



ST. MARY'S UNIVERSITY  
SCHOOL OF GRADUATE STUDIES

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**Effect of Supply Chain Management on Organization  
Performance: *A Case of East Africa Bottling Share  
Company***

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**BY**

**Amanuel Belay**

***January, 2018  
ADDIS ABABA, ETHIOPIA***

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**Amanuel Belay**

**ID. No.: SGS/0120/2007B**

**A THESIS PROPOSAL SUBMITTED TO ST. MARY'S UNIVERISTY  
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SCHOOL OF GRADUATE STUDIES  
MBA PROGRAM**

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**Effect of Supply Chain Management on Organization  
Performance: *A Case of East Africa Bottling Share  
Company***

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**APPROVED BY BOARD OF EXAMINERS**

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## **Declaration**

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

Amanuel Belay

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**St. Mary's University, Addis Ababa**

**January, 2018**

## ENDORSEMENT

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

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Advisor

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Signature

**St. Mary's University, Addis Ababa**

**January, 2018**

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# Acronyms

<b>CRM:</b>	Customer Relations Management
<b>EABSC:</b>	East Africa Bottling Share Company
<b>EFA:</b>	Explanatory Factor Analysis
<b>GSCF:</b>	Global Supply Chain Forum
<b>ICT:</b>	Information Communications & Technology
<b>IT:</b>	Information Technology
<b>JIT:</b>	Just In Time
<b>OC:</b>	Organization Culture
<b>RBV:</b>	Resource Based View
<b>ROI:</b>	Return on Investment
<b>RV:</b>	Relational View
<b>SC:</b>	Supply Chain
<b>SCLP:</b>	Strategic Collaboration and Lean Practices
<b>SCM:</b>	Supply Chain Management
<b>SCOR:</b>	Supply Chain Operations Reference
<b>SSP:</b>	Strategic Supplier Partnership

# Abstract

*This study was conducted with an objective of identifying the effect of supply chain management on performance of an organization in the case of East African Bottling Share Company. Supply chain management has become a valuable way of securing competitive advantage by improving organizational performances since competition is no longer between organizations, but among supply chains. This research conceptualizes and develops five dimensions of supply chain management practices which are strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and internal lean practices and tests the relationships between supply chain management practices and organizational performance. The researcher used descriptive and explanatory research design. The data for the study was collected from 97 employees of East African Bottling Share Company. The relationships proposed in the framework were tested by Pearson correlation and the causal relations were analyzed by ordinary least square regression method by using SPSS Software. From the result of the analysis it is concluded that there is a strong relationship between supply chain management practices and organizational performance. Supply chain management practices have shown a positive and significant effect on performance of organization, all except internal lean practices. Therefore, in order to achieve growth in organizational performance, it is frugal for the organization to give due emphasis to the constructs of supply chain management practices.*

**Keywords:** Supply Chain Management practices, Organizational Performance

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Over the last decade the competitive landscape has shifted from lowest priced product, highest quality or best-performing product to the ability to respond quickly to market needs and get the right product to the right customer at the right time. This shift toward speed has pushed organizations to compete with their entire supply chain. Consequently understanding and practicing supply chain management (SCM) has become a mandate to compete and improve supply chain surplus in the global arena (Anderson & Gerbing, 2008). Being able to create business relationships with customers, suppliers and other strategic partners anchored on trust and long term commitment then becomes a crucial competitive parameter (Lazarevic, 2007). For this and other factors like shorter product lifecycle and customer expectation, businesses have had to invest and re-focus greater attention on relationship with customers and suppliers. Consequently an organization supply chain has become a strategic agenda driving decision making at senior management level

In the 1990`s competition intensified and markets became global resulting to challenges associated with getting a product and service to the right place at the right time and at the lowest cost. 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. The understanding and practicing of supply chain management practices has become an essential for staying competitive in the global market and for enhancing profitability (Storey et al, 2015).

SCM practices have been defined as a set of activities undertaken by an organization to promote effective management of its supply chain (Li et al, 2006). He proposed SCM practices as multi-dimensional construct that includes both upstream and downstream sides

of the supply chain. Donlon, (2006) has considered outsourcing, supplier partnership, information sharing, cycle time compression, and continuous process flow as SCM practices. Tan, Kannan, & Handfield, (2008) used quality, purchasing, and customer relations to represent SCM practices, in their empirical study.

Alvarado & Kotzab (2011) focused on inter-organizational system use, core competencies, and elimination of excess inventory through postponement, as SCM practices. Using factor analysis, Tan et al. (2008) identified: supply chain integration, information sharing, customer service management, geographic proximity, and JIT capability, as the key aspects of SCM practice. Li et al. (2006) in his case study based research identified five practices at the supply chain level that are a key to creating supply chain responsiveness. They include: outsourcing, strategic supplier partnerships, customer relationships, information sharing, and product modularity.

Performance in organizations takes many forms depending on whom and what the measurement is meant for. Different stakeholders require different performance indicators to enable them make informed decisions (Manyuru, 2015). According to Stuart, (2007) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.). Cook, (2009) defines Organizational Performance as the ability of an organization to fulfill its mission through sound management, strong governance and a persistent rededication to achieving results. Effective nonprofits are mission-driven, adaptable, customer-focused, entrepreneurial, outcomes oriented and sustainable.

Previous studies suggest that effective SCM practices have a direct impact on the overall financial and marketing performance of an organization (Waller and Dabholkar, 2000 and Tata, 2000). Indeed, SCM practices is expected to increase an organization's market share, return on investment and improve overall competitive positions. For instance, Tan et al. (1998) asserted that customer relations and purchasing practices impact the effectiveness of SCM strategy and lead to financial and market performance. Frohlich and Westbrook (2001) on the other hand suggested that companies with broader supply chain integrations

with suppliers and customers showed the largest performance improvement in business achievements.

SCM practices impact not only overall organizational performance, but also competitive advantage of an organization. They are expected to improve an organization's competitive advantage through price/cost, quality, delivery dependability, time to market, and product innovation. Prior studies have indicated that the various components of SCM practices (such as strategic supplier partnership) have an impact on various aspects of competitive advantage (such as price/cost). For example, strategic supplier partnership can improve supplier performance, reduce time to market, and increase the level of customer responsiveness and satisfaction (Frohlich & Westbrook, 2011).

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 & 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, J, 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.

East Africa Bottling Share Company (EABSC) has the mission to continually increase profitability, sustainable unit case sales of Coca Cola products by satisfying new and existing consumers through excellent market execution at an increasing return on investment. The company is striving to meet its vision to be one of the best bottler in the world in producing quality product and packaging standard.

Now-a-days, stiff competition, the arrival of mineral and distilled water bottling, juice and milk factories, entrant of multinational companies to the market, other beverage factories coupled with the economic growth of the country has brought in big challenges and opportunities for the company on sales, market share frontiers and reaping the benefits.

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

## **1.2 Statement of the Problem**

According to Li et al (2006), different organizations have recognized Effect of SCM on building sustainable competitiveness of their goods and services in an increasingly crowded market places and enhancing firm performance and overall supply chain performance. This has resulted in increased attention of managers, consultants and business owners towards proper supply chain management in business organizations (Tan et al, 2008).

The early attempts of empirical research in SCM have been limited at developing instruments capable of measuring SCM practices. Most recently, Gibson et al., (2006), Alvarado et al., (2011), and Handfield, (2002) have focused their research efforts into exploring the relationship between practices of SCM and organizational performance. They have used financial and market criteria to operationalize organizational performance (return on investment, market share, profit margin on sales, the growth of return on investment, the growth of sales and the growth of market share). Also, they investigated the relationship among SCM practices, operational performance and SCM-related organizational performance. These studies and others have produced various results due to operationalizing the performance of the organization subjectively and objectively. This has



been attributed to the interdisciplinary origin of SCM, conceptual confusion, the evolutionary nature of SCM concepts and environmental difference where organizations operate. According to Mentzer, et al., (2001), cultural, social and economic aspect of each country and the organizations influence the relationship between supply chain management practices and its performance and organization performance.

