IMPACT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN FOOD PROCESSING FIRMS OF DAR ES SALAAM, TANZANIA

IMPACT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN FOOD PROCESSING FIRMS OF DAR ES SALAAM, TANZANIA

By

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A Dissertation Submitted on Partial Fulfilment of the Requirements Award of the Degree of Masters of Science in Procurement and Supply Chain management (MSc) of Mzumbe University

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled Impact Of Supply Chain Management Practices on Organizational Performance in Food Processing Firms Of Dar Es Salaam, Tanzania; in partial/fulfilment of the requirements for award of the degree of Master of Science in Procurement and Supply Chain Management of Mzumbe University, Tanzania.

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DECLARATION AND COPYRIGHT

I, Asha A. Mollel, declare that this dissertation is my own work and to the best of my knowledge. It has never been submitted for the award of any degree in any University. Even though the community help to prepare this report any error or fault by omission or commission remain entirely my own and should not be associated with them.

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First of all I would like to give thanks to Allah for helping me writing this research dissertation.

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DEDICATION

This dissertation is dedicated to my beloved parents, Mr and Mrs Ahmad Mollel and to my beloved sister, Hamida Ahmad Mollel and brother Abdul Ahmad Mollel without whose caring support it would not have been made possible. Not forgetting to the loving memory of my beloved grandmother, Hamida Hassan Machingaomo, who passed on a love of reading and respect for education and supported me spiritually and morally.

LIST OF ABBREVIATIONS

3PLs	-	A third-party logistics provider
CRM	-	Customer relationship management
E-procurement	-	Electronic procurement
EDI	-	Electronic Data Interchange
ERP	-	Enterprise Resource Planning
GDP	-	Gross Domestic Product
ICT	-	Information and Communication Technology
IT	-	Information Technology
KBV	-	Knowledge –Based View
Les	-	Large Enterprises
R&D	-	Research and Development
RBV	-	Resource-Based View
ROA	-	Return on Assets
ROI	-	Return on Investment
SMEs	-	Small Medium-sized Enterprises
SCM	-	Supply Chain Management
USA	-	United States of America
VMI	-	Vendor-Managed Inventory

ABSTRACT

The main purpose of conducting this study was to investigate the understanding, practical implementation of SCM practices towards organizational performance in food processing firms located at Dar es Salaam, Tanzania. Six key dimensions of SCM practices (strategic supplier partnership, customer relationship, quality and level of information sharing, outsourcing and lean practices) were used as independent variables accompanied by different measurement instruments under each variable, while market and operational/financial performance variables were used to measure the organizational performance.

Data were obtained via questionnaires from a sample of 53 food processing firms. The survey sample frame was based on three sources; Tanzania Federation Drug Authority (TFDA), Tanzania Bureau of Standards (TBS) and ministry of industry and trade. Quantitative methods were applied to analyse data. Chi-square test was used to assess the understanding and practical implementation of SCM practices in Tanzanian food processing firms, while Spearman's correlation and Kruskal Wallis test were used to examine the relationship between supply chain management practices and organizational performance.

From the study findings, it showed majority of Tanzanian food processing firms understood the concept of implementing SCM practices. The level of practical implementation was uneven practiced that is only strategic supplier partnership, customer relationship, quality of information sharing and lean practices were practiced at great extent. Practices such level of information sharing and outsourcing were lowly practiced. In addition to organisational performance, the result showed that SCM practices of strategic supplier partnership, customer relationship, level and quality of information sharing and lean practices were positively related to organizational performance, except outsourcing. Finally the researcher made some recommendations for further studies in the field of supply chain management practices implementation.

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CHAPTER ONE

BACKGROUND INFORMATION

1.1 Introduction

This chapter indicated the general overview on the concept of supply chain management, current trends of food processing industry in the global market followed by brief explanations of Tanzanian food processing industry along with the challenges it face, statement of a problem, the research questions, research objectives. The chapter also discussed the significance of study.

1.2 Background of the study

The concept of supply chain management gained some grave popularity since as early as 1990s where during that time the world experienced the era of intensive competition in the global market to deliver products or services at a right place and at the right time. Many initiatives to improve the performance in supply chains have revolved ever since by different industries. Examples of early adopter of SCM practices who made breakthrough performance in their organizations include Hewlett-Packard, West Co., Becton Dickinson, Baxter, Whirlpool, Wal-Mart, Georgia-Pacific Corp. Just to mention the few (Qayyum*et al*., 2013; Lummus and Vokurka, 1999).

Recently, many firms have shown great interest in supply chain management because they finally realized can no longer compete effectively in isolation of their suppliers or other entities in the supply chain since better management of the supply chain improve customer delivery and at the same time reduce overall costs. From his research findings Christopher (1998) found out that currently businesses no longer compete as solely autonomous entities, but rather as supply chain. Therefore effective management of supply chains is seen as a must strategy for the survival of any company for purpose of staying competitive in the local market as well as in the global market. This involves managing the marketing link to the supply chain and linking supply chain strategies to the overall company strategy. This has far been made possible by the developments of latest communication technologies in information and communication technology (ICT) such as use of electronic data interchange (EDI) and

the internet that enable frequent and quick exchange of huge amounts of information for coordination purposes from end-consumer demand to the upstream stages of the supply chain (Lummus and Vokurka, 1999; Van de Vorst, 2004; Van de Vorst *et al*., 2007; Basnet*et al*., 2000).

For more than a decade now, SCM has shown its competitive advantage towards the success of any company. Some of predominantly benefits of SCM that are currently being discussed in the literature include lower inventory levels, better responsiveness and lower throughput time (Jharkharia, and Shankar, 2004).

1.2.1 The current trends of food processing industry in the global market

Food industry is seen as the most important economic sector that directly impacts the daily life of the entire population society (Farahani, 2011).Currently, there is an intensive global competition in the food industry due to the fact there is an increase of international trade and foreign production that challenges local firms that previously relied on national regulations to protect them from international competition. Example after withdrawal of state control in 1990s, Tanzania has witnessed a number of firms that where run by local investors performing inefficiently or going out of the business because they could hardly withstand competition from local multinational invested companies and importers (Ruteri and Xu, 2009). There are some dramatic changes in the downstream of food processing, where food retailers have become more concentrated and powerful. Already, today, many retailers are increasingly focusing on their own private labels which will impact the distribution channels and/or product range of food processors (Hsiao, 2009).

The current debates in the society (consumer demand) with respect to food sector are mainly concern on three issues that is, food safety, quality and sustainability. Consumer demand is concerning with the safety standards in the food for their healthy being. Consumers have moved away from commodity products towards more finely differentiated, high quality, value-added products. In addition, there is an increased concern amongst consumers about the wider non-economic aspects of food consumption (sustainability) which includes environmental aspects as well as social aspects for example, Life Cycle Assessment, biodegradable packaging, employees'

health and safety, ethical trading in procurement of raw materials and animal welfare (Hsiao, 2009; Farahani, 2011).

