Supply Chain Management Practices and Firm Performance in Case of Awash Tannery Plc.

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By: Mustefa Mohammed

Addis Ababa University

College of Business and Economics

Department of Management

MBA Program

Advisor: Matiwos Ensermu (PhD)

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Approved by Board of Examiners:

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

I, the undersigned, declare that, this study **"Supply Chain Management Practices and Firm Performance in Case of Awash Tannery Plc"** is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the study have been duly acknowledged.

Declared by:

Name_____

Sign_____

Date_____

Confirmed by Advisor:

Name_____

Sign_____

Date_____

Acknowledgement

First of all I pay my whole hearted gratitude to the Almighty ***ALLAH*** that endowed me with an innate ability to recognize and acknowledge His existence. Without His grace and wish, I won't be hear where I am now and obviously this work can't be accomplished successfully. May *ALLAH* send His praises upon the holly and beloved prophet, ***Mohammad bin Abdullah,*** who brought the message of peace and happiness to all creatures.

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Acronyms

CLM: - Council of Logistics Management

CR: - Customer Relation

EFA: - Exploratory Factor Analysis

ILP: - Internal Lean Practices

IT: - Information technology

LIQ: - Level of Information Quality

LIs: - Level of Information Sharing

OC: - Organizational culture

OMS:-Outsourcing and Multi-Suppliers

OP: - Operational Performance

OrP: - Organizational Performance

RBV: - Resource-Based View

ROI: - Return on Investment

RV: - Relational View

SCLP: - Strategic Collaboration and Lean Practices

SCM: - Supply Chain Management

SMEs: - Small and Micro Enterprises

SSP: - strategic Supplier Partnership

Abstract

Effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage through enhancing operational and improving organizational performances since competition is no longer between organizations, but among supply chains. This research conceptualizes and develops five dimensions of SCM practice (strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and internal lean practices) and tests the relationships between SCM practices, operational performance, and organizational performance. The data for the study was collected from 42 employees of Awash tannery Plc. The relationships proposed in the framework were tested using Pearson correlation, and the causal relations were analyzed using regression analysis. From the result of the analysis it is concluded that there is strong relationship between SCM practices, operational performance and organizational performance. Besides, SCM practices have an influence both on operational performance and organizational performance. On the other hand, operational performance has also an influence on organizational performance. Therefore, in order to achieve advancement in marketing and financial performance in the long-run through enhancing organizational performance, it is better for the organization to give due emphasis to the constructs of SCM practices and the measures of operational performance.

Keyword: *supply chain management, operational performance, organizational performance*

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the Study

In today's highly unsteady and competitive markets, rivalry among companies is transformed from competing on the basis of own capabilities to competing with the whole supply chain (Ketchen and Hult, 2007). Relating with this intensified competition organizations began to realize that it is not enough to improve efficiencies within an organization, but their whole supply chain has to be made competitive (Childhouse and Towill, 2003). These were seen in the last few years and the focus has shifted from the factory level management of supply chains to enterprise level management of supply chains (Gunasekaran *et al*., 2005). To make the whole supply chain competitive and enhance their performance, coordination of the supply chain has become strategically important (Puigjaner and Lainez, 2008). Moslem *et al*. (2013) also stated as understanding and implementation of supply chain management (SCM) is a necessary condition to remain competitive in the global competition and improving profitability.

Supply chain consists of the whole activities associated with products and services movement from raw material stage to final products which are consumable by customers. This movement includes financial and information flow as well as material flow. In other words, supply chain is a network consisting of downstream and upstream organizations which are involved in different processes and activities that create value for end customers in the form of products or services (Christopher, 1998).

The performance of the supply chain is affected by different factors. One of the most important factors influencing the performance of supply chain is strategic supplier alliances (Narasimhan and Jayaram, 1998). Effective partnerships with suppliers can be a critical factor to guide supply chain management (Li *et.al*, 2006). The other factor is having good relationships with customers, which are needed for successful implementation of SCM programs (Moberg *et al.,* 2002). Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers (Magretta 1998). Furthermore, Wang *et al.* (2008) stated that integration and coordination across supply chain can be well provided through information sharing. Supply chain partners that exchange information regularly are able to work together as a single key. They are better able to understand the needs of the final consumer and hence are able to respond quickly to changing market (Li *et al.*, 2006). Power (2005) also state that the failures can occur in case of information delays, shortage or distortion across the supply chain. Additionally, while information sharing is important, the significance of its impact on SCM depends on the extent of quality of information shared, when and how it is shared, and with whom (Holmberg, 2000 and Chizzo, 1998). According to Moslem *et al*. (2013) internal lean practice is the other factor that affects supply chain performance. Lean production is a production system that aims to optimize production process by reducing waste and other inefficient factors.

Operational performance is a source of competitive advantage for the enterprise to differentiate itself in the eyes of the customers from its competitors by operating at a lower cost and hence at a greater profit (Christopher, 1992). Competitive priorities are

conceptualized to measure operational performance by using price/ cost, quality, delivery, flexibility and time to market. Whereas, organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Yamin *et al*., 1999). The short-term objectives of SCM are primarily to enhance production performance, while long-term objectives are to increase market share and profits for all members of the supply chain (Tan *et al*., 1998). *Li et al. (*2006) stated that any organizational initiative, including supply chain management, should ultimately lead to enhanced organizational performance.

The case company has relationship with upper stream (suppliers) particularly for getting raw material (sheep skins and hides) and different chemicals which helps in the process of the production. 75% sources of skins and hides are Addis Ababa, Gojam. The remains 25% are from Jima, Arbaminch, Lagatafo and Gonder. Regarding to chemicals, the company use three categories of chemicals (i.e. fast moving, slow moving and Dyestuff) which is obtained from both local and foreign markets.

The case company also has strong relation with downstream (customer). The company supplies its products both on domestic as well as foreign markets. Regarding local market, the total customer of the company is 35 which are categorized into large, medium and small scale customers based on their purchasing power and frequency of buying. These customers are 16, 6, and 13 in number respectively which are considered as permanent customers.

Therefore, the researcher is intended to empirically test the framework identifying the relationships among SCM practices, operational performance and SCM-related organizational performance of the case company.

1.2 Statement of the Problem

According to *Tan et al.* (1998), nowadays the concept of SCM has received increasing attention from parts of people like academicians, managers, consultants, and business owners. Many organizations have begun to recognize that SCM is the key to building sustainable competitive edge for their products and/or services in an increasingly crowded marketplace and enhancing organizational and overall supply chain performance (Li *et al.,* 2006).

Despite the increased attention paid to SCM, the literature has not been able to offer much by way of guidance to help the practice of SCM that is applicable to every situation (Cigolini *et al.*, 2004). This has been attributed to the interdisciplinary origin of SCM, the conceptual confusion, the evolutionary nature of SCM concept, and environmental difference in which organizations using supply chain concept are operating in. There is large evidence that cultural, social and economic aspects of each country do influence the link between SCM practices and performance (Harland, 1997; Mentzer et al., 2001, and Kaufmann & Carter, 2006).

On the other hand, much of the current theoretical/ empirical research in SCM focuses only on the upstream or downstream side of the supply chain, or certain aspects/perspectives of SCM (Li *et al.,* 2006). Topics such as the role of relationships with suppliers in improving supplier responsiveness (Handfield and Bechtel, 2002), and

the antecedence and consequences of buyer-supplier relationship (Chen and Paulraj, 2004) have been researched on the supplier side. Studies such as those by Clark and Lee (2000), and Alvarado and Kotzab (2001), focus on the downstream linkages between manufacturers and retailers. A few recent studies have considered both the upstream and downstream sides of the supply chain simultaneously. Tan et al. (1998) explore the relationships between supplier management practices, customer relations practices and organizational performance; Frohlich and Westbrook (2001) investigate the effects of supplier-customer integration on organizational performance; Tan *et al.* (1998) study SCM and supplier evaluation practices and relate the constructs to firm performance; Min and Mentzer (2004) develop an instrument to measure the supply chain orientation and SCM at conceptual levels; Gyaneshwar (2012) study operational performance through SCM Practices and Moslem (2013) study the impact of supply chain management practices on competitive advantage.

However, the relationship of SCM with performance cannot be regarded as conclusive (Cousins *et al.,* 2006). Despite the increase of empirical research in the last few years, important differences in research design undermine comparability: lack of consensus about the definition and dimensionality of the SCM practice (s), use of different units of analysis, and different approaches to performance measurement.

As far as the knowledge of the researcher is concerned, there is no empirical study that is conducted in the area of SCM practices and firms performance (i.e. from perspectives of strategic suppliers partnership, customers relationships, level and quality of information sharing, and internal lean practices on operational and organizational performances) which incorporate upper and down streams on tannery processing firms in Ethiopia

particularly on Awash tannery Plc. Therefore, since the effort to achieve generalization of the causal relationship between SCM practices and performance calls for empirical confirmation in diverse environments, especially emerging economies, this paper is to contribute to the debate by testing the relationship between SCM measurements and operational and organizational performance in the case company.

1.3 Objectives of Study

1.3.1 General Objective

The purpose of this study is to determine the underlying dimensions of supply chain management (SCM) practices and to empirically test a framework identifying the relationships among SCM practices, operational performance and SCM-related organizational performance with special emphasis on the case company.