On the other hand, much of the current empirical studies in SCM focused on their either upstream or downstream side of the supply chain or certain aspect of the SCM. On the supplier side; Handfield and Bechtel, (2002) identified role of relationship with supplier in improving supplier responsiveness and Chen and Paulraj, (2004) analyzed the antecedence and consequences of buyer-supplier relationship. 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 and explore the relationships between supplier management practices, customer relations practices and organizational performance. 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; 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, Lawson, & Squire, 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 practices, 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 on the Effect of SCM on firm performance from perspectives of strategic supplier partnership, customers relationships, level and quality of information sharing, and internal lean practices on organizational performances that incorporated forward and backward integration on beverage industry in Ethiopia specifically in East African Bottling S.C.

Therefore, for the effort to achieve generalization of the causal relationship between SCM and firm performance, this paper is to contribute to the debate by testing the relationship between SCM measurements and organizational performance in the case company.

## **1.3 Objective of the study**

### **1.3.1 General objective**

The general objective of this study is to identify effect of SCM on organizational performances.

### **1.3.2 Specific Objectives**

- i. To identify effect of Strategic Supplier Partnership on organizational performance;
- ii. To analyze effect of Customer Relationship on organizational performance;
- iii. To examine effect of Level of Information Sharing on organizational performance
- iv. To examine effect of Quality of Information Sharing on organizational performance; and
- v. To analyze effect of Internal Lean Practices on organizational performance.

## **1.4 Research questions**

- What is effect of Strategic Supplier Partnership on organizational performance?
- What is effect of Customer Relationship on organizational performance?
- What is effect of Information Sharing on organizational performance?
- What is effect of Quality of Information Sharing on organizational performance?
- What is effect of Internal Lean Practices on organizational performance?

## **1.5 Research Hypotheses**

H1: Supplier strategic partnership has positive effect on performance of East African Bottling Share Company.

H2: Customer relationship has positive effect on performance of East African Bottling Share Company.

H3: Level of information sharing has positive effect on performance of East African Bottling Share Company.

H4: Level of information Quality has positive effect on performance of East African Bottling Share Company.

H5: Internal lean practice has positive effect on performance of East African Bottling Share Company.

## **1.6 Scope of the study**

This study intends to identify Effect of supply chain management practices on organizational performance. For this objective the researcher used practice of supply chain management in East African Bottling Share Company, head office, Addis Ababa. This study is delimited to only supply chain management department practices and organizational performance. The supply chain management practices that are included in the study are strategic supplier partnership, customer relationship, level of information sharing and quality of information sharing and extent of internal lean practices.

## **1.7 Significance of the Study**

This study will help the management of East African Bottling Company, specifically department heads at supply chain management of the organization, in the process of decision making. The study will provide extensive knowledge for the researcher on supply chain management practices and their impact on organizational performance. The study will be useful in building up ground work for further research on the same area or other related fields.

## **1.8 Organization of the Study**

The rest of the paper is organized as follows: The second chapter is about literature reviews which include theoretical literature, empirical literatures and conceptual frame work. The third chapter discusses about methodology of the study which includes description about

study area, research design, data source and collection method, sampling techniques and sample size determination, method of data analysis, reliability and validity analysis, and ethical consideration. The fourth chapter presents result and discussion. The last chapter, fifth, chapter is about conclusion and recommendation.

# **CHAPTER TWO**

## **REVIEW OF RELATED LITERATURE**

### **2.1 Theoretical Review**

#### **2.1.1 Supply Chain Management**

Christopher (2003) Supply Chain is a network of various organizations involved both through upstream and downstream linkages in different kinds of activities and processes. It is the task of integrating organizational units along a supply Chain and coordinating materials, information and financial flows in order to fulfill customer demands with the aim of improving competitiveness of the supply chain as a whole. 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 organizations involved, together with the internal function of an organization itself. The upstream parties, as being described by (Handfield, 2002) consists of an organization'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 SC and the value it carries will be minimal. While managers in a supply Chain involving external organizations have to deal with the people outside of its own company, in this situation mutual understanding have to be reached between the managers of departments inside the company itself. However, the term supply Chain Management has been used to describe the planning and control of materials and information flows as well as logistics activities not only internally within a company, but also externally between

companies (Cooper, Lambert, & Janus, 2007). Due to the increasing number of players and forces, a supply Chain may develop into a supply network which will require a more complex and complicated management system.

Mentzer, (2001) defined Supply chain management as the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole. SCM focuses on how firms utilize their suppliers' processes, technology, and capability to enhance competitive advantage. Supply chain management (SCM) enhances competitive performance by closely integrating the internal cross-functions within a company and effectively extending them to the external operations of external partners to be successful (Kim, 2006). Supply chain is a set of three or more entities directly involve in the upstream and downstream flows of products services, finances and information from a source to a customer (Handfield, 2002).

The idea of improving products and services through Supply chain management; including to reduce the production time and cost without compromising the product quality, is that the managers have to work cooperatively with other organizations in the Supply chain (Handfield, 2002). Eventually, through mutual understanding between them and ability to reduce the risks of uncertainties in production processes, higher degree of efficiency can be achieved. Though originally it was used mainly in manufacturing industry to improve responsiveness and flexibility, and has been found to also improve organizational competitiveness (Gunasekaran, Patel, & McGaughey, 2003), Supply chain management has now been recognized by many to be an important strategic tool for organization's efficiency and to gain competitive advantage.

### **2.1.2 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.

### **2.1.3 Supply Chain Management as a Management Philosophy**

Supply chain management as management philosophy takes a system approach to viewing the supply chain as a single entity. This means that the partnership concept is extended into a multi firm effort to manage the flow of goods from suppliers to the ultimate customer. Each firm in the supply chain directly or indirectly affects the performance of other supply chain members, as well as the overall performance of the supply chain (Cooper, Lambert, & Janus, 2007)

## **2.1.4 Supply Chain Management as a Set of Management**

### **Processes**

Supply chain management is increasingly being recognized as the integration of key business processes across the supply chain. Implementation is carried through by three primary elements; the supply chain network structure, the supply chain processes and the management components. In terms of supply chain network structure, it is important to integrate decisions related to purchasing, manufacturing, stocks, warehousing and distribution. On the other hand, it is important to design a set of standard processes which will assure rational behavior of the individuals or companies that are part of the supply chain. Last but not least, it is necessary to define control mechanism to be able to audit performance of supply chain according to the plan. This is conducted by coordinating activities and processes in order to build links between supply chain members and making the right decision. There are several organizations trying to set cross-industry standard processes such as Global Supply Chain Forum (GSCF), Supply-Chain Operations Reference Model (SCOR), Collaborative Planning, Forecasting & Replenishment (CPFR) and Rosseta Net, which can help members of a supply chain integrate efficiently. The Global Supply Chain Forum defines supply chain management as “the integration of key business process from end user through to original suppliers that add value to customers and stake holders” (Lambert, 2005).

## **2.1.5 Supply Chain Management versus Logistics**

Halldorsson & Larson (2000) stated that supply chain management relative to logistics can be viewed in four different ways: Traditionalist, Re-Labeling, Unionist and Intersectionist. Some authors do not distinguish between supply chain management and logistics, they just interchange the names. Christopher, (2003) defines supply chain management as an extension of logistics. Logistics is essentially a planning orientation and framework that seeks to create a single plan for the flow of products and information through a business. Supply chain management builds upon this framework and seeks to achieve linkage and coordination between processes of the entities in the pipeline. Schary & Skjott-Larsen (2008) also see supply chain as more than logistics. It includes the flow of material and products to customer and more than that, it includes also the organizations that are part of



these processes crossing organizational boundaries to link their internal operations as part of this system. The scope of supply chain spans the entire set of organizations from procurement of material and product components to delivery of completed product to the first customer (Schary & Skjott-Larsen, 2008).