All these trends are forcing food processors to be more innovative towards finding better and more flexible ways to cope with these unstable demands for their products (Hsiao, 2009).Therefore, there is a need for implementing SCM concept efficiently and effectively to cope with these changes since competition among the organizations is highly effected by the implementation of SCM practices (Qayyum*etal.,* 2013). Again this cannot be made possible by one party itself. Cooperation among members of supply chain is needed to fulfil market demands for responsive, low cost and high quality deliveries (Van de Vorst *et al.* 2007).

1.2.2 Overview of the Tanzanian food processing industry

Food industry is one of the largest branches of industries in Tanzania as it alone account for nearly half of total manufacturing value added (URT, 2012). According to annual report 2009/2010 statistics of Bank of Tanzania has shown almost a quarter of all registered manufacturing enterprises are in the food-processing sector. The sector provides employment to about 58,000 people, which represents about 56% of total employment in manufacturing. The formally recognized sub sectors of the food processing industry in the national statistics are beverages, sugar processing, milk processing, edible oil production, fish and meat processing, grain milling, tea and coffee, fruits and vegetables processing, bakeries and confectionery (Ruteri and Xu, 2009; Sutton and Olomi, 2012).

The industry includes micro, small, medium and large processors. Majority of micro and small food processors operate in an informal sector and use labour intensive and poor technologies, while medium and large scale industries use improved and modern technologies with large capacity output. Small and medium industries are the majority of local manufacturers of consumer goods (RuteriandXu, 2009).

Most food processors are based in Dar es Salaam and distribute their products across the country. Products are channelled through distribution centres, wholesalers and retailers. Some processors deliver directly to retail stores, and some small enterprises deliver directly to consumers (Sutton and Olomi, 2012).

The government of Tanzania accords high priority to improving the food security and nutritional standards of its people. This has been implemented through agricultural policy, food strategy and other programmes. The policy goals are 'ensuring adequacy of food supplies, maintaining safe supply, stability and security of access to available supplies by all consumers according to their nutritional needs'. Food processing is a priority sector for the government following its adoption of the Kilimo Kwanza ('agriculture first') resolution. Despite the good intentions behind current policy, the existing legislative framework has grave weaknesses. Before the Tanzania Food and Drug Authority Act was enacted, the National Food Control Commission was responsible for handling quality and safety licences for food sellers, packagers, processors and manufacturers, importers and exporters. Food processing is currently regulated by more than 17 different bodies, leading to multiple fees, a duplication of regulatory functions, delays, bureaucracy and corruption. This has made it extremely difficult for new and smaller firms to succeed in the industry (Sutton and Olomi, 2012).

1.3 Statement of the problem

The food processing industry is faced with challenges that make it difficult to compete in the local as well as global market, especially in developing countries (Morrissey, 2002). Hence Tanzania as among developing countries is not left behind (Ruteri andXu, 2009). Tanzanian food processing industry is faced with problems which impede the firms' determination to grow fast and compete in the global market, such as insufficient working premises, inadequate link with other sectors, lack of capital, lack of quality of products to access export markets, severe exposure to information asymmetries, technical known how, high transaction and organisational costs problems that are difficult to measure quantitatively, lack of research and development, lack of managerial and physical infrastructures (RuteriandXu, 2009; Mashimba and Kühl, 2014). Therefore, one way to address these challenges is to implement supply chain management practices (Hamisi, 2011).

The importance of adopting supply chain management in the company was further explained by Choy (2002) where in his research at multinational manufacturers, has

concluded by saying supply chain management practices contribute 50% to the profitability and performance of any organization. Therefore, organizations have to understand the concepts and the practices of SCM for the intention of achieving competitiveness as well as for increasing profits (Qayyum*et al*., 2013). Despite this fact, yet Tanzania food processors are still lag behind in the implementation of SCM practices in their daily operation since there is poor understanding of SCM concept among the processors thus hindering them from taping up the advantages SCM concept can offer (RuteriandXu, 2009).

The researcher had hardly found any previous studies which were specifically conducted to examine the practical implementation of SCM practices as well as their impact on the organizational performance in Tanzanian food processing industry. Most of the previous studies regarding Tanzania on supply chain management practices implementation have based on agriculture and farming industries especially in SMEs; example, Eskola (2005) has described the prevailing agricultural marketing arrangements and SCM in Tanzania, Akyoo and Evelyne (2007) have described a supply chain structure of spices in Zanzibar, MMA (2007) has assessed fertiliser supply chain information flows in Tanzania, MMA(2008) addressed value chain analysis of fresh fruit and vegetable sub sector in Tanzania, Loconto (2010) examined value chain governance for Tanzanian tea, Aloyce*et al.* (2014) examined the operational aspects of the input supply chain under national agriculture input voucher scheme (NAIVS) in Tanzania, Dome (2015) examined implementation of supplier development programs as the catalyst for empowering smallholders in supplying high-value products, just to mention the few, all these studies had basically focused on complexity of supply chain for raw agricultural products.

Therefore this study intended to answer some questions related to SCM practices in Tanzanian food processing firms by assessing the understanding and the extent of practical implementation SCM practices as well as their impact on the overall organizational performance.

1.4 Objective of the study

1.4.1 General Objective

To assess SCM practices implementation in Tanzanian food processing firms and their impact to the organizational performance

1.4.2 Specific objectives of the study

i. To investigate the understanding of SCM practices implementation among Tanzanian food processing firms
ii. To assess the level of practical implementation of SCM practices in Tanzanian food processing firms
iii. To examine the relationship between SCM practices and organizational performance in Tanzanian food processing firms

1.5Research Questions

i. To what extent do Tanzanian food processing firms understand SCM practices implementation?
ii. To what extent do Tanzanian food processing firms implement SCM practices?
iii. Is there any relationship between SCM practices and organizational performance in Tanzanian food processing firms?

1.6 Significance of the study

The study established some valued information that determined the current situation of Tanzanian food processing firms in their overall understanding, practical implementation of SCM practices and their organisational performance. This was done by using scientific methods such as Chi-square test, Spearman's correlation and Kruskal Wallis H test which were free from researcher's bias therefore the study has the potential to influence different groups in the society such as regulators and the government, business entities and academicians.

Regulators and the government

The study provided an aid to the government of Tanzania and policy makers towards their development process of improving the food industry in the country. The study came up with an understanding and encouragement to the regulatory organs, policy makers to take some necessary actions to address the importance of implementing efficiently and effectively SCM practices in food processing firms so as to improve their organisational performance and increase their competitive advantage in the global markets.

