Close customer relationship allows an

organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to it customers (Magretta, 1998).

#### 2.6.3. Level of Information Sharing

It is an information sharing has two aspects: quantity and quality. Both aspects are important for the practices of SCM and have been treated as independent constructs in the past SCM studies (Moberg et al. 2002; Monckza etal. 1998). Level (quantity aspect) of information sharing refers to the extent to which critical and proprietary information is communicated to one's supply chain partner (Mockza et al 1998). According to Stein and Sweat (1998), supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker.

#### **2.6.4.** Quality of Information Sharing

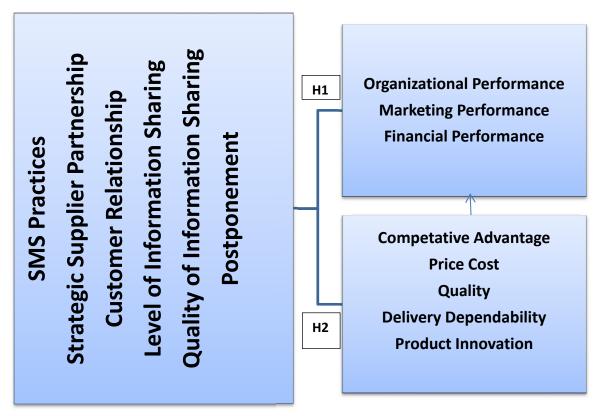
It includes such aspects as the accuracy, timeliness, adequacy, and credibility of information exchanged (Moberg et al, 2002; Monckza et al. 2002). While information sharing is important, the significance of its impact on SCM depends on what information is shared, when and how it is shared, and with whom (Chizzo, 1998; Holmberg, 2000). 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). Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

#### 2.6.5. Postponement

It is defined as the practice of moving forward one or more operations or activities (making, sourcing and delivering) to a much later point in the supply chain (Van Hoek, 1998; Beamon,

1998; Johnson, 1998; Naylor et al, 1999; Van Hoek, 1999). Postponement allows an organization to be flexible in developing different versions of the product in order to meet changing customer needs, and to differentiate a product or to modify a demand function (Waller et al, 2000).

In general, the adoption of postponement may be appropriate in the following conditions: innovative products (Fisher, 1994; Fisher, 1997); products with high monetary density, high specialization and wide range; markets characterized by long delivery time, low delivery frequency and high demand uncertainty; and manufacturing or logistics systems with small economies of scales and no need for special knowledge (Pagh, 1997).



**Figure 3: Research Theoretical Framework** 

Source: Omega the International Journal of Management Science (elsevier.com/locate/omega.2004)

## **2.9. SC Performance Measures**

Performance measurement is defined as the information regarding the processes and products results that allow the evaluation and the comparison in relation to goals, patterns, past results and with other processes and products (Petrovic-Lazarevic and Sohal 2002).

Gunasekaran, et al. (2001) explored that SCM needs to be assessed for its performance in order to evolve an efficient and effective supply chain. Muhammad (2004) defines SCM performance as the measurement of performance of current SCM activities or practices by any particular firm. To measure performance of SCM activities practiced by firms, five dimensions of measurement were used, namely Supply Chain Flexibility, Supply Chain Integration, Responsiveness to Customers, Supplier Performance, and Partnership Quality.

It became apparent that the terms, frameworks, models and systems, were often used interchangeably with performance measurement. Performance measurement system to be useful ways of thinking about modeling, evaluating and improving supply chain. Lee and Bilington (1992) suggested SC performance measurement systems (PMSs) are necessary for firms to successful implement SCM. According to Neely et al. (2002) "A Performance Measurement System is the set of metrics used to quantify the efficiency and effectiveness of past actions" and "it enables informed decisions to be made and actions to be taken because it quantifies the efficiency and effectiveness of past actions through the acquisition, gathering, sorting, analysis and interpretation of appropriate data". PMSs are considered as a tool to gain competitive advantages and continuously react and adapt to external changes (Cocca, 2010).

Based on their definition, indicators are called measures when they can be measured without ambiguity and with some degree of precision. In other words, performance measures report

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clearly about the relationships between program activities, outputs and outcomes associated with them (Thomas, 2006).

However, when it is not possible to find a precise performance measure, it is better to refer to performance indicators. However, performance measures and targets are key elements of performance measurement.

An important step to transform the individual business units into a fully operational integrated supply chain member is to design and implement supply chain performance measures and performance measurement systems. From such design each business enterprise will be taking a responsibility not only for its own business performance but also for the overall performance of the supply chain (Gunasekaran, Patel, Tirtiroglu, 2001).Hence there is now an increasing focus on supply chain measures and the overall performance.

An effective supply chain performance measurement process should be able to directly address performance areas that create sustainable profitability and financial strength.

In operational supply chain, a bigger challenge is to collect, sort and analyze the data generated by each processes. The challenge for many companies lies in determining what information is necessary to drive improvements and efficiencies at each process in the supply chain, and designing an information management environment to turn the raw data into meaningful metrics and key performance indicators (KPI).

Key performance indicators are measurements that directly relate to key business requirements. Information from supply chain management (SCM) processes must be collected, measured and analyzed. This requires integration of data coming out of ERP (Enterprise Resource Planning), SCM and all other systems supporting these business processes.

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# **CHAPTER THREE**

# **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1. Research Design**

The main objective of this study is to examine "A STUDY OF SUPPLY CHAIN MANAGEMENT PRACTICES" that consists of strategic supplier partnership, customer relationship and information sharing and effects on "EFFECTS ON COMPETITIVE ADVANTAGE and ORGANIZATIONAL PERFORMANCE". For this particular study descriptive survey and explanatory research designs will be appropriate. The significance of this approach for the study is based on Cohen & Morrison, K. (2000) statement that says descriptive survey method is useful to explore current information from respondents.