1.3.2 Specific Objectives

The specific objectives of the study are:-

1. To assess the relationship between supply chain management practices and operational performance.
2. To assess the relationship between supply chain management practices and organizational performance.
3. To assess the relationship between operational performance and long-term organizational performance.

1.4 Research Hypotheses

Prior studies have indicated that the various components of SCM practices (such as information sharing) have an impact on organizational performance. For example, Information sharing leads to high levels of supply chain integration (Li *et al.,* 2006) by enabling organizations to make dependable delivery and introduce products to the market quickly. The higher level of information sharing is associated with the lower total cost, the higher-order fulfillment rate and the shorter-order cycle time (Moslem, 2013). Based on these arguments it is hypothesized that:

Hypothesis1: There is relationship between SCM practices and organizational performance.

Others studies have indicated that the various components of SCM practices (such as strategic supplier partnership) have an impact on various aspects of operational performance which is source of competitive advantage (such as price/cost) Moslem *et al*. (2013). For example, strategic supplier partnership can improve supplier performance, reduce time to market Moslem *et al*. (2013) and increase the level of customer responsiveness and satisfaction Power (2005). Based on this arguments it is hypothesized that:

Hypothesis 2: There is relationship between SCM practices and operational performance.

Having a competitive advantage generally suggests that an organization can have one or more of the following capabilities when compared to its competitors: lower prices, higher

quality, higher dependability, and shorter delivery time. These capabilities will, in turn, enhance the organization's overall performance (Mentzer *et al.,* 2001) Based on this it is hypothesized that:

Hypothesis 3: There is relationship between operational performance and organizational performance.

1.5 Significance of the Study

Investigating the practices of supply chain management which have relation with operational and organizational performance in this complex and dynamic business world is believed to have the following importance to the academicians, researchers, corporate managers, policy makers; and generally for business practitioners, and specifically, for the case company.

Specifically, this study has the following main significances:

- Help to better understand the processes of SCM practices in related with the company under consideration.
- Help to identify bottlenecks, waste, problems and improvement opportunities in the supply chain process of the company.
- Help to identify which SCM practice (s) is more contributing for success of operational and organizational performance of the company.
- Use as a guideline to facilitate a more open and transparent communication and cooperation among supply chain partners of the company.
- Contribute to narrow the gap in the literature on the generalization of the causal relationship between SCM practices and performance.
- Help future researchers who are willing to conduct study on this topic.

1.6 Scope of the Study

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 is delimited to SCM practices and firm performance of one selected tannery processing firm in terms of topic.

The subject scope of this study is also delimited to the company's point of reference towards strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and internal lean practice. In terms of firm performance the study was delimited to operational (which was measured by price/ cost, quality, delivery dependability and time to market) and organizational performance (which incorporate market share, return on investment, the growth of market share, the growth of sales, growth in return on investment, profit margin on sales and overall competitive position).

The area of the study is also delimited to the case company i.e., Awash Tannery Plc, through assessing how the company interact with their upper stream (suppliers) and the down streams of the supply chain.

1.7 Limitations of the Study

It is difficult to cover entire domain of supply chain just in one study. The research sample didn’t incorporate all the supply chain participants namely: the suppliers and customers due to time constrained so that it couldn't be generalized/applied to the complete chain of the company under investigation. On the other hand constructs of SCM are not only limited to SCM practices selected in this study. Therefore it is not representing all constructs that could explain SCM practices.

1.8 Organization of the Paper

This project paper is organized into five chapters: Chapter one contains the introduction part dealing with back ground of the study, the research problem, objectives of the study, scope and significance of the study and limitation of the study. The second chapter discusses the literature review about the subject matter. In chapter three the research methodologies were presented. In chapter four presents results and discussion of the study and finally, chapter five presents the summary of major findings, conclusion and forwarded suggestions.

CHAPTER TWO

2 LITERATURE REVIEW

2.1 Introduction

This part of the study address relevant conceptual issues, theoretical framework and empirical review related to the topic of the study. It includes definition and concept such as supply chain management, SCM practices, operational performance and organizational performance by focusing on previous research in this area and present reviewed literature relevant to this study

2.2 Resource-Based View and Relational View Theory

One of the relevant theoretical supports for the relation between SCM practices and performance is the resource-based view (RBV) and its extensions relational view (RV). The RBV considers that firms are heterogeneous and achieve competitive advantage due to rare, valuable, inimitable and not substitutable resources and capabilities (Barney, 1991 and Peteraf, 1993). The original approach of the RBV, focused on the internal resources owned by a firm, was broadened to consider the relationship as a source of competitive advantage and improvement of performance. This gave rise to the Relational View (RV) (Dyer & Singh, 1998). The RV considers relationships as potential sources of superior performance. It identifies four different sources of relational rents: investments in relation specific assets, substantial knowledge exchange, complementary and rare resources, and lower transaction costs. All these sources are influenced by more effective governance mechanisms based on informal safeguards, such as trust and reputation (Dyer & Singh, 1998; Holcomb & Hitt, 2007; and Rungtusanatham *et al.*, 2003). As in the RBV

perspective, the relational resources and capabilities should be rare, valuable, and hard to imitate or to substitute in order to provide sustainable competitive advantage.

Generally, the relation and impact of SCM in performance can be better understood if we interpret its practices using the relational view. Information sharing and quality of information maps directly into accurate and timeliness knowledge exchange. Long-term relationships with suppliers and customers can help to reduce transaction costs through the development of trust and reputation (Cooper et al., 1997; Mentzer et al., 2001 and Li *et al.*, 2006). It also can contribute to developing knowledge exchange and assure investments in specific assets. Moslem *et al.* (2013), on the other hand, described that internal lean practice can reduce waste and contribute to lower transaction cost. Therefore, the researcher conducted the study based on the above theory.

2.3 Concepts and Definitions of Supply Chain Management

The traditional understanding of supply chain management is to leverage the supply chain to achieve the lowest initial purchase prices while assuring supply. Typical characteristics include: multiple partners; partner evaluations based on purchase price; cost-based information bases; arm's-length negotiations; formal short-term contracts; and centralized purchasing. Operating under these conditions encourages fierce competition among suppliers, often requiring playing one supplier against the others, and uses rewards or punishment based on performance. The fundamental assumption in this environment is that trading partners are interchangeable and that they will take advantage if they become too important. In addition, there is a belief that maximum competition, under the

discipline of a free market, promotes a healthy and vigorous supply base which is predicated on the "survival of the fittest" (Robert, 1998).

The term SCM was first used in the 1980s and as such is a relatively new discipline within management theory with tools and concepts still being developed. According to Tan *et al.* (2002) in last few years the concept of SCM has received increasing attention from academicians, consultants, and business managers alike. Furthermore, Li *et al.* (2006) identify as many organizations have begun to recognize that SCM is the key to building sustainable competitive edge for their products and/or services in an increasingly crowded marketplace. As Burgess *et al.* (2006) and Harland et al. (2006) describe, the academic debate over the last 20 or more years contributed to develop the SCM understanding and its relevance to firm strategy.

However, the concept of SCM has been considered from different points of view in different bodies of literature such as purchasing and supply management, logistics and transportation, operations management, marketing, organizational theory, and management information systems (Croom *et al*., 2000). Various theories have offered various insights on specific aspects or perspectives of SCM, such as industrial organization and associated transaction cost analysis (Ellram, 1990), resource-based theory and its extension relational view theory (Rugtusanatham, 2003), competitive strategy (Porter, 1985), and social–political perspective (Stem and Reve, 1980). In addition those academic debates over the last years also produced a fragmented literature, lacking commonly accepted frameworks and clear constructs, undermining knowledge advancement (Burgess *et al.*, 2006; and Harland *et al*. 2006).

Even though different things contribute for differences on the concepts of SCM, different researchers tried to describe the concepts of SCM as follows. Ellram and Cooper (1990) identify SCM as an integrating philosophy to manage the total flow of a distribution channel from supplier to the ultimate customer. Whereas Robinson and Kalakota (2000) view the supply chain quite simply as a "process umbrella" under which products are developed and delivered to customers. From a structural viewpoint, they argue, the supply chain refers to the complex network of relationships that organizations maintain with trading partners to source, manufacture and deliver products. As Li *et al.* (2006) described, SCM is a concept which its goal is to integrate both information and material flows seamlessly across the supply chain as an effective competitive weapon. Li *et al.* (2006) also stated that SCM applies to show the collaborative relationships of members of different echelons of the supply chain and refers to common and agreed practices performed jointly by two or more organizations. In addition, according to Arawati (2011), SCM includes managing supply and demand, sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution across all channels, and delivery to the customer.

Generally, the SCM concept used in the research in its essence assumes that firms set up alliances with members of the same chain (i.e., upward stream, supplier, and downward stream, customer) to improve its competitive advantage revealed by superior operational performance of all chain members.