Business entities

Findings from this study indicated the performance of organisation depended on how well it implements SCM practices. The main reason to why companies struggle to accomplish in the business world is to maximise profits while minimising operation costs and this cannot be successfully achieved unless their organisational performance is higher in terms of deliver dependability, cost saving, quality products and services, forecasting accuracy, flexibility, sales growth, market share growth, profit margin, return on investment, return on assets, just to mention the few. Therefore the study demonstrated tangible benefits organisation achieved when effectively and efficiently implement SCM practices and vice versa is true.

Academicians

The study's findings provided a room to other researchers to use it as reference point to their future studies related to this subject matter. It will enable them to see the gap of what is unknown, what needs further research, elaboration and improvement. It added value to the body of knowledge in bridging the gap between theories and practical implementation of SCM practices in food processing firms.

1.7 Scope and delimitation of the study

The study was carried out in private food processing firms located at Dar es Salaam whereby the sample population was derived from both three Dar es Salaam's administrative districts that is Kinondoni, Ilala and Temeke. Eight (8) sub sectors of food processing industry that is, fish and meat processing, grain milling, fruits and

vegetables, tea and coffee, baking and confectionery, beverages, milk processing and edible oil production were selected. The primary goal of the study was to assess supply chain management practices implementation in ensuring organizational performance in food processing firms.

1.8 Limitation of the study

Confidentiality of information

Some of the respondents in the respective firms refused to provide some information in the questionnaires they were distributed with. This was because of confidentiality information companies feared could be spread to their competitors hence the researcher tried the level best to persuade them to provide such information by attaching introduction letter got from Mzumbe university to identify the researcher as their student or showing student identity card in case of self-administered distribution. However in other circumstances, some firms had completely neglected to answer the questionnaire distributed to them which reduced the sample size.

Time constraints

There was time constraint in the collection of filled questionnaires that hindered the researcher to collect some questionnaires. Some firms failed to submit their questionnaire on time which reduced the sample size. The researcher mitigated the effect of time constraints by constant reminding the selected firms for feedback through phone calls and massages or e-mails.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter aimed at giving insight to the researcher regarding the study. It included literature works from the books, articles, journals and previous studies which are relevant to SCM applications in different fields. The literature review is divided into two major parts; theoretical literature review and empirical literature review.

2.2 Definition of Key Terms

The following are the key terms used in the study. They are defined and briefly described in order to meet the purpose of understanding the study.

Supply chain

Christopher (1998) defined supply chain as "a network of organisations that are involved, through upstream and downstream linkages in the different processes and activities that produce value in the form of products and services in the hand of the ultimate consumer." (Liu, 2011)

From the Council of Supply Chain Management Professionals (2010) defined supply chain as "the material and informational interchanges in the logistical process, stretching from acquisition of raw materials to delivery of finished products to the end user. All vendors, service providers, and customers are links in the supply chain" (CSCMP, 2014).

The supply chain includes suppliers, manufacturers, distributors, retailers, and customers. The customers are the main focus of the chain, since the primary purpose of the existence of any supply chain is to satisfy customer needs, in the process generating profit for itself (Habib, 2011).

An example of a basic supply chain is shown in the figure below:

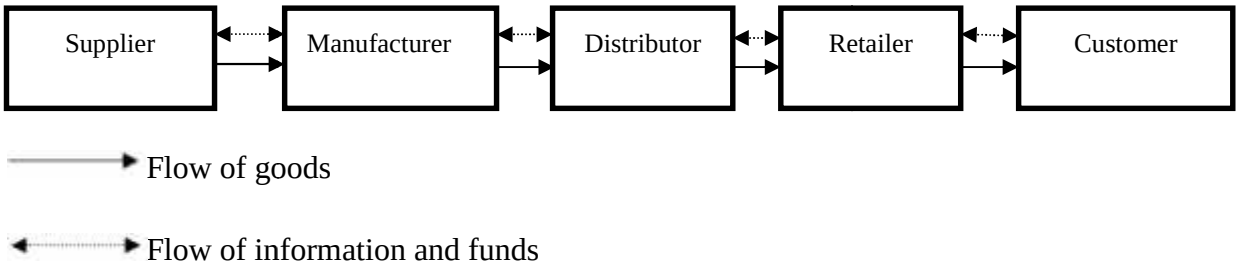

Fig. 2.1: The basic supply chain (Habib, 2011)

Supply chain management

Supply chain management has been defined differently due to its multidisciplinary origin hence there is no singled basic definition of SCM that being used universally (Croom, *et al*, 2000). Regardless the difference in definitions, you will find all these professional associations, consultants, and academicians addressing similar issues though they provide their own interpretations and areas of emphasis (CSCMP, 2014). Therefore, for the purpose of this study will use the definition of SCM developed and used by the members of The Global Supply Chain Forum (GSCF) (Lambert and Cooper, 2000) which stated as:

"the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders'.

SCM practices

SCM practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain (Adebayo, 2012). This study has used six dimensions of SCM practices include strategic supplier partnership, outsourcing, customer relationship, quality and degree of information sharing and lean practice.

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 on-going benefits” (Li *et al*., 2006).

Customer relationship is the practice of serving the customers for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction (Li *et al*., 2006).

Lean practice Shah *et al*., (2003) defined lean practices as a multi-dimensional approach that encompasses a wide variety of management practices, including just-in-time, quality systems, work teams, cellular manufacturing, supplier management, and so on, in an integrated system.

Level of information sharing: is defined as the extent to which critical and proprietary information is communicated to one’s supply chain partner (Li *et al*., 2005).

Quality of information sharing includes such aspects as the accuracy, timeliness, adequacy and credibility of information exchanged in order to make the entire supply chain more competitive and resourceful (Li, 2005).

Outsourcing is a process of having suppliers or vendors to provide goods and services which were previously provided internally (Lambert, 2004).

Organizational performance

No standardized definition has been accepted to define organizational performance by researchers (Ou*et al*., 2010). However, many studies defined organizational performance as how well an organization achieves its market-oriented goals as well as its financial goals (Li *et al*., 2006; Deshpande, 2012; Perry II, 2012; Qayyum*et al*., 2013; Arun and Kumar, 2014; Karimi and Rafiee, 2014; Karami*et al.*, 2014).

Food processing industry

Is the industry concern with the transformations of raw ingredients into food, or into other forms of food are made. It begins when the given food products has been bought

from the farmer which involves taking clean, harvested crops or butchered animal products and uses these to produce attractive, marketable and often long shelf-life food products (Okello and Were, 2014).