## **2.1.6 Drivers of Supply Chain Development and Main Initiatives**

In today's global economy, companies face increasing pressure to reduce cost while maintaining production and quality levels to deliver results. In order to achieve these goals, companies must successfully overcome a number of challenges. As Meakem (2003), points out, free market economies and new technologies are creating new supply and demand markets around the world. Many organizations, for instance, are looking for supply from China. But good numbers of these organizations lack the information and knowledge necessary to drive more supply and production offshore. The rules of free market global competition dictate that only the strong survive. As a result, industries around the world are consolidating at a rapid rate. This in turn requires organizations to select the best suppliers and pull them into core enterprise activities. Organizations across geographies and industries are scrutinizing make-versus-buy options. And many are finding increased value in outsourcing production of goods and services.

Handfield (2002) summarizes drivers into:

1. Ever-increasing customer demand in terms of product and services cost, quality, delivery and technology as well as cycle time brought about by global competition.
2. The emergence and greater acceptance of higher order cooperative inter-organizational relationships.
3. The information revolution.

The consequence of this development is that companies are putting more and more efforts into developing new way to increase competitiveness on the market in terms of more efficient and effective supply chain management.

## **2.1.7 Practices of Supply Chain Management**

Supply chain management practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain. Tan, Kannan, & Handfield (2008) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, geographical proximity and JIT capability. According to Muhammad (2004) this variable refers to several activities or practices related to operational function of firms. It is used to measure the SCM adoption and its level practices. Related practices are divided into six dimensions namely strategic supplier partnership, customer relations practices, information sharing, information quality, lean system and postponement. In reviewing and consolidating the literature, five distinctive dimensions are selected for measuring SCM practice. The five constructs cover upstream (strategic supplier partnership) and downstream (customer relationship) sides of a supply chain, information flow across a supply chain (level of information sharing and quality of information sharing), and internal supply chain process (postponement).

### ***2.1.7.1 Customer Relationship***

Customer relationship comprises the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction (Tan, Kannan, & Handfield, 2008). 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. According to Lambert (2005) the management of customer relationships is widely recognized as an essential component of an organization because of the expected benefits likely to occur if done well and the likely detriments to arise if neglected, the determination of what exactly constitutes CRM and its implementation remains to be a prominent point of contention in CRM literature and in practice has proven to be nothing short of extreme. He further suggests that technology is a tool and to be successful, management must place its primary focus on the CRM process, the people and the procedures that make the technology effective. This is not to say that technology doesn't play a Effect in CRM or can't assist in its success. Actually, it had been observed that all customers do not

contribute equally to the firm's success; hence the goal of every firm is to identify those customers who desire and deserve special treatment so that offerings can be tailored to meet their needs while achieving the firm's profit goals for the customer.

### ***2.1.7.2 Strategic Supplier Partnership***

Strategic supplier partnership: is defined as the long term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing benefits (Stuart, 2007). 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 & Voisin, 2006). An effective supplier partnership can be a critical component of a leading edge supply chain (Noble, 2007). Raps (2005), claims that the key to success is an integrative view of the implementation process of strategy. Researchers have emphasized the strategic importance of integrating suppliers, manufacturers, and Customers. Christopher, (2003) stresses the importance of linking an innovative strategy to the company's vision and overall business strategy. Clients are shown to be key drivers of performance improvement and innovation and are the most significant factor in achieving integration in the supply chain.

### ***2.1.7.3 Level of Information Sharing***

Level of information sharing: information sharing has two aspects: quantity and quality. Both aspects are important for the practices of SCM and have been treated as independent constructs in the past supply chain management (Moberg, Cutler, Gross, & Speh, 2012). Level (quantity aspect) of information sharing refers to the extent to which critical and proprietary information is communicated to one's supply chain partner. Supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker.

#### ***2.1.7.4 Quality of Information Sharing***

Quality of information sharing includes such aspects as the accuracy, timeliness, adequacy, and credibility of information exchanged. While information sharing is important, the significance of its impact on SCM depends on what information is shared, when and how it is shared, and with whom. It appears that there is a built in reluctance within organizations to give away more than minimal information since information disclosure is perceived as a loss of power. Given these predispositions, ensuring the quality of the shared information becomes a critical aspect of effective SCM (Feldmann and Muller, 2003). Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

#### ***2.1.7.5 Lean practices***

According to Lean Enterprise Institute (2009) the term lean was coined by Krafcik in the late 80`s, even though the philosophy came to the Western world`s attention in the early 80`s as a result of competition from Japan automobile industry which offered low prices and quality products. To precisely define lean is hard and it is likely that every company exercising lean will follow their own unique course (Lewis, 2000). It is the process of removing all of the wasted time and resources in the production process. Lean can be considered a philosophy, a work culture, a technique, a management concept, a value, a methodology or an ethos (Mark, Wilson and Ram, 2009). Today, lean is evolving into a management approach that improves all the processes at each level of an organization (Womack *et al.*, 1990; Liker, 1998).

According to Bhasin and Butcher (2006) some of the common lean procurement methodologies are; Kaizen, Kanban systems and Supplier development. A long term philosophy, processes, people and right culture are essential to convert an organization into a lean enterprise (Liker, 2004; Henderson *et al.*, 1999). Long term relationships with suppliers are important elements of lean supply (Handfield, 1993). According to Liker (1996); Lathin, (2001); Ferch, *et al.*, (1998) today`s demand driven supply chains require lean procurement methods whose goals are: to eliminate waste in all procurement cycles, prevent shortages, reduce inventory investment, reduce procurement lead time and cost,

increase inventory turnover and ensure customers satisfaction. These methods ensure greater efficiency and standardization of procedures.

### **2.1.8 Organizational Performance**

Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Yamin, 2009). 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, 2008). 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 represented by constructs like, Price/Cost. It is the ability of an organization to compete against major competitors based on low price and quality (Li, 2006). The ability of an organization to offer product quality and performance that creates higher value for customers' delivery dependability. It includes the ability of an organization to provide on time the type and volume of product required by customer(s) (Li et al, 2006).

### **2.1.9 Supply Chain Management Practices and Organization Performance**

SCM practices impact not only overall organizational performance, but also competitive advantage of an organization. They are expected to improve an organization's competitive advantage through price/cost, quality, delivery dependability, time to market, and product innovation. Prior studies have indicated that the various components of SCM practices (such as strategic supplier partnership) have an impact on various aspects of competitive advantage (such as price/cost). For example, strategic supplier partnership can improve supplier performance, reduce time to market (Hanfield, 2007), and increase the level of customer responsiveness and satisfaction (power, 2001). Information sharing leads to high levels of supply chain integration by enabling organizations to make dependable delivery and introduce

products to the market quickly. Information sharing and information quality contribute positively to customer satisfaction and partnership quality (Li, 2009).

## **2.2 Empirical Reviews**

Otchere, Annan, & Anin, (2013) concluded in their studies that supply chain integration directly relates with business performance. Internal collaboration directly affects firm performance. Higher levels of integration generally lead to better performance.

Kim, (2006) found that in small firms, efficient SC integration may play a more critical role for sustainable performance improvement, while, in large firms, the close interrelationship between the level of SCM practices and competition capability may have more significant effect on performance improvement.

Flynn, Huo, & Zhao (2010) assessed the impact of three dimensions of supply chain integration (supplier integration, customer integration, and internal integration) on operational and business performance and stated that internal integration directly relates to both business and operational performance and that customer integration directly relate to operational performance. Although supplier integration is not relate directly to either type of performance, the integration of supplier and customer were related to operational performance. Internal and external integration influence each other along with performance. The effect of integration between corporate competitive capability and SC operational capability on performance improvement becomes insignificant as the developmental stage of SC integration increases (Otchere, Annan, & Anin, 2013).

Alireza *et al.* (2011) conducted study on Malaysia Electronic Industry to present a mode 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.