Regarding definitions of SCM, many definitions have also been used to explain the term. The frequency with which the term SCM is used in today's environment would suggest that it is a well understood concept accompanied by an accepted set of managerial

practices. However, definitions of and approaches to SCM vary substantially from organization to organization because it is influenced by many different fields and researchers in the area of SCM. Tan, *et al.* (2002) defines SCM as the simultaneous integration of customer requirements, internal requirements and upstream supplier performance. Council of Logistics Management (CLM) defines SCM as the systemic, strategic coordination of the traditional business functions and tactics across these businesses functions within a particular organization and across businesses within the supply chain for the purposes of improving the long-term performance of the individual organizations and the supply chain as a whole. SCM has been defined to explicitly recognize the strategic nature of coordination between trading partners and to explain the dual purpose of SCM: to improve the performance of an individual organization, and to improve the performance of the whole supply chain (Li *et al*., 2006).

Supply chain by Christoper (1998) defined as a network of various organisations involved both through upstream and downstream linkages in different kinds of activities and processes. Meanwhile, Adebayo (2012) summed up the many definitions of SCM by various authors and researchers as 'the task of integrating organisational units along a supply chain and coordinating materials, information and financial flows in order to fulfill (ultimate) customer demands with the aim of improving competitiveness of the supply chain as a whole'. Thus, in the end produce value whether in the form of products or services to the end user.

The key elements of supply chain and its management from these definitions are therefore the upstream parties, the downstream parties and the integration of all the organisations involved, together with the internal function of an organisation itself. The

upstream parties, as being described by Handfield and Nichols (1999) consists of an organisation's functions, processes and network of suppliers while the downstream function on the other hand concerns the distribution channels, processes and functions where the product passes through to the end customer. Where external downstream and upstream functions are concerned, the managers involved in each upstream and downstream supplier and functions are responsible in making sure that the deliveries of products and services are done as scheduled to their destinations. If there are cases where delays are inevitable, the managers are to ensure that the impact of the delays to the supply chain and the value it carries will be minimal.

In general, regarding the definition of SCM, the researcher conceptualize it as the strategic coordination of the traditional business functions (i.e., coordinating the firm/organization with the supplier and customer) and the tactics across these businesses functions within a particular organization and across businesses within the supply chain for the purposes of improving short-term and long-term performance of the individual organizations and the supply chain as a whole.

2.4 Supply Chain Management Practices/Measurements

SCM practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain. SCM practices are multidimensional which affect the performance of partners in the supply chain. These SCM practices were seen and discussed by different researchers from different perspectives. Donlon (1996) describes the evolution of SCM practices, which include supplier partnership, outsourcing, cycle time compression, continuous process flow, and information

technology sharing. Tan *et al*. (1998) use purchasing, quality, and customer relations to represent SCM practices, in their empirical study. Tan *et al*. (2002) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, geographical proximity, and just in time capability. Alvarado and Kotzab (2001) include in their list of SCM practices concentration on core competencies, use of inter-organizational systems such as elimination of excess inventory levels by postponing customization toward the end of the supply chain. Chen and Paulraj (2004) presented SCM framework/practice that encompassed three dimensions: supply network structure, characterized by strong linkages between members, low levels of vertical integration, non-power based relationships; long-term relationships, managed with effective communication, cross-functional teams, and early supplier involvement in crucial projects, planning processes; and logistics integration. Min and Mentzer (2004) identify the practices of SCM as including agreed vision and goals, information sharing, risk and award sharing, cooperation, process integration, long-term relationship and agreed supply chain leadership.

Arawati (2011) identify SCM dimensions as its encompasses: Strategic Supplier Partnership, developing trust and collaboration among supply chain partners as well as customers; Lean Production, is associated with continuous pursuit of improving the processes, a philosophy of eliminating all non-value adding activities and reducing waste within an organization; Postponement Concept, Postponement involves the process of delaying final product configuration until the actual order requirement is specified by the customer. Keeping products in semi-finished would allow more flexibility and

customization in completing the final products and also enables a company to respond more quickly to market demand and New Technology and Innovation, New technology and innovation refers to the application of the latest scientific or engineering discoveries to the design of operations and production processes in SCM .

Thus the literature reveals SCM practices from a variety of different perspectives with a common goal of ultimately improving organizational performance. In reviewing and consolidating the literature, five dimensions, including strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and internal lean practice, 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 lean practice (waste minimization). It should be pointed out that even though the above dimensions capture the major aspects of SCM practice, they cannot be considered complete. Other factors, such as geographical proximity, structural aspect (Tan *et al.*, 2002), cross-functional teams, logistics integration (Chen and Pauraj, 2004), agreed vision and goals, and agreed supply chain leadership (Min and Mentzer, 2004) are also identified in the literature. Though these factors are of great interest, they are not included due to the concerns regarding the length of the survey and the parsimony of measurement instruments. The present study, therefore, proposes SCM practices as a multi-dimensional concept.

2.4.1 Strategic Supplier Partnership

It is defined as the long term relationship between the organization and its suppliers. Strategic supplier partnership emphasizes direct relationship and long-term and encourages mutual planning and efforts to resolve problem. Supplier and organizations can work together more closely and eliminate useless time and effort. Effective partnerships with suppliers can be critical factor to guide supply chain management (Li *et.al.,* 2006). Sandikiglu and zehir (2010) also stated that in strategic supplier partnership, suppliers play more direct role in an organization's quality performance.

Through close bonded relationships, supply chain partners are more willing to share risks and reward and be able to maintain the relationship over a longer period of time (Lascelles and Dale, 1989; Landros and Moncza, 1989). It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing benefits (Noble, 1997 and Sheridan, 1998). Such strategic partnerships are entered into to promote shared benefits among the parties and ongoing participation in one or more key strategic areas such as core raw materials, technology, products, and markets (Yoshino and Rangan, 1995).

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). The main objective of strategic partnerships with suppliers is increasing the functional capability desired supplier (Rosenzweig, 2003). Therefore, strategically managed long-term relationship with supplier has positive impact on a firm's supplier performance (Cooper and Ellram, 1993).

2.4.2 Customer Relationship

It encompasses 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 (Claycombb et al. 1999 and Tan *et al.,* 1998).

Noble (1997) and Tan et al. (1998) consider customer relationship management as an important component of SCM practices. As pointed out by Day (2000), devoted relationships are the most sustainable advantage because of their essential barriers to competition. Focusing and maintaining the customer relationship will enable the organizations to be more responsive towards customers' needs and will result creating greater customer loyalty, repeat purchase and willing to pay premium prices for high quality product (Carr and Pearson, 1999).

Besides, the main goals of SCM are customer satisfaction and their loyalty as (Stalk and Hout, 1990), customer relationship management is an important component of supply chain management practices (Noble, 1997). The growth of mass customization and personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival (Wines, 1996). Good relationships with supply chain members, including customers, are needed for successful

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

As discussed in Niknia (2007), the main customer relationship goals are identifying new business opportunities, reduce missed opportunities, reducing customer defection, creating customer loyalty, improve customer service, improve organization appearance, reduce costs, and increase revenue. For this research purpose, customer relationship is conceptualized from the literature review and practicability in Ethiopia as the way of building long-term relation with customers through creating customer loyalty, reducing defect products, improving customer services, reducing price/cost, managing customer complaints and working on improving customer satisfaction.

2.4.3 Level of 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 by partners is needed sharing information. 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. Together, they can understand the needs of the end customer better and hence can respond to market change quicker.

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

2.4.4 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. 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).

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). The work of Tan *et al*. (1998), in which most of the indicators of information quality is adopted, does not incorporate completeness as the indicators of information quality which is the key for quality of information in reality of the case organization.

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

2.4.5 Internal Lean Practices

Another supply chain management practices is the use of internal lean practices. Internal lean practices refer to consume less system resources uses with the same speed mass production and offers greater variety to customers. In other way James and Jones (2003) internal lean practices as Lean production associated with continuous pursuit of improving the processes, a philosophy of eliminating all non-value adding activities and reducing waste within an organization.

One of the fundamental ideas in internal lean practices is removed surplus (Hassanzadeh and Jafarian, 2010). The most famous of internal lean practices can be mentioned timely and lean produce. Production of lean and timely is production system that its aims are to optimize processes and production process by reducing waste and other inefficient factors (White, 1993).

Internal lean practices understanding for the study is waste elimination regarding to set-up time, continuous improvement and just in time.

2.5 Operational Performance

The competitive priorities literature (Ferdows and Meyer, 1990; and Ward *et al.,* 1998) in operations strategy can offer a useful approach to measure operational performance. Operational performance is a source of competitive advantage for the enterprise to differentiate itself in the eyes of the customers from its competitors by operating at a lower cost and hence at a greater profit (Christopher, 1992).

Competitive priorities, which are realized by operational performances, are the extent that an organization is able to create a state of defense against competitors and includes a feature that allows an organization to distinguish itself from its competitors (Li *et al.*, 2006). The concept of competitive advantage is directly related to desired value of the customer (Mehri and Hosseini, 2004). Competitive advantage includes set of capabilities and factors that always demonstrated better performance of company than competitors (Sadri and Lees, 2001). In other words, competitive advantage is factors or a combination of factors that led to very successful organization than other organizations in a competitive environment and competitors cannot easily imitate it. Therefore, to achieve a competitive advantage, an organization must also pay attention to their external position and internal capabilities (Barny, 1999).

The competitive priorities can also be thought as a way to conceptualize and measure operational performance. Improvements in performance can manifest themselves in different aspects like inventory reduction, lead time reduction or quality improvement. Grouping these types of improvements under the broader classes of competitive priorities as cost, quality, delivery and time can be a useful measurement approach allowing comparability, comprehensiveness and theoretical underpinning (Priscila and Luiz, 2011).