Food supply chain

The food supply chain involves all industries collaborating to provide final consumers with foods. The scope of food supply chain stretches from farms, as the first origins of food products, to consumer, as the last point of consumption. Food supply chain consist of three industries the agriculture and farming industries as raw materials providers; the food processing industry which transforms raw materials into finished products, and the distribution industry which carries out the logistical responsibilities (Farahani, 2011). An example of Process-based food supply chain is shown in figure 2.2 below:

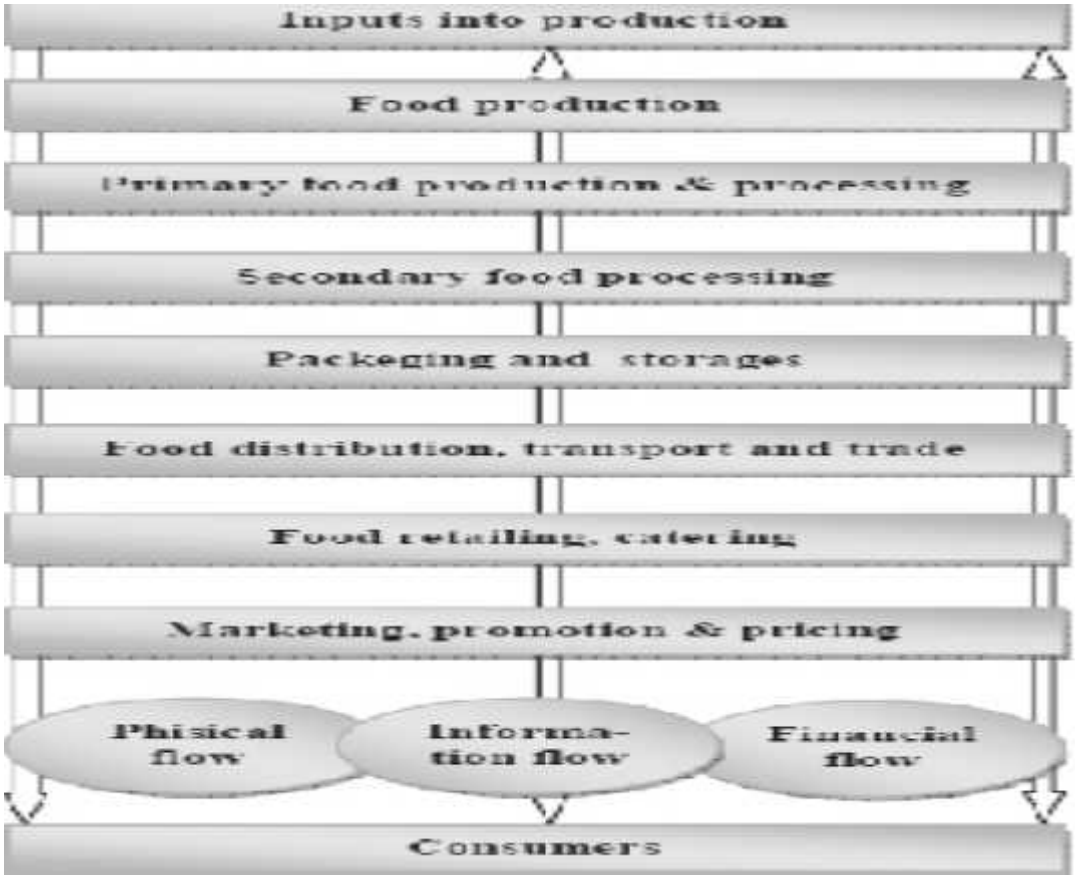

Fig. 2.2: Process-based food supply chain (Hawkes, 2009)

2.3 Theoretical literature review

This section introduced the theories related to the study. A theoretical part focused on the adoption theories and concepts that were presented by distinguished authors in relation to SCM practices implementation and organizational performance. SCM had been linked to theories borrowed from fields such as accounting, management, economics, sociology and engineering. Majority of these theories that are currently explored in SCM literature has existed for a very long time so they are actually older than the SCM concept itself (Pala, 2013). Therefore, the study adopted seven (7) common theories. These theories include institutional theory, resource-based view, knowledge-based view, resource dependent theory, customer service theory, communication privacy theory and transaction cost economic.

2.3.1 Resource-based view theory (RBV)

The resource-based view of the firm (RBV) has emerged in recent years as a popular theory of competitive advantage (Ray *et al*., 2004; Raduan*et al*., 2009). This has been witnessed in the past 20 years, where it showed the dimension of performance and/or organizational competitiveness has been analysed under the angle of the resource-based view (Ibrahim and Hamid, 2014). The RBV is a theoretical perspective that attempts to describe, explain, and predict, how firms can achieve a sustainable competitive advantage through acquisition and control over resources (Arifin and Baihaqi, 2012). In order to provide competitive advantage a resource must fulfil four criteria:

- Valuable: must have strategic value to the Organization,
- Rare (uniqueness): must be unique or rare to find amongst the current and potential competitors,
- Imperfect immutability (inimitable): must not be possible to perfectly imitate or copy the resource,
- Non-substitutability: competitors cannot substitute the resource by another alternative resource to achieve the same results (Liou*et al*., 2009).

Organization resources can be easily categories into three building block, that is, physical assets (example: technological equipment, plant), human assets (example:

deployment, competency and skill recourses), and organizational assets (example: culture, business process, and management resources) (Shamsuddin*et al*., 2013). The resources are also categorized as tangible or intangible (Curado, 2006). Furthermore, the RBV theory is used to examine the impact of organization resources and capabilities on competitive advantage that leads to overall organizational performance. Based on Ray *et al*.'s (2004) study, the resources and capabilities that are not conditioned into sustaining activities and business processes will not have positive impact on an organizational performance (Yap and Tan, 2012). Also the theory is applied to explain differences in performance within an industry. The RBV of the firm states that differences in performance happen when well succeeded organizations possess valuable resources that others do not have, allowing them to obtain a rent in its quasi-monopolist form (Curado, 2006).

In the context of SCM practices in the real environment, RBV can be used to understand the link between SCM practices and competitive advantage, that is how the application become one of organization resources and contribute to SCM excellence performance (Shamsuddin*et al*., 2013).

2.3.2 Knowledge-based view (KBV)

It has largely been accepted from different researchers in the literature to support the fact that KBV of the firm to be an extension of RBV of the firm. They argued that KBV is an outgrowth of resource-based thinking where the concept of resources is extended to include intangible assets and, specifically, knowledge-based resources (Grant, 1996; Decarolis and Deeds, 1999; Bosch- Bosch-Sijtsema and Postmab, 2004; Curado, 2006; Ketchen Jr. and Hult, 2007; Harms, 2011; Blome*et al*., 2013).