According to Cohen, L. Morrison, to collect data from relatively large sample for the purpose of describing the nature of existing conditions and the relationship that exists between specific events, survey method is appropriate. Similarly, Abiy (2009) explained that descriptive survey method can be used to collect numerical data to answer questions about the current status of the study and make detailed analysis for the existing problems.

## **3.2.** Sampling and Sampling Techniques

Purposive sampling techniques are used to select sample population for this study. The data collection instrument that will be used for this study is a questionnaire which is going to be administered a total sample of 10 branches are selected by purposive sampling technique. They are selected purposively due to the relevance of distribution and market concentration in

different sub cities. From the selected branches shop supervisors and sales officers based on their job title are selected purposively as respondent of this study.

N <u>o</u>	Name of Branches	Location of Branches – Sub-City	Selected Sample Branches	Number of Workers	Number of Selected Respondents	Percent of Selected Respondents
1	Head Office	Bole	**	420	201	65.26
2	Golagol	Bole	**	4	4	1.29
3	Olympia	Bole	**	4	4	1.29
4	Friendship (Bole)	Bole	**	4	4	1.29
5	Jacros	Bole	-	-	-	-
6	Birhane Adere	Bole		7	7	2.27
7	Zefmesh	Yeka (Megenagna)	**	7	7	2.27
8	Hayahulet	Yeka (GetahunBesha)	-	-	-	-
9	Kera	NifasSilik	**	4	4	1.29
10	Saris	NifasSilik	**	4	4	1.29
11	City Hilton	Kirkos	**	7	7	2.27
12	City Center	Kirkos (Legehar)	**	33	30	10.00
13	Yeha	Kirkos (Legehar)	-	-	-	-
14	Top (Habte Giyorgis)	Addis Ketema	**	4	4	1.29
15	Tana (Militery Tera)	Addis Ketema	**	14	13	4.22
16	Tana (Merkato)	Addis Ketema	-	-	-	-
17	Merkato	Addis Ketema	-	-	-	-
18	Piassa	Addis Ketema	**	13	12	3.89
19	Arat Kilo	Addis Ketema	**	7	7	2.27
	Total Num	ber of Respondent	S	532	308	100

**Table 1: Sample Distribution of the Firm** 

NB: Sample size is determined according to Krejcie, R & Morgan, D (1970)

**\*\* Indicates Selected Samples** 

On table 1 above, in addition to sample branches, at company's head office 201 respondents are selected on purposive sampling bases for these are the ones to be contacted for questionnaires, interviews and for any other required information of the study.

With regard to branches where a sizeable and a big number of employees are available,100% and over half of them are respectively considered as respondents. Sample respondents of branches are at various levels of responsibilities and are accountable for the overall performance of their respective branches.

N <u>o</u>	Position of Respondents at Head Office	Number of Samples
1	Corporate Executives	9
2	Project & Investment	4
3	Audit & Inspection	3
4	Store Department	19
5	Marketing Department	20
6	Quality control Department	3
8	Finance Department	14
9	Production Department	129
Total		201

**Table 2: Head Office Sample Distribution** 

#### **3.3.** Sources of Data and Instruments of Data Collection

The data will be collected on primary as well as on secondary data source basis. The primary data will be collected through questionnaires and interview of key personnel of the firm. The secondary data will be collected from various citations, literature reviews, journals, annual reports, document analysis and audit reports.

The data collection instrument to be used in the study is the questionnaire. This is structured in such a way that both opens and closes type and serve to gather data from pertinent practitioners of the supply chain management of the company.

Interview will be carried out with selected executives of the Factory. This will be employed as an alternative method to complete the gap to triangulate the data collected through questionnaires. The relevance of pursuing this method is due to the anticipation of some respondents may fail to give their true opinion on self-administered questions or may get tired of or may not good enough to reflect their opinion in writing. In this regard, it has also two-fold support for the researcher:-

- Assists in procuring information on certain issues which are difficult to address through questionnaires,
- It may enable the researcher to be certain that the respondents comprehend what the researcher is looking for.

Adding to this Robinson (2002:73) interview is flexible and adaptable to find out the problem of the study.

## **3.4. Procedures of Data Collection**

To obtain relevant data for the study three instruments will be used in the process of collecting the necessary data for the study. These are questionnaire, interview and document analysis.

## 3.5. Methods of Data Analysis

Both qualitative and quantitative methods of analysis will be employed in analyzing the data collected. The qualitative data analysis will involve an analysis of questionnaires collected from the respondents as means of assessing the firm performance with respect to applying supply chain management practices to business processes. The quantitative analysis of

the data involves the ranking and descriptive analysis of answers to questions according to their frequencies and distributions collected the data from the Factory (Head Office) and branches in the study area. Descriptive analytical technique is used with the aid of SPSS software to analyze the data collected with the use of questionnaires. The data collected will be analyzed to bring out the current relevant problems of "Supply Chain Management practices: effects on 1 performance" using both descriptive (mean and standard deviation) and inferential (correlation and multiple regression analysis) statistics.

It also includes an analysis of data collected during interviews in the form of notes put down during the survey and in-depth interviews with key personnel.

Furthermore, documents on textiles and garment, research papers on the subject and various literatures related to supply Chain management practices and implementation will be reviewed. This will provide to a great extent to go through different citations and enable to come out with an understanding on "A study of Supply Chain Management practices : effects on performance " that may require primary attention of the organization. Having gone through the practices and understanding the findings of the study one may come out with supply chain management practices and its effects on performance.

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