Many empirical literatures have been quite consistent in identifying price/cost, quality, delivery, and flexibility as important competitive priorities which can be conceptualized as measures of operational performance (Roth and Miller, 1990; and Tracey, 1999). In addition, recent studies have included time-based competition as an important competitive priority. Research by Stalk (1988), Vesey (1991), Handfield and Pannesi

(1995), Kessler and Chakrabarti (1996), and Zhang (2001) identifies time as the next source of competitive advantage. On the basis of prior literature, Koufteros *et al*. (1997) describe a research framework for competitive capabilities and define the following five dimensions: competitive pricing, premium pricing, value-to-customer quality, dependable delivery, and production innovation. Li *et al.* (2006) also describes the dimensions of the competitive advantage constructs are price/cost, quality, delivery dependability, product innovation, and time to market. Based on the above used study, the researcher adopts price/ cost, quality, delivery and time to market as dimensions of competitive advantage to measure operational performance in this study.

2.6 Organizational Performance

Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Li *et al.,* 2006). The short-term objectives of SCM are primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the supply chain (Tan *et al.,* 1998). Financial metrics have served as a tool for comparing organizations and evaluating an organization's behavior over time (Holmberg,2000). Any organizational initiative, including supply chain management, should ultimately lead to enhanced organizational performance. A number of prior studies have measured organizational performance using both financial and market criteria, including return on investment (ROI), market share, profit margin on sales, the growth of ROI, the growth of sales, the growth of market share, and overall competitive position (Vickery et al.,1999; Stock *et al.,* 2000; and Li *et al.,* 2006). In line with the above literature, the same items will be adopted to measure organizational performance in this study.

Market share, return on investment, the growth of market share, the growth of sales, growth in return on investment, profit margin on sales and overall competitive position are adapted as organizational performance measures in this study.

2.7 Empirical Review of Studies

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

Alireza *et al.* (2011) conducted study on Malaysia Electronic Industry to present a model for supply chain performance by employing supply chain design, supply chain information sharing, and flexibility and delivery components as independent variables influencing supply chain performance. The results from this study depicted that supply chain design influences supply chain performance through delivery and information sharing. Furthermore, information sharing and delivery have a direct influence on supply chain performance. The findings also showed that flexibility influences supply chain performance through delivery. Information sharing affects supply chain performance directly and has also an indirect impact on supply chain performance through flexibility. This study elaborates the significant effect of the design of the supply chain on its performance while considering the impact of information sharing.

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

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

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

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

Adebayo (2012) conducted study on SCM Practices in Nigeria Today: Impact on SCM Performance. The SCM practices considered in this paper were namely strategic supplier partnership, customer relations practices, information sharing, information quality and postponement. This paper provides empirical justification for five key dimensions of SCM practices identified and describes the relationship among SCM practices and SCM performance as well as the impact of these practices on SCM performance. The study thus showed that SCM practices definitely impacts SCM performance.

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

Generally, from above literature reviews it can be easily understandable that the work on supply chain management measurements/ practices and its influences on different perspectives of the organization and overall supply chain partners increasing and yields good backgrounds. However, the relationship of SCM with performance cannot be regarded as conclusive (Cousins, *et al.*, 2006). Despite the increase of empirical research in the last few years, important differences in research design undermine comparability: lack of consensus about the definition and dimensionality of the SCM construct, use of different units of analysis, and different approaches to performance measurement.

2.8 Conceptual Framework

Based on overall review of related literature, and particularly the work of Li *et al*. (2006), Lenny *et al.* (2007), Priscila and Luiz (2011) and Moslem *et al*. (2013), the following conceptual framework in which this specific study governed was developed as follows:

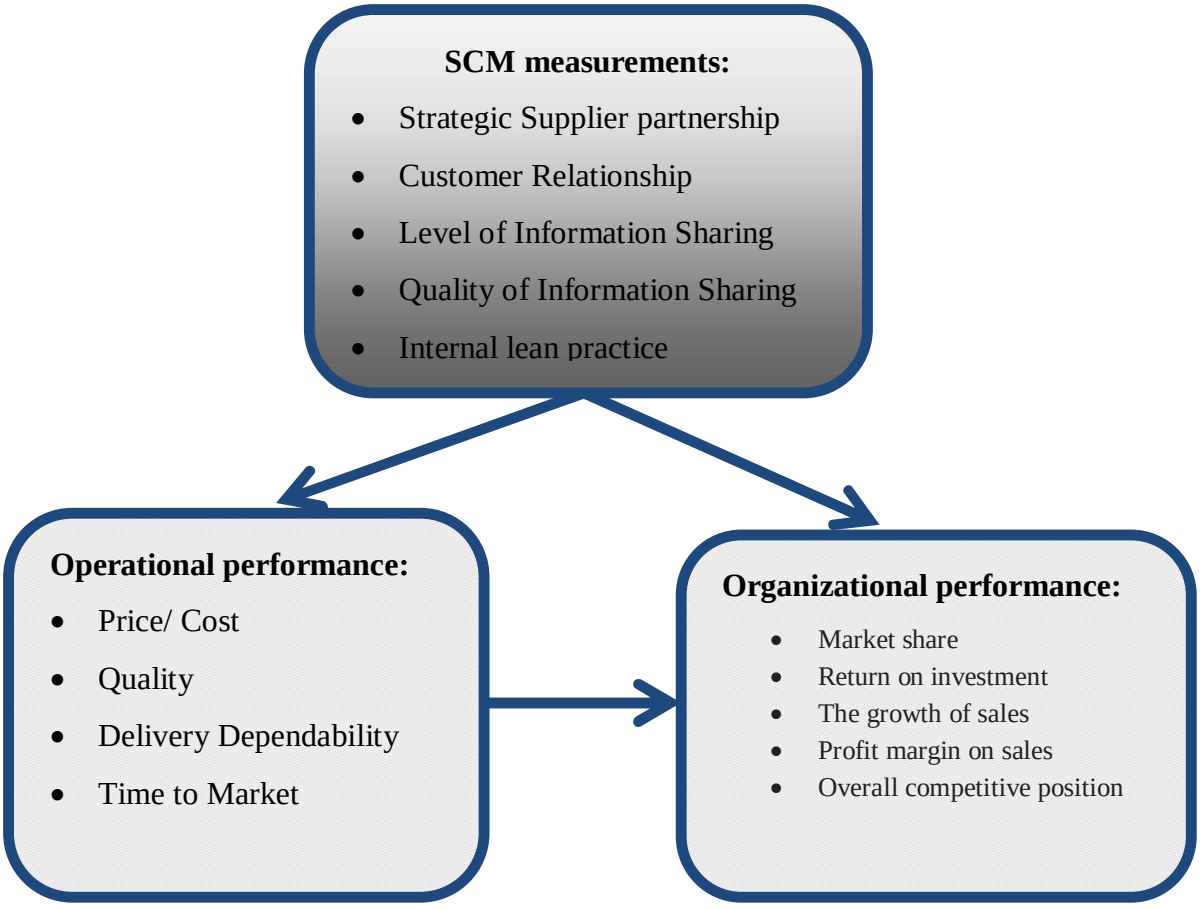

Fig 2.1 Conceptual framework for the study

Source: adapted from Li *et al.* (2006) and Lenny *et al.* (2007).

CHAPTER THREE

3 RESEARCH METHODOLOGY

3.1 Introduction

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

3.2 Research Design

Designing a study helps the researcher to plan and implement the study in a way that will help the researcher to obtain intended results, thus increasing the chances of obtaining information that could be associated with the real situation (Burns & Grove 2001). This study is an applied research which follows a correlational research approach in order to address the aforementioned objectives. It is conducted on one selected area of tannery processing firm, Awash Tannery Plc., in Addis Ababa, Ethiopia. The data used in the study are quantitative in nature which is collected from primary sources. The researcher used the Cross-sectional field survey method to assess the relationship between SCM measurements/practices and operational performance on one hand and SCM practices with organizational performance, and finally the relationship between operational performance and organizational performance of Awash Tannery Plc. In the cross-sectional field survey, independent and dependent variables were measured at the same point in time by using a single questionnaire. In addition the study is also said to be associational in design because there is the intent to establish the relationship between dependent and independent variable of the study. The researcher selected the sample

from the target population by using probability sampling particularly stratified sampling technique.

Correlational research aims to ascertain if there is a significant association between two variables (Reid, 1987). Hence, after the data were collected, the researcher analyzed the data by using correlation, particularly Pearson's coefficient of correlation, and regression analysis technique to show the effect of independent variables on the dependent variable.

3.3 Data Type and Source of Data

The researcher used primary data for the entire analysis of this study. The information was gathered through questionnaire from the selected sample of respondents/ employees of Awash tannery Plc. The data collected from the respondents through questionnaires was used as primary data. According to Biggam (2008), primary data is the information that the researcher finds out by him/herself regarding a specific topic. The main advantage with this type of data is that it is collected with the research's purpose in mind. It implies that the information resulting from it is more consistent with the research questions and objectives.