The knowledge-based view (KBV) of firm suggests firms should be analysed based on their knowledge resources (Blome*et al*., 2013) because it considers knowledge to be the most important strategic resource (Grant, 1996; Curado, 2006). In the KBV, the role of the firm and its source of unique advantage, rest in its ability to integrate the knowledge of individuals in the production process of goods and services (Grant, 1996). Grand (1997) who made significant contributions to the development of

knowledge-based view, describes the contribution of several authors from various dimensions to the development of this view. These dimensions are:

- Organizational learning- learning processes create new knowledge and form the basis of the growth of organizations through the recombination of existing resources. This perspective view organizations as multiple communities-of-practice. Each community-of-practice is engaging in experimental and interpretative activities with the environment from which sense making emerges, leading to adaptive behaviour. Organizations thus evolve based on the competing perspectives of different communities-of-practice (Eisenhardt and Santos, 2001).
- Evolutionary economics- while the economic view of operations, such as those described by transaction cost theory and classical resource-based view, promote the acquisition of factors of production that is labour and capital, for achieving organizational goals, the knowledge-based view promotes the sharing of knowledge (Lavassani1and Movahedi, 2010) which is the biggest competitive advantage of them all in today "new economy order" which driven by knowledge, is based upon knowledge, and it is moved by knowledge (Curado, 2006).
- Organizational capabilities and competencies- knowledge-based capabilities are considered to be the most strategically important ones to create and sustain competitive advantage. Superior talent is recognized to be the main creator of sustained competitive advantage in high performance firms. The capacity to learn faster than competitors could turn out to be the only sustained competitive advantage. This dynamic capability builds up over time a historical or path dependency, creating causal ambiguity (creating barriers to imitability and making it very difficult for other firms to recreate the unique historical evolution each organization develops), and it establishes a basis for competitive advantage. Capacities are difficult to duplicate. The replication of organizational routines, for example, is a very difficult and expensive process because replication itself is an organizational capability only developed through execution (Curado, 2006).

- Innovation and new product development- a firm is able to innovate new products and processes, or improve existing ones more efficiently and or effectively through the application of competitive knowledge and skills to the production of goods and services (Bosch-Sijtsema and Postmab, 2004).

In recent years the knowledge-based view (KBV) of firms has received an increasingly attention, intangible assets (especially knowledge) in the global economy are highly valued (knowledge is the King) since they recognize the aspects of fundamental economic changes as result they form the basis for creation and sustainability of competitive advantage in the firm. Example the change from manufacture to services in the majority of developed economies is based on the manipulation of information and symbols and not on the use of physical products (Bosch-Sijtsema and Postmab, 2004; Curado, 2006).

In relation to SCM practices, knowledge sharing exerted some influences towards its implementation process. Several studies have justified the influence of knowledge sharing in SCM practices implementation. This means, these studies have justified the fact knowledge to be the source of competitive advantage hence exchange of knowledge increases the supply chain (SC) value creation. Example: Kotabe*et al.* (2003) found a link between knowledge transfer in buyer-supplier relationships and the relationship length. Lin and Wu (2005) showed that collaborative relationships with customers and suppliers create new knowledge, and Hernández – Espallardo *et al.* (2010) demonstrated the importance of knowledge sharing and learning in supply chains. Hult*et al*. (2007) found that a culture of knowledge development has a positive effect on supply chain performance (Blome*et al*., 2013).

2.3.3 Institutional Theory

The institutional theory is used to examine how external pressures influence a company (Sarkis, *et al.,* 2010). According to the institutional theory "external pressure", play a major role in shaping organizational strategies associated with supply chain management. For example, strategies associated with the organizations' choices of technology adoption and supply chain collaboration (Lavassani and Movahedi, 2010).

Within institutional theory, there are three forms of isomorphic drivers a company tends to be induced to adopt certain practices, namely; coercive, normative, and mimetic. Coercive isomorphic drivers occur from influences exerted by those in power. Government agencies are an example of powerful institutions that may coercively influence the actions of an organization through, for example, fines and trade barriers. Normative isomorphic drivers cause enterprises to conform in order to be perceived as having legitimate organizational activities. Mimetic isomorphic drivers occur when enterprises imitate the actions of successful competitors in the industry, in an attempt to replicate the path of their success (Sarkis, *et al*., 2010).

In relation to SCM practices, institutional environment where the firm operate exert an influence on adoption process. Coercive pressure is seen important in imposing authorize standard in shaping firm operational conduct through regulatory mechanism. Mimetic pressure is seen as following other organization successful implementation practices. And finally, normative pressure is seen as firm accepting best practice for SCM adoption in fast changing environment (Shamsuddin*et al*., 2013).

2.3.4 Resource Dependent Theory (RDT)

The theory centres on how some firms become reliant on others for needed inputs such as goods and materials, and how firms can manage such relationships (Pfeffer and Salancik, 1978). The asymmetric interdependence that exists in these inter-firm relationships is critical to reduce environmental uncertainty for some firms. As supply chain members work together closely, they often become more dependent on each other thus developing partnerships, alliances and cooperation. Thus, RDT has a high level of value in the supply chain context. The assumptions in this theory include; commitment to partnership for mutual benefits, creating conditions favourable to be depended on by your partners to create a position of strength, trust in the partnership deal. Thus, from the perspective of best value supply chains, dependencies should be used to create mutual forbearance and trust, not to drive aggressive exploitation of one chain member by another (Mbuthia and Rotich, 2014).

2.3.5 Customer Service Theory

The theory of customer service is based on identifying and satisfying your customers' needs and exceeding their expectations. A company must be totally committed to delivering consistently high standards of service to gain and retain customer loyalty. Everyone from top management on down must be tuned into what the customer wants. Creating a customer service culture within a company can help build success. Customer satisfaction and loyalty are inextricably linked to the quality of customer service and, ultimately, to the company's profitability (Mbuthia and Rotich, 2014).

Key assumptions of the theory are; build a customer service culture, know your customers, set customer expectations and communication (Mbuthia and Rotich, 2014; Dorling, 2015).

Build a Customer Service Culture

Indoctrinate new employees into the customer service culture immediately. Provide comprehensive training programs that make them experts in their field. Ensure the front-line customer service team is personable, friendly and knowledgeable. Empower employees to make decisions that lead to customer satisfaction. Reward outstanding employee performance with recognition in the company newsletter, celebratory dinners, prizes and other perks.

Know Your Customers

Get to know your customers by profiling them. You can ask them directly, through customer comment cards and surveys at your place of business and on your website. In addition to demographic details, learn what they like and dislike, and how your product or service directly benefits them. Note their buying preferences and interests. Consider how your customer perceives quality.

Set Customer Expectations

Set realistic expectations for your customers about your products and services. Savvy marketing and exaggerated claims might attract customers, but the product or service must always accurately meet customer expectations.

Deliver on every promise to win customer loyalty. When customers are happy, they recommend your business to their friends and family. Increased levels of customer satisfaction also mean increased expectations. Look for ways you can improve your products, services and the overall customer experience.

Communication

Establish a continuing dialog with your customers. Keep them informed of special promotions that appeal to their interests. Tell your customers how much you appreciate their business by letter, email or a telephone call. Ask for your customers' opinions on a regular basis to ensure you are consistently delivering good customer service. Pay attention to their changing needs, and introduce new products and services based on customer feedback gathered from surveys. Continually explore new ways to keep your customers engaged. Focus on caring for your existing customers and new ones will naturally follow.