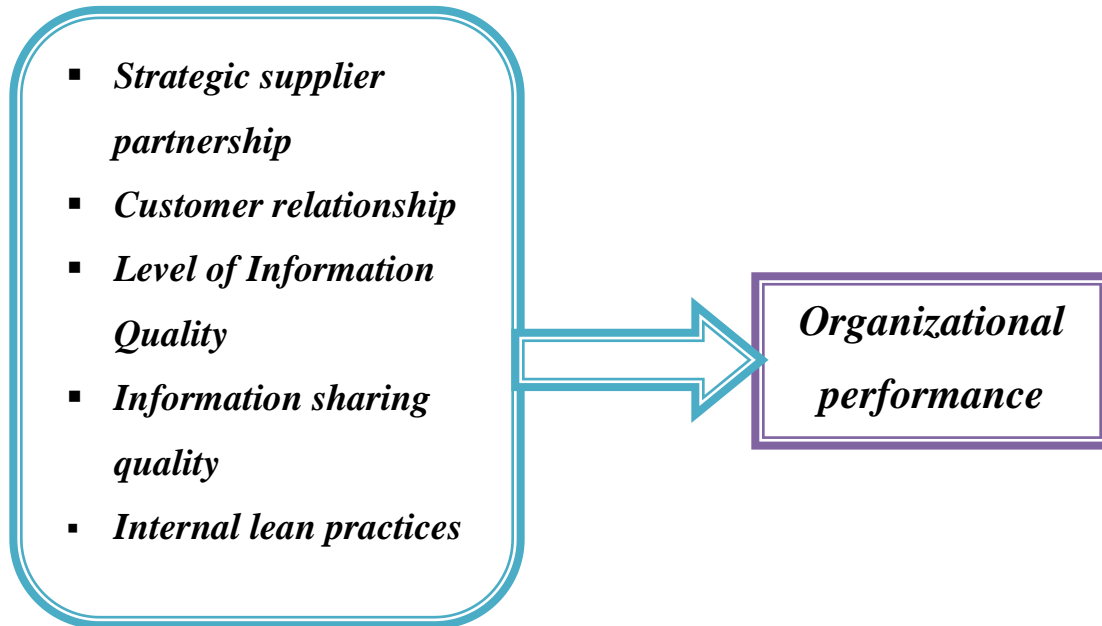
Adebayo (2012) conducted study on SCM Practices in Nigeria Today: Impact on SCM Performance. The SCM practices considered in this paper were namely strategic supplier partnership, customer relations practices, information sharing, information quality and postponement. This paper provides empirical justification 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. Mahbulul (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.



## 2.3 Conceptual Framework

*Figure 1 Conceptual Framework*



Source: (Li Suhong, Bhanu Ragu-Nathan, T.S. Ragu-Nathan, S. Subba Rao, 2006)

# CHAPTER THREE

## METHODOLOGY

### 3.1 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 both descriptive and explanatory research designs in order to address the aforementioned objectives. It is conducted on supply chain management in East African Bottling Share Company in Addis Ababa. The data for the study was quantitative in nature which was collected from primary sources. The researcher used the Cross-sectional field survey method to assess the relationship between supply chain management and firm performance. 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 independent and dependent variable of the study. The researcher selected the sample from the target population by using probability sampling particularly stratified and random sampling technique. The researcher used descriptive design in order to identify practices of supply chain in the case company. Correlational research aims to ascertain if there is a significant association between two variables (Reid, 1987). Hence, after the data are 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.

### 3.2 Population and Sampling

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 observation made to develop required data structures and information. The target populations of this study were East Africa Bottling employees in different supply chain departments, working on clerical and above roles. According to East Africa Bottling S.C, (2017) there are 147 employees including

managerial and non-managerial positions in the departments located in Addis Ababa. There are 9 departments that involve in Supply Chain Management activities. These departments include Warehouse, Store, Distribution, Procurement, Sales and Marketing, Manufacturing, Trade Service, Fleet, and Depot Management. The researcher used these departments as strata to identify practices of supply chain management practices in each department. Therefore, this study used both stratified and random sampling methods.

According to Alreck & Settle (2005) the choice of sample size is normally made after considering statistical precision, practical issues and availability of resources. On the other hand, Tabachnick & Fidell(2001) noted that samples are selected on a random basis and those samples are considered as representative of the population. A different sampling paradigm by Lowler (1984) noted that there is no a single precise way for the determinations of sample size hence there are a number of inadequacy for deciding on sample size. Malhotra & Peterson(2006) 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, to determine the sample size of the study, the researcher used Yamane's (1967) formula. He provided a simplified formula to calculate the sample size. This formula is based on a 95% desired confidence level and a 5% desired level of precision.

$$n = \frac{N}{1 + N(e)^2}$$

Where: - n = Sample size

N = population size

e = level of precision

According to the formula the sample size for the study is 107 respondents.

*Table 1 Population and sample size*

S/N.	Department	Population	Sample Size
1	Depot Management	10	8
2	Distribution	15	11
3	Fleet Management	6	4
4	Manufacturing	25	18
5	Procurement	15	11
6	Sales & Marketing	32	23
7	Store Management	15	11
8	Trade Service Management	8	6
9	Warehouse Management	21	15
	Total	147	107

### **3.3 Data type and Collection Techniques**

This study used both primary and secondary sources to undertake the study. Primary data were collected from respondents and secondary data from dissertations, reports and books with relevant literature and the internet. Primary data were used for the purposes of identifying Effect of supply chain management on firm performance. The researcher collected primary data from employees.

In order to achieve the objectives of this study, the researcher used quantitative research methods. The study used questionnaire as a data collection instrument that helps to cover larger target groups than the interview, given the quality and chance of no response.

The questionnaire has three parts, the first part explains the purpose of the questionnaire; the second part comprises of profile of respondents while the third part comprises of research questions. The questionnaire was prepared using 5 Point Likert-Scale approaches (i.e., from “Strongly Disagree to Strongly Agree”). In order to encourage respondents and maximize the chances of obtaining adequate responses, the length of the questionnaire was taken into consideration. Accordingly, respondents were asked to indicate their level of

agreement on 5 point Likert scale with the following ratings; Strongly Disagree (1), Disagree (2), neutral (3), Agree (4) and Strongly Agree (5) . The numbers were indicated in the questionnaires to provide a feel of ordinal scale measurement and to generate data suitable for quantitative analysis.

### 3.4 Method of Data Analysis

After the data are collected both descriptive and inferential statistical techniques were employed to analyze the data. The data were analyzed using SPSS version 20. The statistical tools were aligned with the objectives of the research. Inferential statistics is particularly the Pearson’s correlation were used to show the relationship and the strength/degree as well as direction of associations between variables. The other inferential statistics used were regression analysis that shows 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.

### 3.5 Model Specification

The researcher used ordinary least square (OLS) regression method to analyze the result. This regression analyses were conducted to know by how much the independent variable explains the dependent variable. The regression was conducted between new products (independent variable) and organization performance (dependent variable) measured opinion of respondents for both financial and non-financial performances. The result of the regression analysis is presented as follows.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \dots + \beta_nX_n + \varepsilon_i$$

Where

Y is dependent variable which is explained by the independent variables

$\beta_0$  is constant

$\beta_1 \dots \beta_n$  are the coefficient of the independent variables  $X_1$  to  $X_n$ .

$\varepsilon_i$  is an error term

Specifically, model for this study can be expressed as follows;

$$OP = \beta_0 + \beta_1SSP + \beta_2CRS + \beta_3ISQ + \beta_4ILP + \varepsilon_i$$

Where,

*OP=organizational performance*

*SSP= Strategic supplier partnership*

*CRS= Customer relationship*

*ISQ= information sharing and quality*

*ILP= internal lean practices*

## **3.6 Reliability and Validity analysis**

### **3.6.1 Validity**

Validity is defined as how much any measuring instrument measures what it is intended to measure. Bryman and Bell (2003) also suggested that the important issue of measurement validity relates to whether measures of concepts really measure the concept. Validity refers to the issue of whether an indicator (or set of indicators) that is devised to gauge a concept really measures that concept. Several ways of establishing validity are: content validity; convergent validity concurrent; predictive validity; construct validity; and convergent validity (Bryman and Bell, 2003). This study addressed content validity through the review of literature and adapting instruments used in previous research.

### **3.6.2 Reliability Test**

The level of reliability of the instrument that is the consistency of the variables is checked with the Cronbach's alpha statistics. Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the underlying construct (Nunnally, 1978). Cronbach's Alpha's can only be measured for variables which have more than one measurement question. Nunnally (1978) has stated that 0.5 is a sufficient value, while 0.7 is a more reasonable Cronbach's alpha. The results were extracted presented in table 2 and are more than 0.7.