3.4 Research Approach

The three methods that are commonly implemented in a research are quantitative, qualitative and mixed, where one of them is not better than the others, all of this depends on how the researcher want to do a research of study(Creswell, 2005). Creswell (2005) asserted that quantitative research is a type of educational research in which the researcher decides what to study, asks specific, narrow questions, collects numeric (numbered) data from participants, analyzes these numbers using statistics, and conducts

the inquiry in an unbiased, objective manner. Variables can be defined as attributes or characteristics of individuals, groups, or sub-groups of individuals (Creswell, 2009). Quantitative method is a study involving analysis of data and information that are descriptive in nature and qualified (Sekaran, 2003). Quantitative approach is one in which the investigator primarily uses postpositive claims for developing knowledge, i.e., cause and effect relationship between known variables of interest or it employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data (Creswell, 2009). Therefore, in terms of methods, this research employed quantitative method while conducting the study.

3.5 Data Gathering Technique and Instruments

The primary data was gathered particularly using survey questionnaire. The researcher distributed the questionnaire to sampled respondents. For the purpose of this study a quantitative methodology involving a close-ended questionnaire was used as the measuring instrument. The close-ended questionnaires can be administered to groups of people simultaneously, since they are less costly and less time consuming than other measuring instruments. The standard questionnaire used to collect the necessary information regarding the study was adopted from the work of Li et al. (2006), Lenny *et al.* (2007), and Priscila and Luiz (2011). The Likert-type scale method used a range of responses: ‘Strongly Disagree’, ‘Disagree’, ‘Neutral’, ‘Agree’, and ‘Strongly Agree’, with a numeric value of 1-5, respectively. The usage of this particular scaling method ensured that the research study illustrated the ability to assess the responses and measure the responses quantifiably so that a pattern or trend may be produced in order to assess

research hypotheses. As Neuman (2003) hypothesize, it is a process of asking many people the same questions and examining their answers.

3.6 Sampling and Sampling Techniques

3.6.1 Target Population

According to Hair *et al.* (2010), target population is said to be a specified group of people or object for which questions can be asked or observed made to develop required data structures and information. Therefore, for this study, the target populations are employees of Awash tannery Plc, particularly those their education level is grade ten completed and above.

3.6.2 Sampling Techniques

For the purpose of this study, the researcher used probability sampling particularly stratified sampling technique. The target population for the study was classified into six strata based on the departments and section in the firm which is directly related with SC of the organization. Then the samples were selected from each stratum according to their proportion to the total population. Since the information required for the study needs different people who have knowledge and awareness about different supply chain management practices/dimensions, operational performance and organizational performance of the firm, stratified sampling technique were used to have the right proportion of people from every concerned department or section. The departments considered as strata, from which data were collected, are: production department (Hide section, skin section and quality control), administration, local sales and purchasing

department, general accountant, property administration, general service and technique department.

3.6.3 Sample Size

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

Table 3.1: Carvalho's Sample Size Determination

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

Source: Carvalho (1984)

Table 3.2: Sample Size Determination for the study

Strata (departments)	Total Population of each Stratum	Target Population of each Stratum (grade ten completed)	Sample size of each Stratum
Production:	-------	-------	--------
Hides	170	63	12
Skin	203	71	14
Quality control	22	20	4
Research and development	7	7	1
Administration	12	10	2
General Accountant	13	13	2
Local sales and Purchases	10	10	2
Property administration	89	60	13
***General service and Techniques**	91	----	
Total	577	254	50

*Not part of concerned department

Source: survey 2014

As table 3.2 indicates the total numbers of Awash tannery firm employees are 577, out of this about 323 are not target population due to education level (not completed grade 10) and out of concerned departments. Therefore, from the remaining 254 employees 50 were considered as sample size of the study as per Carvalho's sample determination method, through considering the heterogeneity of sample respondents on the basis of different units/ departments within the organization. Out of 50 sample size selected, 42

were considered as sample respondents and 8 were avoided due to incompleteness of the response.

3.7 Data Analysis

After the data was collected, inferential statistical technique was employed to analyze the information, as this study is quantitative in nature. The data is analyzed using SPSS version 20. The statistical tools were aligned with the objectives of the research. Inferential statistics is particularly the Pearson's correlation was used to show the relationship and the strength/degree as well as direction of associations between variables. The other inferential statistics used is regression analysis so that to show interdependence of independent variables and dependent variable. Thus, both the strength of the relationship between variables and the influence of independent on dependent variable and statistical significance were assessed.

3.8 Validity and Reliability

3.8.1 Assessing Reliability

According to Bryman and Bell (2007), reliability analysis is concerned with the internal consistency of the research instrument. As multiple items in all constructs were used, the internal consistency/reliabilities of SCM practices, operational performance, and organizational performance were assessed with Cronbach's Alpha and the reliability values for all constructs are confirmed as greater than 0.7, which are considered acceptable (Nunnally, 1978). The following table shows the summary of reliabilities of all constructs.

Table 3.3: Reliability of SCM Practices, Operational Performance and Organizational Performance

Variable	Reliability
a) SCM practices	-
Strategic supplier partnership	.872
Customer relation	.747
Level of information sharing	.747
Level of information quality	.779
Internal lean practices	.846
b) Operational performance	-
Price	.768
Quality	.871
Delivery dependability	.706
Time to market	774
c) Organizational performance	.788

Source: survey 2014

3.8.2 Analysis of Validity

Malhotra (2010) mentioned about three types of validity in his study: content validity, predictive validity, and construct validity. This study addressed content validity through the review of literature and adapting instruments used in previous research.

CHAPTE FOUR

4 DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

As discussed in previous chapter, this study attempted to examine the Relationship between supply chain management practices and firm performance in case of Awash Tannery Plc. Therefore, the findings of the study are presented and discussed in this chapter. The questionnaire were developed in five scales ranging from five to one; where 5 represents Strongly agree, 4 agree, 3 Neutral, 2 disagree, and 1 strongly disagrees. In order to assess the relationship between supply chain management practices and firm's performance, Correlation and regression analysis were conducted for scale typed questionnaire. A total of 50 questionnaires were distributed to employees and 42 (84%) questionnaire were obtained valid and used for analysis. The collected data were presented and analyzed using SPSS (version 20) statistical software.

The study used correlation analysis, specifically Pearson correlation to measure the degree of association between different variables under consideration. Regression Analysis was also used to test the effect of independent variable on dependent variable.

4.2 Inferential Statistics for SCM Practices and Firm Performance

4.2.1 Correlation Analysis

Correlations are the measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicates that there is little or no linear relationship. As described by Andy (2006), the correlation is a commonly used measure of the size of

an effect: values of ± 0.1represent a small effect, ± 0.3 is a medium effect and ± 0.5 is a large effect.

In this section, correlation analysis conducted in the light of each research objectives and hypotheses developed. The relationship between supply chain management practices and firm performance was investigated using correlation analysis. This provided correlation Coefficients which indicated the strength and direction of relationship. The p-value also indicated the probability of this relationship's significance.

4.2.1.1 Correlation Analysis between Construct of SCM Practices and Operational Performance (OP)

Table 4.1: Correlation matrix between constructs of SCM practices and OP

		SSP	CR	LIS	LIQ	ILP	OP
SSP	Pearson Correlation	1	.687**	.528**	.615**	.369*	.752**
	Sig. (2-tailed)		.000	.000	.000	.016	.000
	N	42	42	42	42	42	42
CR	Pearson Correlation	.687**	1	.628**	.656**	.254	.642**
	Sig. (2-tailed)	.000		.000	.000	.104	.000
	N	42	42	42	42	42	42
LIS	Pearson Correlation	.528**	.628**	1	.683**	.456**	.516**
	Sig. (2-tailed)	.000	.000		.000	.002	.000
	N	42	42	42	42	42	42
LIQ	Pearson Correlation	.615**	.656**	.683**	1	.675**	.856**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	42	42	42	42	42	42
ILP	Pearson Correlation	.369*	.254	.456**	.675**	1	.709**
	Sig. (2-tailed)	.016	.104	.002	.000		.000
	N	42	42	42	42	42	42
OP	Pearson Correlation	.652**	.642**	.516**	.656**	.609**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	42	42	42	42	42	42
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Source: survey 2014

The constructs of SCM practices which their relation with operational performance seen in the above table are Strategic supplier partnership (SSP), customer relation (CR), level of information sharing (LIS), level of information quality (LIQ) and internal lean practices (ILP).

The correlation between constructs of SCM practices with operational performance was run as seen in the above table. The result of correlation matrix between each constructs and operational performance are analyzed as follow:

As it is indicated in the table, there is significant positive correlation between strategic supplier partnership (SSP) and operational performance with correlation coefficient of 0.752 (r=0.752) and significance less than 0.001. Therefore, strategic supplier partnership and operational performance are genuinely correlated.

Table 4.1 also depict that as there is strong positive relationship between customer relation (CR) and operational performance with a Pearson correlation coefficient of 0.642 (r=0.642) and significance value is less than 0.001. This significance tells that there is genuine relationship between customer relation and operational performance.

As the conducted Pearson correlation test indicated in the table 4.1, also there is significant positive correlation between level of information sharing (LIS) and operational performance. In other words level of information sharing and operational performance are Correlated in high relationship (r=0.516) with level of significance less than 0.001.