2.3.6 Communication Privacy Management Theory (CPM)

Communication privacy management theory is a communication theory first developed by Sandra Petronio (Petronio and Durham, 2014). The theory was started in 1991; however it truly came together as a theory in 2002 when she published her book, giving it its title. CPM theory basically addresses how individuals understand and manage their privacy and disclosure decisions (Petronio, 2002). That is, the CPM theory describes the ways in which relational actors manage their privacy boundaries and the disclosure of private information. The theory focuses heavily on the processes that people employ to determine when and how they choose to conceal or reveal private information. The theory describes the ever-present dialectic of privacy and openness within various relationship models, explains how relationships develop as public and private boundaries are negotiated and coordinated, and demonstrates how individuals regulate revealing and concealing information through communication. The theory focuses on the idea that there are not only two contradictory stances within a relationship, but that at any given moment decisions are weighed using multiple viewpoints. CPM theory considers those rules for access and protection of information by examining the following about information sharing: the types of ownership of

information, the circumstances under which sharing occurs, and the expectations of sharing (Petronio and Durham, 2014; Mbuthia and Rotich, 2014).

2.3.7 Transaction Cost Economics (TCE)

Transaction Cost Economics (TCE) had been developed to facilitate an analysis of the "comparative costs of planning, adapting, and monitoring task completion under alternative governance structures" (Williamson, 1985).Transaction cost economics (TCE) support the role of supply chain management in the organizations as it act as an economic theory that provides an analytical framework for investigating the governance structure of contractual relations within a supply chain (Garfamy, 2012).Furthermore, the Transaction cost economics (TCE) has been the most utilised theory of outsourcing. TCE is perceived to provide the best decision making tools to help organizations to decide to outsource and to prepare themselves for forthcoming outsourcing arrangements (Perunović and Pedersen, 2007).

2.4 Empirical Literature Review

This section of the literature review builds its strength on the empirical findings that have been presented by different authors following series of tests of the adoption theories that were tested in the practical world of the SCM practices implementation. The review is segmented into seven segments that is, supply chain management overview, SCM practices, organizational performance, SCM practices and organizational performance, the gap of the study from previous studies conducted in Tanzania regarding SCM adoption and implementation in food processing firms lastly but not least is the study conceptual framework (research model) and list of hypotheses.

2.4.1 Supply chain management overview

The origin of SCM concept

The term supply chain management (SCM) is relatively a new concept in the business world, (Tan *et al.*, 1999; Ardianto *et al*., 2013; Mensah *et al*., 2014) that has received an increasing attention from many academicians, consultants, and business managers

from different field (Li *et al*., 2006; Bahri - Ammari, 2013; Perry II, 2012). Thus the concept of SCM has been considered from different perspectives, such as purchasing and supply management, logistics and transportation, operations management, marketing, organizational theory, management information systems (Croom *et al*., 2000). It has been described in many terms such as; integration of suppliers, partnerships, major supply management, supplier alliances, balance supply chain, lane network, supplier of pipeline management, management value chain, value stream management and as a demand chain (Ardianto *et al*., 2013). It first appeared in logistics literature in 1982 as an inventory management approach with an emphasis on the supply of raw materials. By 1990, academics first described SCM from a theoretical standpoint to clarify how it differed from more traditional approaches to managing the flow of materials and the associated flow of information (Mensah *et al.*, 2014). The concept of SCM has been advanced mainly from two bodies of knowledge: (1) purchasing and supply management and (2) transportation and logistics management. According to purchasing and supply management perspective, SCM is synonymous with rationalization of supply base and integration of suppliers into product development and manufacturing activities. While according to transportation and logistics management perspective, the focus of SCM is on reduction of inventories both within and across the organizations in the supply chain and improvement of service level. Eventually, these two perspectives evolved into an integrated SCM that integrates all the activities along the whole supply chain (Kushwaha and Bnarman, 2008; Li *et al.,* 2006).

The basic objective of SCM

The basic objective of supply chain management is to optimize performance of the chain to add as much value as possible for the least cost possible. In other words, it aims to link all the supply chain agents to jointly cooperate within the firm as a way to maximize productivity in the supply chain and deliver the most benefits to all related parties (Finch 2006). In addition Mentzer (2001) has point out the significant importance of SCM as the systematic, strategic coordination of the traditional 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. Others authors have suggested primary objective of SCM is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple functions and multiple tiers of suppliers. Furthermore, basic objective of SCM is to synchronize the customers' requirements with materials flow to strike a balance among conflicting goals of maximum customer service, minimum inventory management, and low unit costs (Habib, 2011). According to *Li et al.* (2006) categorized the objectives of SCM into two groups; short-term and long-term objectives. Whereas 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.

The scope of SCM

The scope of SCM is functional and organizational. The functional scope of SCM refers to which traditional business functions are included or excluded in the implementation and the process of SCM. The organizational scope of SCM concerns what kinds of inter-firm relationships are relevant to the participating firms in the implementation and the process of SCM (Mentzer, *et al.*, 2001).

Functional scope of SCM

Functional scope of SCM from today perceptive encompassed all "traditional intra-business functions" (Mentzer, *et al.*, 2001). These functions will in turn influence other functions in the company. Due to its multidisciplinary origin, functions of SCM have expanded more and more over time. Studying articles published from the 1980s until now have shown this development clearly. Therefore, different researchers from the literature have come up with different functions over time. Example: Houlihan (1985), found a need for a new approach within the area of materials management in order to avoid a sub-optimal utilisation of assets. Jones and Riley (1985) claimed that "supply chain management deals with the total flow of materials from suppliers through end users" (Jones and Riley, 1985, p. 19). Stevens (1989) extended SCM to contain the information flow connected to the physical materials flow.

Lee and Billington (1992) mentioned for the first time R&D in an inventory context and argued that the involvement of R&D could reduce inventory and distribution costs.

Cooper *et al*., 1997a, p. 1) broaden the scope of inventory control and logistics by proposing an integration of business operation along the supply chain (Sandberg, 2007).Example of functional scope of SCM is illustrated in the figure below:

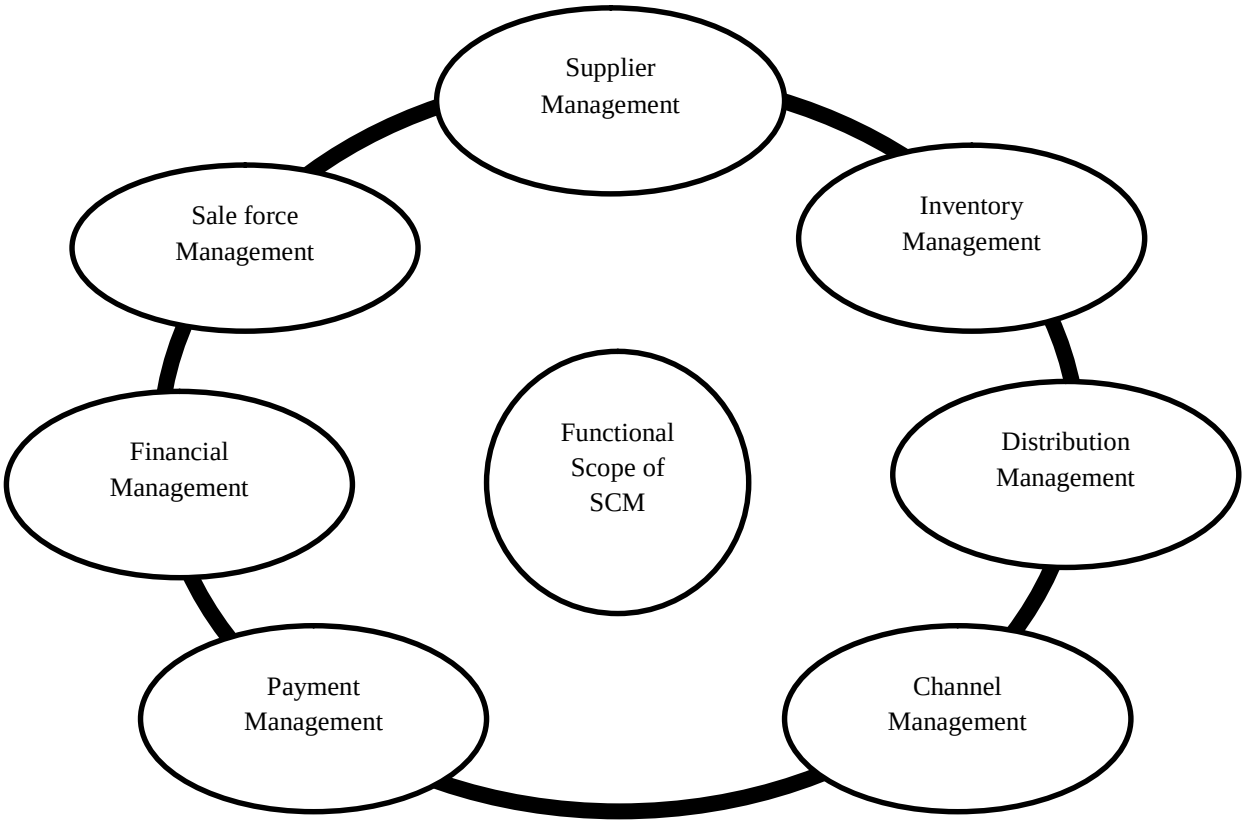

Fig 2.3: Functional scope of SCM (www.tutorialspoint.com, 2015)

Organizational scope of SCM

Two main views about the organisational scope of SCM exist in the literature. The first considers all companies from point of origin to point of consumption to be involved, that is, consider only primary members of the supply chain: a focal company and its customer and supplier. While the other, requires at least three companies should be involved. Recently, organizational scope of SCM is seen as the implementation and process of SCM across three or more companies, that is, in its

simplest form this could be a supplier, a third party logistics provider, and the supplier's customer (Mentzer, *et al*., 2001; Sandberg, 2007).

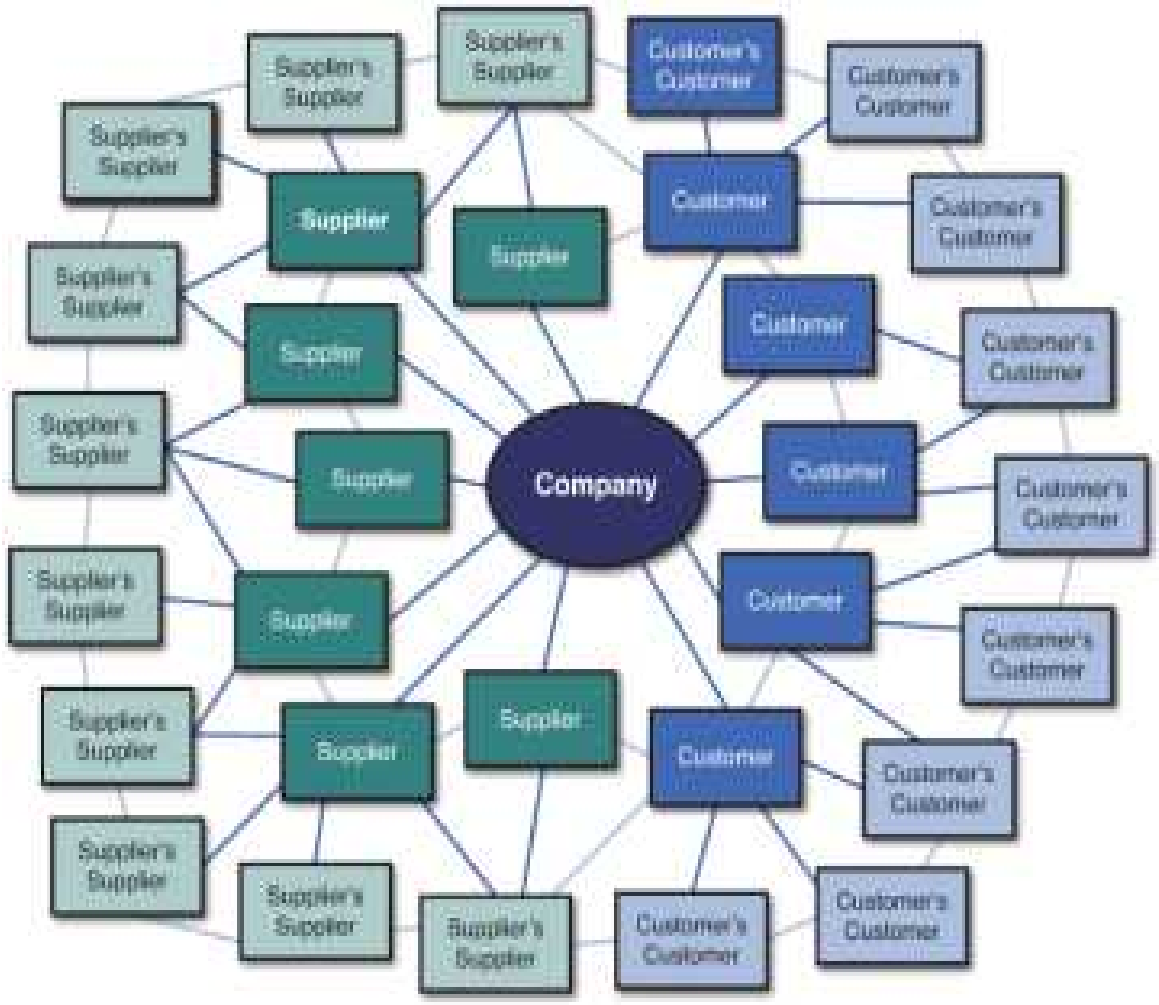

Fig 2.4: Organizational scope of SCM (CSCMP, 2014)

Key elements of SCM

SCM comprises of a lot of issues related to different stages in the supply chain. According to Liu (2011)'s study identified six key elements of SCM from different perspectives whereby the coordination and integration between them have been given extensive research attention from different studies they include:

- Service level management, including customer segmentation, service level management.