*Table 2 Reliability Analysis*

Construct	Number of Item	Cronbach's alpha
<i>Strategic supplier partnership</i>	6	0.705
<i>Customer relationship</i>	5	0.721
<i>information sharing</i>	7	0.776
<i>Information quality</i>	5	0.866
<i>internal lean practices</i>	3	0.734
<i>organizational performance</i>	7	0.760

Source: Survey, 2017

### 3.7 Multicollinearity Test

According to (Kleinbaum et.al, 1988) as cited by Velnampy & Sivesan (2012), there two major approaches that utilized in order to identify the presence of multi-collinearity among independent variables. These approaches are calculation of tolerance test and variance inflation factor (VIF). Multi Collinearity exists when tolerance level is less than or equal to 0.1 and all VIF is 1/Tolerance values are above 10. The results presented for multi Collinearity in table 3 below indicate that there is no multi Collinearity among the study independent variables because tolerance is above 0.1 and VIF is well below 10. Thus the measures selected for assessing independent variables in this study, do not reach multicollinearity.

*Table 3 Multicollinearity Test*

	Collinearity Statistics	
	Tolerance	VIF
<i>Strategic supplier partnership</i>	.756	1.322
<i>Customer relationship</i>	.854	1.171
<i>information sharing</i>	.739	1.354
<i>Information quality</i>	.626	1.598
<i>internal lean practices</i>	.623	1.606

Source: Survey, 2017

### **3.9 Ethical Consideration**

Every person involved in the study was entitled to the right of privacy and dignity of treatment, and no personal harm was caused to subjects in the research. Information obtained was held in strict confidentiality by the researcher. All assistance, collaboration of others and sources from which information was drawn were acknowledged.



# **CHAPTER FOUR**

## **RESULT AND DISCUSSION**

This study tries to identify Effect of supply chain management on performance of organization in the case of East African bottling Share Company. To achieve this objective the researcher distributed 107 questionnaires to employees in Supply Chain Management related departments. 97 questionnaires were returned and analyzed with response rate 90.65%.

### **4.1 Demographic Analysis of respondents**

#### **4.1.1 Gender and Age**

Table 4 below presents gender and age of respondents with their respective frequencies and percentages. Total of 97 respondents participated in the study. Out of this respondents 69 (71.1%) of the respondents were male and remaining 28 (28.9%) of the respondents were females, this implies that large proportion of employees in Supply Chain Management department are male.

On the other hand, age categories of respondents include less than 30 years, between 31 and 40, and between 41 and 50. Largest number of respondents was between 31 years to 40 years and followed by age category of less than 30 years. This category comprises 55.7% of the respondents. 34% of the respondents were with age less than 30 years. But only 10.3% of the respondents are in an age category of years between 41 and 50. This shows that 89.7% of the respondents are at age of less than 40 years. This is an indication that majority of employees in supply chain management department are at younger age. Although the researcher intended to identify response from age above 50 years, he could not find any respondent in this category.

*Table 4 Analysis of gender and age of respondents*

Factor	Component	Frequency	Percent
Gender	Male	69	71.1
	Female	28	28.9
Age	Less than 30	33	34.0
	31-40	54	55.7
	41 – 50	10	10.3

Source: Survey, 2017

#### **4.1.2 Analysis of Departments**

This study used different departments that have direct relationship with Supply Chain Management practices. As it shown in table 5 below, these departments include Depot Management, Distribution, Fleet Management, Manufacturing, Procurement, Sales and Marketing, Store Management, Trade Service Management, and Warehouse Management. As it is shown in table 5 below, respondents in Sales and Marketing Department constitute highest number with percentage of 22.7% of total respondents in Supply Chain Management. Next to this department, Manufacturing Department constitutes second largest number. Percentage of respondents in this department is 17.5%. The third highest number of respondents is from Warehouse Management with percentage of 15.5%. As it is indicated in the table 5 below, 10.3% of respondents is from Procurement Department. This implies that activities that need largest human power in the company are in department of Sales and Marketing, Manufacturing, Warehouse Management and Procurement.

*Table 5 Analysis of Departments of Respondents*

Factor	Component	Frequency	Percent
Department	Depot Management	8	8.2
	Distribution	9	9.3
	Fleet Management	3	3.1
	Manufacturing	17	17.5
	Procurement	10	10.3
	Sales & Marketing	22	22.7
	Store Management	8	8.2
	Trade Service Management	5	5.2
	Warehouse Management	15	15.5

Source: Survey, 2017

### **4.1.3 Analysis of Experience and Education of the respondents**

The researcher collected data about education and experience of the respondents and analyzed in table 6 below. As shown in the table, 39.2% of responds have worked in the company for two to five years. Respondents that worked for 5 to 10 years constitute 29.9% of the respondents. 18.6% of respondents have worked in the company for less than two years. But only 12.4% of the respondents have a work experience of more than 10 years in the company. This implies that the company has significant turnover.

On the other hand, 67% of the respondents have educational qualification of bachelor's degree. In addition to this, 24.7% of the respondents have master's degree. But only 8.2% of the respondents have educational qualification of diploma. This implies that the employees of company have educated background that makes the company competitive.

*Table 6 Analysis of Experience and Education of the respondents*

Experience	Less than 2	18	18.6
	2-5	38	39.2
	5-10	29	29.9
	Above 10	12	12.4
Education	Diploma	8	8.2
	Bachelor Degree	65	67.0
	Masters	24	24.7

Source: Survey, 2017

## **4.2 Descriptive Analysis**

This study used descriptive, correlation and regression analysis to identify of Effect of Supply Chain Management on organizational performance in East African Bottling Share Company. The descriptive analysis was intended to identify existence of supply chain management practice in the company. The researcher presented about practices of the supply chain management in the company with their respective sub practices by using responses from employees in different departments, analyzed by using mean and standard deviation and presented by tables.

### **4.2.1 Strategic Supplier Partnership**

Level of practices of strategic supplier partnership is presented in the table 7 below by using mean of the responses and standard deviation. Respondents moderately agree that quality is first criterion in selecting suppliers with mean of 3.81. This implies that while quality may not have the utmost priority, it is still the number one criterion and the company is giving fairly high focus to quality when selecting the supplier. Since the company is in a franchise business and the main ingredient/ supply is procured from the mother company, other suppliers may not get due attention to the point of being a strategic supplier. The mean of the responses indicate that the problems of supplies are jointly solved with supplier. This implies that the company provides assistance in solving problems of supplies. Product quality of the supplier has an effect on quality of product of the company. The responses for support of company to suppliers to improve their product quality with

mean value of 3.84 indicates that the company supports suppliers to improve their product quality. Responses are neutral for involvement of suppliers in continuous improvement programs. This implies that the employees lack awareness about involvement of the suppliers in improvement programs. The responses for involvement of suppliers in planning and goal setting activities with mean of 2.24 indicate that the suppliers are not included in the goal setting and planning activities. Finally, as the responses for involvement of key suppliers in new product development with mean of 2.21 indicate the suppliers are not involves in the new product development. Generally, in average practice of strategic supplier partnership in the East African bottling Share Company is partially implemented. This implies that the company hasn't been giving much attention for strategic supplier partnership.