For Pearson correlation test conducted to know whether there is significant correlation or not between Level of Information Quality (LIQ) and operational performance, table 4.1 clearly indicates that there is strong and positive relation between Level of Information Quality and operational performance. The result of correlation analysis between Level of Information Quality and Operational performance is correlation coefficient of 0.856 (r=0.856) and significance value less than 0.001.

For Internal Lean Practices (ILP) and Operational Performance also Pearson correlation test was conducted and the results are shown in table 4.1. As it is shown in the table, there is strong positive significant correlation between Internal Lean practices and Operational Performance. In other words Internal Lean Practices and Operational Performance have strong relationship (r=0.709) with significance value less than 0.001.

4.2.1.2 Correlation between SCM Practices and OP

Pearson correlation test was conducted between SCM practices (collective representative of five constructs of SCM practices) and the results are shown in table 4.2. As it is shown in the table, there is significantly strong correlation between SCM practices and operational performance. In other words SCM practices and operational performance have strong positive relationship with correlation coefficient of 0.850 (r=0.850) and significance value less than 0.01.

Table 4.2 Correlation between SCM Practices and OP

		SCM practices	OP	
SCM practices	Pearson Correlation	1	.850**	
	Sig. (2-tailed)		.000	
	N	42	42	
OP	Pearson Correlation	.850**	1	
	Sig. (2-tailed)	.000		
	N	42	42	
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: survey 2014

4.2.1.3 Correlation Analysis between Constructs of SCM Practices and Organizational Performance (OrP)

Table 4.3 Correlation Matrix between Construct of SCM Practices and Organizational performance

		SSP	CR	LIS	LIQ	ILP	OrP
SSP	Pearson Correlation	1	.687**	.528**	.615**	.800**	.800**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	42	42	42	42	42	42
CR	Pearson Correlation	.687**	1	.628**	.656**	.763**	.763**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	42	42	42	42	42	42
LIS	Pearson Correlation	.528**	.628**	1	.683**	.727**	.727**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	42	42	42	42	42	42
LIQ	Pearson Correlation	.615**	.656**	.683**	1	.797**	.797**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	42	42	42	42	42	42
ILP	Pearson Correlation	.369*	.254	.456**	.675**	.520**	.520**
	Sig. (2-tailed)	.016	.104	.002	.000	.000	.000
	N	42	42	42	42	42	42
OrP	Pearson Correlation	.652**	.642**	.516**	.656**	1	1
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	42	42	42	42	42	42
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							
Source: survey 2014							

The correlation between constructs of SCM practices with organizational performance was run as seen in the above table. The result of correlation matrix between each constructs and organizational performance are analyzed as follow:

As it is shown in the table 4.3 above, strategic supplier partnership positively related to organizational performance with a Pearson correlation coefficient of 0.800 (r=0.800) and significance value is less than 0.001. This significance tells that there is genuine relationship between strategic supplier partnership and organizational performance.

Table 4.3 also depict that as there is strong positive relationship between customer relation (CR) and organizational performance with a Pearson correlation coefficient of 0.763 (r=0.763) and significance value is less than 0.001. This significance tells that there is genuine relationship between customer relation and organizational performance.

As the conducted Pearson correlation test indicated in the table 4.3, also there is significant positive correlation between level of information sharing (LIS) and organizational performance with a Pearson correlation coefficient of 0.727 (r=0.727) and significance value is less than 0.001. This significance tells that there is genuine Level of Information Sharing and Organizational Performance.

For Pearson correlation test conducted to know whether there is significant correlation or not between Level of Information Quality (LIQ) and organizational performance, table 4.3 clearly indicates that there is strong and positive relation between Level of Information Quality and operational performance. The result of correlation analysis between Level of Information Quality and Organizational performance is correlation

coefficient of 0.797 (r=0.797) and significance value less than 0.001 which indicates as there is genuine relation between them.

For Internal Lean Practices (ILP) and Organizational Performance also Pearson correlation test was conducted and the results are shown in table 4.1. As it is shown in the table, there is positive and significant correlation between Internal Lean practices and Organizational Performance with a Pearson correlation coefficient of 0.520 (r=0.520) and significance value is less than 0.001. This significance tells that there is genuine relation between internal lean practices and organizational performance.

4.2.1.4 Correlation between SCM Practices and Organizational performance (Orp)

Table 4.4: Correlation Matrix between SCM Practices and OrP

		SCM Practices	OrP
SCM Practices	Pearson Correlation	1	.864**
	Sig. (2-Tailed)		.000
	N	42	42
OrP	Pearson Correlation	.864**	1
	Sig. (2-Tailed)	.000	
	N	42	42
**. Correlation Is Significant At The 0.01 Level (2-Tailed).			

Source: survey 2014

Pearson correlation test was conducted between SCM practices (collective representative of five constructs of SCM) and organizational performance. As it is shown in the table 4.4 above there is strong positive relationship between SCM Practices and organizational performance with a Pearson correlation coefficient of 0.864 (r=0.864) and significance value is less than 0.001. This significance tells that there is genuine relationship between SCM practices and organizational performance.

4.2.1.5 Correlation Analysis between OP Measures and OrP

Table 4.5: Correlations Matrix between OP measures and OrP

		Price	Quality	Delivery Dependability	Time to Market	OrP
Price	Pearson Correlation	1	.633**	.582**	.475**	.747**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	42	42	42	42	42
Quality	Pearson Correlation	.633**	1	.510**	.363*	.704**
	Sig. (2-tailed)	.000		.001	.018	.000
	N	42	42	42	42	42
Delivery Dependability	Pearson Correlation	.582**	.510**	1	.677**	.721**
	Sig. (2-tailed)	.000	.001		.000	.000
	N	42	42	42	42	42
Time to Market	Pearson Correlation	.475**	.363*	.677**	1	.583**
	Sig. (2-tailed)	.001	.018	.000		.000
	N	42	42	42	42	42
OrP	Pearson Correlation	.747**	.704**	.721**	.583**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	42	42	42	42	42
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: survey 2014

The above table shows the matrix of correlation between operational performance measures (i.e., price, quality, delivery dependability, and time to market) and organizational performance. The analysis of correlation matrix between each measures of operational performance and organizational performance is given as follows:

As shown in table 4.5 above, Pearson correlation test was conducted for price and organizational performance the results indicates as there is strong positive significant correlation between Price and Organizational Performance. In other words Price and Organizational Performance have genuine relationship with correlation coefficient of 0.747 (r=0.747) and significance value less than 0.001.

On the other hand, as it is shown in the table 4.5 above there is strong positive relationship between quality and organizational performance with a Pearson correlation coefficient of 0.704 (0.704) and significance value is less than 0.001. This significance tells that there is genuine relationship between quality and organizational performance.

Also for delivery dependability and organizational performance Pearson correlation test was conducted and the results are shown in above table 4.5. As it is shown in the table, there is strong positive significant correlation between delivery dependability and organizational performance. In other words delivery dependability and organizational performance have genuine relationship (r=0.721) at significance value less than 0.001.

correlation test for between time to market and organizational performance was also conducted as seen in table 4.5 above, the result shows that time to market positively related to organizational performance with a Pearson correlation coefficient of 0.583 (r=0.583) and significance value is less than 0.001. This significance tells that there is genuine relationship time to market and organizational performance.

4.2.1.6 Correlation between OP and OrP.

As it is shown in the table 4.6 below there is strong positive relationship between operational performance and organizational performance with a Pearson correlation coefficient of 0.814 (r=0.814) significance value is less than 0.001. This significance tells that there is genuine relationship between operational performance and organizational performance.

Table 4.6: Correlation between OP and OrP

		OP Performance	OrP
OP	Pearson	1	.814**
	Sig. (2-tailed)		.000
	N	42	42
OrP	Pearson	.814**	1
	Sig. (2-tailed)	.000	
	N	42	42
**. Correlation is significant at the 0.01 level (2-tailed).			

4.3 Regression Analysis

This regression analysis is conducted to know by how much the independent variable explains the dependent variable. The regression was conducted between supply chain management practices (independent variable) and operational performance (dependent variable) in the first regression. The second regression was made between supply chain management practices (independent variable) and organizational performance (dependent variable). Finally, the third regression was made between operational performances (independent variable) and organizational performance (dependent variable). The results of the regression analysis are presented as follows.

4.3.1 Multi Collinearity Test

Table 4.7:Multi collinearity test of independent variable

Model	Collinearity Statistics	
	Tolerance	VIF
Strategic supplier partnership	.111	9.021
Customer relation	.184	8.942
Level of information sharing	.236	4.232
Level of information quality	.151	6.620
Internal lean practices	.275	3.632

Dependent Variable: Organizational Performances

Source: survey 2014

The result in table 4.3 show that the collinearity between independent variables has no series problem Since the value of tolerance for all independent variable is greater than 0.1 and all VIF is less than ten (VIF<10).

4.3.2 Regression Analysis between SCM Practices and OP

Table 4.8: Regression Analysis between SCM Practices and OP

Model	B	Std. Error	t-stat	p-value	Adjusted R Square
1	.850	.804	10.200	.000	.715

a. Predictor: SCM practices.

b. Dependent variable: Operational Performance

Source: survey 2014

As shown in the table 4.8, there is causal relationship between SCM practices and operational performance. The value of R^2 is .715, which implies that SCM practices can account for 71.5% of the variation in operational performance. Although there might be many factors that can explain the variable on operational performance, nearly 71.5% of it

is explained by SCM practices. This means that the remaining 28.5% of the variation in operational performance cannot be explained by those dimensions of SCM practices. The significant and positive β coefficient also implies that SCM practices have a positive and significant influence on operational performance.