*Table 7 Descriptive analysis of supplier strategic partnership*

	N	Mea n	Std. Deviation
Quality is our first criterion in selecting suppliers	97	3.80 52	.57958
Problems are jointly solved with suppliers	97	3.90 72	.75114
The company supports suppliers to improve their product quality	97	3.83 51	.62384
Key suppliers are included in continuous improvement programs	97	3.19 59	.70177
Key suppliers are included in planning and goal-setting activities.	97	2.23 61	.80444
Key suppliers involve in new product development processes	97	2.20 62	.49871
<b><i>Strategic supplier partnership</i></b>	97	3.19 76	.34722

Source: Survey, 2017

## 4.2.2 Customer Relationship

Table 8 below presents descriptive analysis for practices of customer relationship. Responses with mean value of 3.96 indicated that there is frequent interaction with customers to set reliability, responsiveness, and other standards. This indicates that the company has frequent interaction with customers. The company is moderately measuring and evaluating the customers as it is indicated by mean of 3.62. This implies that the company has some way to go in giving much attention in measuring and evaluating customers because it achieving the sales target easily. The company frequently determines the future customers' expectation as the responses with mean of 3.94 indicate. This implies due to seasonal change in demand the company determine future expectations. The company provides support to customers when they seek assistance from the company like providing materials and sales promotions. This is identified from respondents with mean of 3.5. The responses with mean value of 3.95 indicate that the company periodically evaluates importance of relationship with customers. On overall, customer relationship practice has mean of 3.8 implying that the company is practicing customer relationship dimensions.

Table 8 Descriptive Analysis for Customer relationship

	N	Mean	Std. Deviation
There is frequent interaction with customers to set reliability, responsiveness, and other standards	97	3.9588	.86503
The company frequently measure and evaluate customer	97	3.6186	.63645
The Company frequently determines future customer expectations	97	3.9381	.65851
The company provides support to customers when they seek assistance.	97	3.5464	.50043
Periodically, the company evaluate the importance of relationship with customers	97	3.9485	.78224
<b><i>Customer relationship</i></b>	<b><i>97</i></b>	<b><i>3.8021</i></b>	<b><i>.36798</i></b>

Source: Survey, 2017

### 4.2.3 Level of Information Sharing

Table 9 below presents practices of level of information sharing in the company. As the mean response from employees of the company indicates with value of 3.9, the company informs trading partners in advance for change of needs. The company gives information for both suppliers and customers about the change in needs. Responses for trading partners' share of proprietary information with company with mean value of 3.5 indicate that they share very important information with the company. The trading partners give full information about the issues that affect business of the company. This implies that the company is well informed for changes to occur.

*Table 9 Descriptive Analysis for Level of Information Sharing*

	N	Mean	Std. Deviation
The company informs trading partners in advance of changing needs.	97	3.9072	.84265
Trading partners share proprietary information with the company	97	3.5016	.86603
Trading partners keep the company fully informed about issues that affect business the business of the company.	97	3.6289	1.09278
Our trading partners share business knowledge of core business processes with us	97	3.3763	1.04341
We and our trading partners exchange information that helps establishment of business planning.	97	3.8351	.82513
Exchange of information with our partners (formal or informally) is frequent.	97	3.7320	.63763
We and our trading partners keep each other informed about events or changes that may affect the other partners	97	3.5464	.67732
<b>Level of Information Sharing</b>	<b>97</b>	<b>3.5876</b>	<b>.33601</b>

Source: Survey, 2018

The responses indicated that the trading partners share business knowledge of core business process only moderately with the company. Also, the company and trading partners moderately exchange information that helps establishment of business planning. There is exchange of both formal and informal information with partners frequently. The company and trading partners share information for actions that affect one another. In general, the level of information sharing between the company and its trading partners is moderately frequent.

#### 4.2.4 Level of Information Quality

Table 10 below presents practices of level of information quality in the company. Respondents reveal that on overall the company has quality information as depicted by mean of 3.97 and standard deviation of 0.49. This indicates that the company is sharing quality information with trading partners. As the respondents confirmed, among the measures of information quality, accuracy of the information is mainly practiced one. The respondents agree that the information is accurate and has mean value of 4.2 and standard deviation of 0.83. The respondents agree with mean of 4.12 and standard deviation of 0.80 that the information shared is reliable. This indicates that the company is sharing reliable information with concerned organs. In addition to these, the quality of information shared indicates that the company uses adequate information with the trade partners. The company registered least quality of information with dimension of time. The respondents agreed that the company uses moderately timely information. Responses for this dimension have a mean value of 3.67. This implies that the company is less efficient in providing timely information when compared to other dimensions.

*Table 10 Descriptive Analysis for Level of Information Quality*

	N	Mean	Std. Deviation
Reliable	97	4.1753	.80377
Complete	97	3.8041	.79895
Adequate	97	3.9691	.87146
Accurate	97	4.2165	.83200
Timely	97	3.6701	.55381
<b>Information Quality</b>	<b>97</b>	<b>3.9670</b>	<b>.48621</b>



Source: Survey, 2015

#### 4.2.5 Internal Lean Practice

Table 11 below presents responses for practices of internal lean which is one of the practices of supply chain management used in this study. On overall respondents moderately agree with the existence of internal lean practice in the company with mean of 3.78 and standard deviation of 0.47. There are different practices related with internal lean in the company although they have different level of implementation. Among these practices existence of continuous quality improvement program is the main one. Response with mean of 4.37 and standard deviation of 0.62 indicated that the company has continuous quality improvement programs. On the other hand, the responses with mean of 3.18 indicated that the company doesn't produce customized products per customer needed. This indicates that the company produces at mass, with small exception of production intended for prestigious customers and events.

*Table 11 Descriptive Analysis for Internal Lean Practice*

	N	Mean	Std. Deviation
The company reduces process set-up time (time required to prepare or refit equipment/workstation for production)	97	3.8041	.77243
The company has continuous quality improvement programs	97	4.3711	.61778
The company produces only what is demanded by customers when needed	97	3.1753	.75014
<b>Internal Lean Practices</b>	<b>97</b>	<b>3.7835</b>	<b>.46904</b>

Source: Survey, 2017

## 4.2.6 Performance of Organization

Organization performance is used as a dependent variable in the study. Table 12 presents descriptive analysis for performance of the organization by using opinion of the respondents. Respondents indicated with a mean of 4.27 that the company has high market share in the country. Sales of the country are growing due to the sales strategies of the company. This is confirmed by the responses with mean of 4.18. The responses indicated that the same mean for overall competitive position and growth of market share. The mean for these performance measures is 4.10 that the company has good growth of market share and overall competitive positions. These implies that market share of the company is growing due to marketing strategies of the company such as advertising, new product development and customer relationship. The respondents agree that there is good return on investment with mean of 4.03 that the company is benefited from additional investment. But rate of growth in investment is not increasing as the return increases. This implies that there are diseconomies of scale in new investment. Profit margin on sales is not significant due to associated cost of sales. The responses indicated that profit margin is lowest when compared to other performance measures. On overall, the company is performing very well especially in sales performances. This is indicated by mean of 3.94 for overall performance of the company.

*Table 12 Descriptive Analysis for Organization Performance*

	N	Mean	Std. Deviation
Market share	97	4.2680	.65376
Return on investment	97	4.0309	.74237
The growth of market share	97	4.1031	.79693
The growth of sales	97	4.1856	.61796
Growth in return on investment	97	3.5773	.53687
Profit margin on sales	97	3.2887	.47782
Overall competitive position	97	4.1031	.77034
<b>Organization Performance</b>	<b>97</b>	<b>3.9367</b>	<b>.29085</b>

Source: Survey, 2017

### 4.3 Correlation Analysis

In addition to descriptive analysis, the researcher used correlation analysis to identify relationship between independent variables, practices of supply chain management and dependent variable, organization performance. This analysis included the relationship between variables, their correlation coefficients and their relationship strength. The study use Pearson correlation method to conduct correlation analysis. Its coefficient is the most common tool to measure the relationship between variables. It measures the linear dependence between two variables. The coefficient is a value between +1 and -1 inclusive. A value of 1 implies that a linear equation describes the relationship between the two variables perfectly, i.e. the first variable increases in the same proportion as the second one. A value of -1 implies that all data points lies on a line for which if the first variables increases the second have a perfectly proportional decrease. A value of 0 implies that there is no linear correlation between the variables. The other values are a mean term between these results. An important aspect to be considered is that the Pearson correlation coefficient presupposes that the variables are normally distributed. So in order to verify if this is valid for the studied sample test for normality was made for each of the variables.

Assumption of Normality test was conducted and annexed. The study identified the correlation between independent variables and dependent variable, performance of the organization. As it is presented in table 13, correlation matrix calculated by using Pearson correlation indicates that strategic supplier partnership and operational performance are positively related. Their relationship is significant at level of 1%. This indicates that strategic supplier partnership in the company is positively and significantly contributing the performance of the organization.

On the other hand, customer relationship is positively and significantly correlated with performance of the organization. The correlation coefficient between customer relationship and performance of the organization is 0.672 and significant at significance level of 1%. This implies that the strategies of customer relationship management are positively contributing to the performance of the organization.

*Table 13 Correlation Analysis*

	OP	SSP	CRS	LIS	LIQ	ILP
OP	1					
SSP	.720**	1				
CRS	.672**	.065	1			
LIS	.528**	.316**	.108	1		
LIQ	.341**	.239*	.191	.383**	1	
ILP	.029	.361**	-.199	.011	.413**	1

\*\*Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Level of information sharing has positive significant correlation with performance of an organization with a significance level of 1%. The correlation coefficient between level of information sharing and operational performance is 0.528 indicating that increase in level of information sharing results in increasing performance of an organization significantly. Level of information quality is significantly increasing performance of an organization with significance level of 1% and correlation coefficient of 0.341. This implies that the organization is efficiently using quality information that results in better performance.

But internal lean practice has insignificant effect on performance of an organization.

## **4.4 Regression Analysis**

In addition to descriptive and correlation analyses, the researcher used regression analysis to identify Effect supply chain management on organization performance. This section of the study presents the results and discussions of the regression analysis. So far, the study established a framework of literature review and data analysis of descriptive statistics was described for the practice of supply chain management in selected company. To investigate the significant factors of supply chain management, multiple regression model were computed. The multiple regression model of the study was estimated by linear regression model by using ordinary least square (OLS) method. This analysis enabled the researcher

to test hypotheses and reach at a conclusion for effect of individual variable on the dependent variable.

Test of Linearity and Homoscedacity assumptions were conducted and annexed.

*Table 14 Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721 <sup>a</sup>	.5240	.4894	.03578

a. Predictors: (Constant), ILP, LIS, CRS, SSP, LIQ

Source: Survey, 2017

As stated in the model summary table 14 above R squared in the model is 0.52 that indicates that 52 percent of variability in performance of the organization is explained by the changes in the independent variables used in the model. This implies that supply chain management practices of the company are affecting the performance of the company especially marketing performance.

*Table 15 ANOVA*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.0775	5	.01938	15.1440	.007 <sup>b</sup>
	Residual	0.7042	91	.00128		
	Total	0.1479	96			
a. Dependent Variable: OP						
b. Predictors: (Constant), ILP, LIS, CRS, SSP, LIQ						

Source: Survey, 2017

The overall significance of the model presented in ANOVA table 15 above, when measured by F statistics of 15.14 and P-values of 0.007 indicates that the model is well fitted at 1 percent significance level. This implies that the model used for the study is appropriate.

Table 16 Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
<b>(Constant)</b>	0.880	0.092		9.565	0.070
<b>SSP</b>	0.642	0.093	0.651	6.903	0.001
<b>CRS</b>	0.540	0.082	0.577	6.585	0.002
<b>LIS</b>	0.506	0.097	0.507	5.216	0.042
<b>LIQ</b>	0.707	0.073	0.746	9.685	0.000
<b>ILP</b>	0.037	0.076	0.06	0.487	0.623

a. Dependent Variable: OP  
Source: Survey, 2017

## 4.5 Hypotheses Summary

Table 17 Hypotheses Summary

Hypothesis	Significance Level	Decision
Ho: Supplier strategic partnership has no effect on performance of an East African Bottling share company	0.001	Reject
Ho: Customer Relationship has no effect on performance of an East African Bottling share company	0.002	Reject
Ho: Level of information sharing has no effect on performance of an East African Bottling share company	0.042	Reject
Ho: Level of information Quality has no effect on performance of an East African Bottling share company	0.000	Reject
Ho: Internal lean practice has no effect on performance of an East African Bottling share company	0.623	Accept

Source: Survey, 2017

Table 17 above summarizes the hypothesis of the study. The researcher used 5% significance level to reach at decision. As it is indicated in the table, the researcher cannot accept null hypothesis except null hypothesis of internal lean practice has no effect on performance of an East African Bottling share company. Other hypotheses are as expected they have positive and significant effects on performance of the organization.

## **4.6 Discussion**

The researcher identified the Effect of supply chain management practices on performance by using multiple regression models. The independent variables used to identify practices of supply chain management are supplier strategic partnership, customer relationship, level of information sharing, level of information quality, and internal lean practices.

This study was conducted with an objective of identifying Effect of supply chain management on performance of an organization in the case of east African bottling company. The researcher used supply chain practices such as supplier strategic partnership, customer relationship, level of information sharing, level of information quality and internal lean practices as independent variables.

As a result of regression analysis in the table 16 shows, there is positive relationship between supplier strategic partnership and organizational performance with coefficient of 0.642 and significance level of 1%. This implies that the partnership with the strategic suppliers is highly contributing to performance of the organization by increasing the effectiveness of the organization. According to Tan *et al.*, (2002) strategic supplier partnership enables an organization 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. Chau (2007) reached the conclusion of strategic supplier partnership has been reported to yield organization-specific benefits in terms of financial performance. Advanced design

and logistic links with suppliers are related to better-performing plants. Strategically aligned organizations can work closely together and eliminate wasteful time and effort.

Customer relationship is significantly affecting the performance of the organization. Effect of the customer relationship is positive and significant on the performance at significance level of 1%. 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. (H, Padmanabhan, & Whang, 2007) also identified that customer relation practices lead to significant improvement in organizational performance. It enables to manage customer complaints, building long-term relationships with customers, and improving customer satisfaction. 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.

Another practice of supply chain management is level of information sharing is one which has strong positive effect on organizational performance with coefficient 0.506 and significant at 5%. 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. Kroes & Ghosh (2010) stated that the higher level of information sharing is associated with the lower total cost, the higher-order fulfillment rate and the shorter-order cycle time. 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.

Level of information quality has positive significant impact on performance of the organization with significance level of 1% and coefficient of 0.707. This finding is consistent with the work of Child house and Towill (2003). The empirical findings of the study 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. Supply chain partners who exchange information regularly are able to work as a single entity. They can understand the needs of the end customer better and hence can respond to market change quicker.

Unlike other components internal lean practice has positive but insignificant effect on performance of the organization. But White (1993) describes that production of lean and timely is a production system that aims to optimize processes by reducing waste and other inefficient factors. This has an impact on the organizational performance in long term. But in the case of the company this has insignificant effect because the company used mass production.

# CHAPTER FIVE

## SUMMARY OF MAJOR FINDINGS, CONCLUSION, AND RECOMMENDATIONS

### 5.1 Summary of Major Findings

This study was conducted with objective of identifying effect of supply chain management on performance of organization in the case of East African Bottling Company. The researcher used supply chain management practices such as supplier strategic partnership, customer relationship, information sharing level, information sharing quality and internal lean practice as independent variables and performance of the company as a dependent variable. Primary data is collected from employees of the company through semi-structured questionnaires. The researcher used Ordinary Least Square regression method, Pearson Correlation analysis and descriptive analyses to achieve aforementioned objectives. This study identified effect of individual practices of supply chain management on performance of the company. This study found that supplier strategic partnership has significant positive effect on performance of the organization through selecting few but very important suppliers that makes cost effective. In addition to this, the company has customer relationship that positively and significantly affects performance of the company by creating greater customer loyalty, repeat purchase and willing to pay additional prices for new product forms that will guaranty in increasing market share. As information is great asset to company performance, it is positively and significantly contributing to the performance of the company by lowering total cost through the higher-order fulfillment rate and the shorter-order cycle time. This study found the level information quality is positively and significantly affecting performance of the company by integrated and effective supply chain. According to this study internal lean practice has insignificant but positive effect on performance of the company.

## **5.2 Conclusion of the study**

Based on finding of the study the researcher reached at the following conclusions.