4.3.3 Regression Analysis between SCM Practices and OrP

Table 4.9: Regression Analysis between SCM Practices and OrP

Model	B	Std. Error	t-stat	p-value	Adjusted R Square
2	.864	.090	10.874	.000	.777

Predictor: SCM practices.

Dependent variable: Organizational Performance

Source: survey 2014

As shown in the table 4.9, there is causal relationship between SCM practices and organizational performance. There might be many factors that can explain this variable, but our model, which includes SCM practices, can explain approximately 77.7% of it. This suggests that the remaining 22.3% of the variation in organizational performance cannot be explained by those dimensions of SCM practices. The significant and positive β coefficient also implies that SCM practices have a positive influence on organizational performance.

4.3.4 Regression Analysis between OP and OrP

Table 4.10: Regression Analysis between OP and OrP

Model	B	Std. Error	t-stat	p-value	Adjusted R Square
3	.814	.102	8.878	.000	.655

Predictor: Operational Performance.

Dependent variable: Organizational Performance

Source: survey 2014

As shown in the table 4.10, there is causal relationship between operational performance and organizational performances. The value of R^2 in this model is .655, which implies that operational performance can account for 65.5% of the variation in organizational performance. Although there might be many factors that can explain the variable on organizational performance, approximately 65.5% of it is explained by operational performance. This indicates that the remaining 34.5% of the variation in organizational performance cannot be explained by operational performance. The P value and positive β coefficient also implies that operational performance have a positive and significant influence on organizational performance.

4.4 Discussion of the Results

The objective of this study is to determine the underlying dimensions of SCM practices and to empirically test a framework identifying the relationships among SCM practices, operational performance and SCM-related organizational performance with special emphasis on Awash Tannery Plc. The literature has suggested that there is a relationship between SCM practices and operational performance, SCM practices and organizational

performance, and operational performance and organizational performance. But, the dimensions used in expressing SCM practices and the measures of operational performance, are not directly the same with the framework used in the previous studies. This study makes contributions by exploring the relationship between SCM practices, operational performance and organizational performance. The results of the study are discussed as follows:

This study revealed that there is significant positive relationship between SCM practices and operational performance. As seen from the results, strategic supplier partnership, which is one of the construct of SCM practices is positively correlated with coefficient 0.752 (r=0.752) and significant level less than 0.001with operational performance. As Li *et.al* (2006) describe, effective partnerships with suppliers can be critical factor to guide effective operational performance of organizations in the supply chain.

The finding shows customer relation which is also another construct of SCM practices is correlated with operational performance with correlation coefficient 0.642 (r=0.642) and significance value less than 0.001. As pointed out by Day (2000), devoted relationships with customers are the most sustainable advantage because of their essential barriers to competition. This statement indicates that customer relation plays vital role to enhance operational performance of the organization which enables to be competitive.

The other construct of SCM practices is level of information sharing which is positively correlated with operational performance with correlation coefficient 0.516 (r=0.516) and confidence level less than 0.001. As Alireza et al. (2011) stated, integration and coordination across supply chain can be well provided through information sharing. From

Alirezas' statement, it is possible to conclude as there is positive relationship between information sharing and operational performance of the firm in the supply chain.

The other construct of SCM practices which is correlated positively with operational performance with correlation coefficient 0.548 (r=0.856) and confidence level less than 0.001 is the level of information quality. As Ahmadi (2005) describes, effective use of relevant and timely information by all the functional elements in the supply chain is considered as a competitive factor and distinctive, and this statement is very consistent with the finding of this study.

The last construct of SCM practices is internal lean practices which is positively correlated with coefficient of 0.709 (r=0.709) with operational performance at level of significant of less than 0.001. James (2003) stated that internal lean practices as Lean production associated with continuous pursuit of improving the processes, a philosophy of eliminating all non-value adding activities and reducing waste within an organization. Moslem *et al.* (2013), on the other hand, also described that internal lean practice can reduce west and contribute to lower transaction cost. This realizes that as the organization implement lean practices the firm operational performance will be enhanced.

In general as the finding indicates there is a genuine relationship between SCM practices and operational performance with a Pearson correlation coefficient of 0.850 (r=0.850) and significance value is less than 0.001. Moreover, 71.5% of the variability in operational performance originates from SCM practices based on regression analysis result of SCM practices on operational performance. This result is supported by the work of Moslem (2013), which indicates that when the SCM practices are good, the operational performance of supply chain will also become good.

On the other hand, this study also revealed that there is significant positive relationship between SCM constructs and organizational performance. As the test results indicate there is positive relationship between strategic supplier partnership and organizational performance with correlation coefficient of 0.800 (r=0.800) and significance value less than 0.001. The evidence from the review literature shows as 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). From this discussion it is possible to show as there is a relation between strategic supplier partnership and organizational performance.

The other practice of SCM is customer relation, which is positively correlated with organizational performance with Pearson correlation coefficient 0.763 (r=0.763) and significant level less than 0.001. The finding of this study is consistent with the work of Carr and Pearson (1999) which describe that focusing and maintaining the customer relationship will enable the organizations to be more responsive towards customers' needs and will result creating greater customer loyalty, repeat purchase and willing to pay premium prices for high quality product that will guaranty in increasing market share.

Level of information sharing is one among the constructs of SCM practices which has strong positive relationship with organizational performance with correlation coefficient 0.727 (r=0.727) and significant value less than 0.001. This result is consistent with the work of Lalonde (1998) which describes sharing of information as one of five building

blocks that characterize a solid supply chain relationship and have an impact on the performance of organizations in supply chain.

Level of information quality is the other construct of SCM practices which has positive and strong relation with organizational performance with correlation coefficient0.792 (r=0.792) and significance value less than 0.001. This finding is supported by the work of Child house and Towill (2003). The empirical findings of Child house 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.

Internal lean practice is also one construct of SCM practices which is positively correlated with organizational performance with coefficient 0.52 (r=0.520) and significance level less than 0.001. As White (1993) describes, production of lean and timely is a production system that its aims are to optimize processes and production process by reducing waste and other inefficient factors. This has an impact on the organizational performance in long term. From this discussion, it is possible to conclude that there is relationship between internal lean practices and organizational performance.

In general SCM practices have strong positive relationship with organizational performance with Pearson correlation coefficient 0.864 (r=0.864) and significance value less than 0.001. It also explains 77.7% organizational performance. This finding is consistence with Adebayo (2012) who describes SCM practices as 'the task of integrating organisational units along a supply chain and coordinating materials, information and financial flows in order to fulfill (ultimate) customer demands with the

aim of improving competitiveness of the supply chain as a whole'. Thus, the prime aim of realizing the enhancement of organizational performance in supply chain is to produce value whether in the form of products or services to end user.

The research findings also indicate that operational performance is positively correlated with organizational performance. One among measures of operational performance is price, which its test result indicates as it is positively correlated with organizational performance with Pearson correlation coefficient 0.747 (r=0.747) and significance value less than 0.001. The finding is consistent with the work of Li *et al.* (2006); price is one component of operational performance which is source of competitive advantage that enables organization to create a state of defense against competitors and includes a feature that allows an organization to distinguish itself from its competitors.

The other measure of operational performance is quality which is also positively correlated with organizational performance with correlation coefficient of 0.704 (r=0.704) and significance value less than 0.001. As Koufteros *et al.* (1997) and Li *et al.* (2006) describe quality as one among the measures of operational performance which contributes for competitive capabilities and value-to-customer.

The other way used to measure operational performance is delivery dependability which is also shown as it has positive correlation with organizational performance with correlation coefficient of 0.721 (r=0.721) and significance value less than 0.001. Li *et al.* (2006) also describes delivery dependability as one dimension of the competitive advantage which in long contributes for organizational enhancement. This justify as there is a relationship between delivery dependability and organizational performance.

The last measure of operational performance used in the study is time to market which the result indicate as there is positive relationship between time to market and organizational performance with correlation coefficient 0.583 (r=0.583) and significance value less than 0.001. Stalk (1988) in his study has identified time-based competition as an important competitive priority which its source is operational performance.

In general operational performance is correlated genuinely with organizational performance with a Pearson correlation coefficient of 0.14 (r=0.814) and significance value is less than 0.001. Based on regression analysis result of operational performance on organizational performance, 65.5% of the variability in organizational performance originates from operational performance. Identifying price/cost, quality, and delivery, as important competitive priorities which can be conceptualize as measures of operational performance improvement (Roth and Miller, 1990; and Tracey, 1999).

CHAPTER FIVE

5. SUMMARY OF MAJOR FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Major Findings

This study is intended to test if there is a relationship between SCM practices, operational performance and organizational performance. Based on the results of the study the summary of major findings are as follows.

The test result indicates that SCM practices has positive and strong correlation (r=0.850) with operational performance at significance level less than 0.001. In other way, SCM practices have also contributed 78.8% for the variability of operational performance. On the other hand, the test result of SCM practices and organizational performance indicates that SCM practices has significant positive correlation (r=0.864) at significance level less than 0.001 with organizational performance. In addition, 77.7% of variability of organizational performance explained by SCM practices. Finally, the test result of operational performance and organizational performance indicates that operational performance is positively correlated to organizational performance with correlation coefficient of 0.814 (r=0.814) and the significance value is less than 0.001. On the other way, the regression result of operational performance and organizational performance indicates that operational performance can explain approximately 68.4% of organizational performance.