Supply chain management positively and significantly affects performance of an organization. Efficient supply chain management helps an organization to achieve better performance by practicing better supply chain management. Individually, strategic supplier partnership helps organizations in increasing their performance by focusing on only few and very important supplier. Customer relationship is another factor in increasing performance of the organization by creating good relationship with customers which then creates loyalty, increased purchase and accepting premium prices that result in higher market share. Level and quality of information sharing positively and significantly affect performance of the organization by lowering cost of doing business and increase responsiveness to dynamisms in the market and the general environment. But, company lean practice has little to insignificant effect on performance of the company, highly due to the company's use of mass and homogeneous production. Which establishes, for companies that use mass production, lean practices may not have significant effect on their production, efficiency and outputs.

## **5.3 Recommendations**

Based on the findings and conclusions, the researcher forwards the following recommendations.

- The organization, organizations at large, has to focus on supply chain management practices in order to increase their organizational performance by establishing the practices at company, department and staff levels.
- In order to make supply chain management of the company efficient and effective, companies have to develop strong strategic supplier partnership strategies by focusing on key and very important suppliers.
- Since level of information sharing and quality have significant effect on performance of the organization, companies have to foster means to provide and receive accurate, reliable, and timely information to trading partners by utilizing modern ICT, giving due focus to the supply side of information.

## **5.4 Limitation and Further Studies**

Although this study makes significant contributions to academic research and practices, it has several limitations that open up avenues for future studies. First, the researcher conducted this study using East African Bottling Share Company and thus the findings are more meaningful in this company context. Hence, it is not clear how supply chain practices are used with competitive strategies to improve performance in different contexts, such as in different organizations. Future studies can investigate this issue in other companies or conduct cross-company studies. Second, this study used a cross-sectional design and cannot reflect the lag time or long-term effects of supply chain practices on performance. Therefore, future studies could conduct longitudinal studies to examine the relationship between supply chain practices and performance. Third, this study only examined the moderating effect on the relationship between supply chain management practices and organizational performance. Future studies could investigate the causal effects of competitive strategies on the qualitative facets of supply chain management. For example, they could explore what kinds of supply chain practices, such as types of information sharing, should be emphasized under various strategies. Finally, by focusing on the company, the researcher developed a broad picture of the relationship between supply chain management practices and company performance. However, this relationship may not be the same for all companies, industries or regions. Future research should investigate the effects of these contextual factors on competitive strategies, supply chain practices and company.

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# APPENDIX

## Annex I: Questionnaire

*Dear Sir/Madam*

**RE: REQUEST FOR PARTICIPATION IN A RESEARCH STUDY**

I am a Postgraduate student at St. Mary's University. As a partial fulfillment for the Masters of Business Administration in General Management, I am conducting a research study on "Effect of Supply Chain Management in Company Performance: in the case of East African Bottling S.C."

Therefore, I would appreciate if you could spare a few minutes of your time to answer the following questions in regard to how supply chain management (SCM) practices influence company performance in your organization. All the information provided will be purely used for academic purposes and your identity will be treated with utmost confidentiality.

Your assistance will be highly appreciated and thank you in advance.

Yours faithfully,

**Amanuel Belay**

**Mobile Number: +251911058973**

### Part I: Demographic Information

1. Gender:      Male                       Female

2. Age in years:

Less than 30  31-40  41 – 50  above 50

3. Your Current Position: \_\_\_\_\_

4. For how long have you held the position (in years):

Less than 2  2-4  5-10  Above 10

5. Level of Education

Diploma  Bachelor Degree  Masters  PhD

**Part two: Supply chain management practices in the Organization**

1. To what extent do you agree about practices of strategic supplier partnership which are stated in following statements? (Please mark X in appropriate box to your opinion)

Where; SD = strongly disagree, D = disagree, N = neutral A=agree and SA = strongly agree

<b>Strategic supplier partnership:</b>	SD (1)	D (2)	N (3)	A (4)	SA (5)
Quality is our first criterion in selecting suppliers.					
Problems are jointly solved with suppliers.					
The company supports suppliers to improve their product quality.					
Key suppliers are included continuous improvement programs.					
Key suppliers are included in planning and goal-setting activities.					
Key suppliers involve in new product development processes.					
<b>Customer relationship:</b>					
There is frequent interaction with customers to set reliability, responsiveness, and other standards					
The company frequently measure and evaluate customer satisfaction.					

The Company frequently determines future customer expectations					
The company facilitates customers' ability to seek assistance from us.					
Periodically, the company evaluate the importance of relationship with customers					
<b>Level of information sharing:</b>					
The company informs trading partners in advance of changing needs.					
Trading partners share proprietary information with the company					
Our trading partners keep us fully informed about issues that affect our business					
Our trading partners share business knowledge of core business processes with us					
We and our trading partners exchange information that helps establishment of business planning.					
Exchange of information with our partners (formal or informally) is frequent.					
We and our trading partners keep each other informed about events or changes that may affect the other partners					
<b>Level of information quality:</b> Information exchange between our trading partners and the organization is:					
Timely					
Accurate					
Complete					
Adequate					
Reliable					
<b>Internal lean practices:</b>					
The company reduces process set-up time (time required to prepare or refit equipment/workstation for production)					

The company has continuous quality improvement programs					
The company produces only what is demanded by customers when needed					

2. **Organizational performance:** is how well an organization achieves its market-oriented goals as well as its financial goals in the past five years?

To what extent do you agree on the organizational performance of the company based on the following parameters? (Please mark X in appropriate box to your opinion)

<b>Organizational performance</b>	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Market share					
Return on investment					
The growth of market share					
The growth of sales					
Growth in return on investment					
Profit margin on sales					
Overall competitive position					

## Annex III: Normality Test

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
OP	.123	97	.101	.960	97	.115
SSP	.131	97	.120	.952	97	.181
CRS	.200	97	.215	.925	97	.249
LIS	.108	97	.137	.973	97	.148
LIQ	.167	97	.218	.940	97	.242
ILP	.245	97	.091	.857	97	.113

a. Lilliefors Significance Correction

## Annex IV: Linearity test, SSP

			Sum of Squares	df	Mean Square	F	Sig.
OP *	Between	(Combined)	1.252	12	.104	1.276	.248
SSP	Groups						
		Linearity	.003	1	.003	.038	.846
		Deviation from Linearity	1.249	11	.114	1.389	.193
	Within Groups		6.869	84	.082		
	Total		8.121	96			

## Annex V: Linearity test, CRS

			Sum of Squares	df	Mean Square	F	Sig.
OP *	Between	(Combined)	1.349	7	.193	2.533	.020
CRS	Groups						
		Linearity	.514	1	.514	6.751	.011
		Deviation from Linearity	.836	6	.139	1.830	.102
	Within Groups		6.772	89	.076		
	Total		8.121	96			



## Annex IV: Linearity test, LIS

			Sum of Squares	df	Mean Square	F	Sig.
OP * LIS	Between Groups	(Combined)	1.148	9	.128	1.592	.130
		Linearity	.134	1	.134	1.671	.199
		Deviation from Linearity	1.014	8	.127	1.582	.142
	Within Groups		6.973	87	.080		
	Total		8.121	96			

## Annex V: Linearity test, LIQ

			Sum of Squares	df	Mean Square	F	Sig.
OP * LIQ	Between Groups	(Combined)	1.740	9	.193	2.635	.010
		Linearity	.943	1	.943	12.855	.001
		Deviation from Linearity	.797	8	.100	1.358	.226
	Within Groups		6.381	87	.073		
	Total		8.121	96			

## Annex V: Linearity test, LIQ

			Sum of Squares	df	Mean Square	F	Sig.
OP * ILP	Between Groups	(Combined)	.660	4	.165	2.035	.096
		Linearity	.007	1	.007	.086	.770
		Deviation from Linearity	.653	3	.218	2.685	.051
	Within Groups		7.461	92	.081		
	Total		8.121	96			

## Annex VI: Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.444	.294		1.510	.134
SSP	.124	.055	.258	2.238	.028
CRS	.019	.049	.043	.395	.694
LIS	.102	.058	.207	1.770	.080
LIQ	.046	.043	.133	1.048	.297
ILP	.012	.045	.034	.271	.787

a. Dependent Variable: AbsUt