5.2 Conclusion

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

There is strong and positive relationship between SCM practices and operational and organizational performance. In addition, SCM practice has strong significant influence on both operational and organizational performance. Operational performance is also positively and genuinely correlated with organizational performance. As far as their causal relationship is concerned, operational performance has an influence on organizational performance.

5.3 Recommendation

On the basis of the finding and the conclusion reached, the following suggestions are forwarded

- ✓ So as to be competitive enough, it is better for the organization to give due attention on SCM practices for more improvement of their operational performance.
- ✓ In order to achieve advancement in marketing and financial performance in the long-run through enhancing organizational performance, it is better for the organization to give due emphasis on SCM practices.
- ✓ In order to foster organizational performance, it is also better for the organization to give due emphasis to operational performance measures.

5.4 Implication for Future Research

It should be noted that the SCM practices maybe influenced by contextual factors, such as the type of industry, firm size, a firm's position in the supply chain, supply chain length, and the type of a supply chain. For example, the level of customer relationship practice, measured by customer satisfactions and expectations, maybe higher for company located at the end of a supply chain (close to the consumer). The larger organizations may have higher levels of SCM practices since they usually have more complex supply chain networks necessitating the need for more effective management of supply chain. The level of information quality maybe influenced negatively by the length of a supply chain, information suffers from delay and distortion as it travels along the supply chain, the shorter the supply chain, the less chance it will get distorted.

In another way, the concept of SCM is complex and involves a network of companies in the effort of producing and delivering a final product, it is difficult to cover entire domain just in one study. Future research can expand the domain of SCM practice by considering additional dimensions such as geographical proximity, cross-functional coordination, logistics integration, and agreed supply chain leadership, which have been ignored from this study.

The future study can also test the relationships/dependencies among five dimensions of SCM practices. For example, information sharing may require the establishment of a strategic supplier partnership and customer relation.

This study focus on showing relationship between SCM practices and performance at organizational level, future research can study SCM issues at the supply chain level.

It will also be of interest to use the respondents from pairs of organizations at two ends of supply chains. By comparing different view of SCM practices from organizations across the supply chain, it is possible to identify the strength and weakness of the supply chain and also the best common SCM practice across the supply chain.

Future studies can also examine the proposed relationships by bringing some contextual variables into the model, such as organizational size and supply chain structure. For example, it will be intriguing to investigate how SCM practice differs across organization size. It will also be interesting to examine the impact of supply chain structure (supply chain length, organization's position in the supply chain, channel structure, and so on) on SCM practice and operational as well as organizational performance.

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Appendix

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
MASTERS OF BUSINESS ADMINISTRATION
QUESTIONNAIRE

Dear respondents, the purpose of this questionnaire is to gather data on the supply chain management practices and firm performance in the case company. The study is purely for academic purpose and thus not affects you in any case. So, your genuine, frank and timely response is vital for successfulness of the study. Therefore, I kindly request you to respond to each items of the question very carefully.

General Instructions

- There is no need of writing your name
- Where answer options are available please tick (√) in the appropriate box for part I and circle for your response to each statements of part II.

Contact Address

If you have any query, please do not hesitate to contact me and I am available as per your convenience at (Mobile: 09-13-85-66-04 or e-mail: *obsinetmustefa@gmail.com.com*)

Thank you for scarifying your precious time in advance!

PART I: Demographic Information

1. Educational Qualification:

Grade 10 completed ☐ Grade 12 completed ☐ certificate ☐

College diploma ☐ first Degree ☐ Second Degree and above ☐

2. Job title

CEO/President /Vice President ☐ ☐ Director ☐ Manager

Other_____

3. Years stayed at the organization:

Under 2 years ☐ 2–5 years ☐ 6–10 years ☐ over 10 years ☐

4. Your department/work unit _____

Part II: Instruments for supply chain management practices, operational performance and organizational performance

Section one: supply chain management practices

With regard to SCM practices of your firm, please circle the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Likert type scales with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree, 6 = not applicable.

Strategic supplier partnership:		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We consider quality as our number one criterion in selecting suppliers.	1	2	3	4	5	6
2.	We regularly solve problems jointly with our suppliers.	1	2	3	4	5	6
3.	We have been helping our suppliers to improve their product quality.	1	2	3	4	5	6
4.	We have continuous improvement programs that include our key suppliers.	1	2	3	4	5	6
5.	We include our key suppliers in our planning and goal-setting activities.	1	2	3	4	5	6
6.	We actively involve our key suppliers in new product development processes.	1	2	3	4	5	6
Customer relationship:		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We frequently interact with customers to set reliability, responsiveness, and other standards for us.	1	2	3	4	5	6
2.	We frequently measure and evaluate customer satisfaction.	1	2	3	4	5	6
3.	We frequently determine future customer expectations	1	2	3	4	5	6
4.	We facilitate customers' ability to seek assistance from us.	1	2	3	4	5	6
5.	We periodically evaluate the importance of our relationship with our customers.	1	2	3	4	5	6

Level of information sharing:		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We inform trading partners in advance of changing needs.	1	2	3	4	5	6
2.	Our trading partners share proprietary information with us.	1	2	3	4	5	6
3.	Our trading partners keep us fully informed about issues that affect our business.	1	2	3	4	5	6
4.	Our trading partners share business knowledge of core business processes with us	1	2	3	4	5	6
5.	We and our trading partners exchange information that helps establishment of business planning.	1	2	3	4	5	6
6.	Exchange of information with our partners (formal or informally) is frequent.	1	2	3	4	5	6
7.	We and our trading partners keep each other informed about events or changes that may affect the other partners	1	2	3	4	5	6
Level of information quality:		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	Information exchange between our trading partners and us is timely.	1	2	3	4	5	6
2.	Information exchange between our trading partners and us is accurate.	1	2	3	4	5	6
3.	Information exchange between our trading partners and us is complete.	1	2	3	4	5	6
4.	Information exchange between our trading partners and us is adequate	1	2	3	4	5	6
5.	Information exchange between our trading partners and us is reliable.	1	2	3	4	5	6
Internal lean practices:		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	Our firm reduces process set-up time (time required to prepare or refit equipment/workstation for production)	1	2	3	4	5	6
2.	Our firm has continuous quality improvement programs	1	2	3	4	5	6
3.	Our firm produces only what is demanded by customers when needed (e.g. JIT)	1	2	3	4	5	6

Section two: operational performance

With regard to operational performance of your firm, please circle the appropriate number to indicate the extent to which you agree or disagree with each statement.

The item scales are five-point Likert type scales with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree, 6 = not applicable.

Price/cost:		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We are able to offer prices as low or lower than our competitors.	1	2	3	4	5	6
2.	Our capacity utilization is very good.	1	2	3	4	5	6
3.	Our Inventory turnover is high.	1	2	3	4	5	6
4.	We run operation with less Production cost.	1	2	3	4	5	6
5.	We offer competitive prices	1	2	3	4	5	6
Quality: an organization is capable of offering product quality and performance that creates higher value for customers.		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We are able compete based on quality.	1	2	3	4	5	6
2.	We offer products that are highly reliable.	1	2	3	4	5	6
3.	We offer products that are very durable.	1	2	3	4	5	6
4.	We offer high quality products to our customer.	1	2	3	4	5	6
Delivery dependability: an organization is capable of providing on time the type and volume of product required by customer(s).		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We deliver the kind of products needed.	1	2	3	4	5	6
2.	We deliver customer order on time.	1	2	3	4	5	6
3.	We provide dependable delivery.	1	2	3	4	5	6
4.	Time to solve customer complaints is short.	1	2	3	4	5	6
5.	Customer order processing time is short.	1	2	3	4	5	6
Time to market: an organization is capable of introducing new products faster than major competitors.		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	**Not applicable**
1.	We deliver product to market quickly.	1	2	3	4	5	6
2.	We have time-to-market lower than industry average	1	2	3	4	5	6
3.	We are first in the market in introducing new products.	1	2	3	4	5	6
4.	We have fast product development.	1	2	3	4	5	6

Section three: organizational performance

Regarding organizational performance, please circle appropriates number which best indicate your firm's overall performance. The item scales are five-point Likert scales with 1 = significant decrease, 2 = decrease, 3=same as before, 4=increase, 5=significant increase, 6 = not applicable.

Organizational performance: how well an organization achieves its market-oriented goals as well as its financial goals in the past five years.		**Significant decrease**	**Decrease**	**Same as before**	**Increase**	**Significantly increase**	**Not applicable**
1.	Market share.	1	2	3	4	5	6
2.	Return on investment.	1	2	3	4	5	6
3.	The growth of market share.	1	2	3	4	5	6
4.	The growth of sales.	1	2	3	4	5	6
5.	Growth in return on investment.	1	2	3	4	5	6
6.	Profit margin on sales.	1	2	3	4	5	6
7.	Overall competitive position.	1	2	3	4	5	6

If any comment you well come:

_____
_____
_____
_____
_____

Thank you again very much!!!