- Order and demand management, including sales demand planning and forecasting, inventory management, order entry and fulfilment
- Production management, including network configuration/rationalisation, production planning and scheduling, production execution
- Supply management, including procurement planning, supplier performance management
- Distribution management, including network configuration/rationalisation, warehousing, transportation
- Integrated SCM planning and execution, which is enabled by the SCM processes, IT systems, organisation and performance measurement

Hierarchical Levels in SCM

Several models have been proposed for understanding the activities required to manage supply chain across organizational and functional boundaries (Woldemichael, 2012). According to Simchi- Levi *et al*. (2003) the activities in the SCM can be classified into three hierarchical levels: strategic level, tactical level, and operational level, with the time horizons ranging from several years to a few hours (Li, 2011).

The strategic level management involves long-term decision making for the supply chain, which determines the objective of the supply chain and prepares the resources to achieve this objective, such as the supply chain network design, facilities locations, and so on. Decisions at this level have a significant impact on the supply chain lasting for a relatively long time, usually several years, or even tens of years.

The tactical level management deals with medium-term decisions about how to do in the supply chain to ensure the effective and efficient utilisation of the resources from the strategic level decisions. The typical tactical level decisions, which are updated from once a few weeks to once a few years, include production and distribution planning, inventory policies.

At the operational level, short-term decisions with high details are made to implement the operations and tasks in order to fulfil the objective at the tactical level. The

operational level decisions, such as production and transportation scheduling, are usually updated on a daily or weekly basis.

Benefits of supply chain management

The main reason to why many companies (including Small and Medium-sized Enterprise (SME) companies) in today's era of globalization are striving for ways to effectively implement the Supply Chain Management (SCM) is to achieve competitive advantage at the same time minimise the manufacturing operation costs (Ab Rahman, *et al.*, 2008). Other main benefits identified by different authors;

Table 2.1: Benefits of SCM from different Authors

AUTHOR	**AUTHOR**
Giménez and Ventura (2003)	Reductions in stocks, reductions in costs, reductions in order process costs, reductions in transport costs, simplification of operations at the stores, reductions in the cost of materials purchased, improvement in service - reductions in stock outs, improvements in lead times, improvements in production planning, better equilibrium between supply chain members, move from adversarial relationships towards collaborative relationships
Keane *et al.* (2004)	Cost reduction or improvement, Improved material delivery, Shorter cycle time, including product development cycle times; Access to product and process technology and Quality improvement.
Jharkharia and Shankar (2004)	Lower inventory levels, better responsiveness and lower throughput time
Van de Vorst (2004)	Improved responsiveness and reliability of deliveries, fewer stock outs, higher product quality, reduction of inventory-carrying, reduction of transportation costs, reduction of indirect and direct labour costs and the increase of sales and sales margins.
Fawcett *et al.* (2008)	Respond to customer requests, on-time delivery, customer satisfaction, order fulfilment lead times, cost of purchased items, firm profitability, handle unexpected challenges, inventory costs, overall product costs, productivity, overall product quality, transportation cost, market penetration, product innovation lead times, cost of new product development
Valmohammadi, (2013)	On-time delivery, increased inventory turnover, decreased order cycle times, reduction in risk, shorter order fulfilment lead times, greater product availability, reduction in the duplication of inter-organizational processes, increased customer/market responsiveness, capital utilization, decreased product time to market, logistics cost reduction, transportation costs, handle unexpected challenges, overall product quality, reduction in product development
AbTalib and Abdul Hamid (2014)	Lower operation costs, better service reliability, decrease inventory level, reduce order cycle time, lower the number of back orders, increasing efficiency, eliminate waste, improve customer satisfaction and improve overall competitive advantage

2.4.2 Supply chain management practices

From exploratory research done by Omain*et al.* (2010) based on previous studies argued that the implementation set of SCM practices differ depending on the country and type of organization involve. This means different organizations and countries have a different set of practices in implementing SCM this is due to the fact different managerial perceptions of how supply chain components are related to each other and to the organization example different style of management, different world views from different country and cultural differences. Therefore, there is no clear set of supply chain practices suitable for all industries or countries.

However, study done by Spens and Wisner (2009) justified being more similarities in SCM practices implementation between two countries than differences. The main differences was only concern in the use of 3PLs, the perceived sharing of benefits between supply chain members, the use of VMI, and the importance of ethical practices among supply chain members. Similarities were found when looking at the performance measures that are actually used by the respondents. Since the often-touted benefits of SCM are better customer service and product or service quality, the most important elements in terms of contributing to supply chain success were obvious and in fact, turned out to be very similar. Furthermore, different studies from different countries have used similar dimensions when measuring SCM practices implementation example: Basnet *et al.*, 2000 (New Zealand); Li, *et al.*, 2006 (USA); Kushwaha and Barman, 2008 (India); Choon Ho 2011 (Malaysia); Adebayo, 2012 (Nigeria); Ardianto *et al*., 2013 (Indonesia); Qayyum *et al*., 2013 (Pakistan); Woldemichael, 2012 (Ethiopia); Mwale, 2014 (Kenya); Mensah *et al.*, 2014 (Ghana); Karimi and Rafiee, 2014 (Iran) just to mention the few, all these studies have indicated to use similar dimensions of SCM practices to their respective countries such as strategic supplier relationship, information sharing, outsourcing, customer relationship, lean practices and so on, they indicated positive results to support such practices to be applicable in their respective countries regardless of difference of culture, style of management, geographical background, ideology, type of industry from one country to another or from one continent to another. Therefore this study supported such fact of more similarities found between two countries in terms of SCM

practices implementation is more than the differences. The following is the list of some common dimensions of SCM practices found in the literature:

Table 2.2: Dimensions of SCM practices in the literature

AUTHOR	Dimensions of SCM practices
Koh*et al*. (2007)	JIT supply, many suppliers, holding safety stock, subcontracting, few suppliers, close partnership with suppliers, strategic planning, outsourcing, 3PL,close partnership with customers, e-procurement, supply chain benchmarking
Omain*et al*. (2010)	Customer relationship, close supplier relationship, information sharing, supply chain integration logistics, strategic location.
ChoonHo (2011)	Outsourcing, strategic supplier partnership, customer relationship, information sharing, postponement, quality of information sharing and lean practices.
Sukati*et al*. (2011)	strategic supplier partnership, customer relationship and information sharing
Talib*et al.* (2011)	Customer relationship, material management, strategic supplier partnership, information and communication technologies, corporate culture, close supplier partnership
Adebayo (2012)	Strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and internal supply chain process (Postponement).
Woldemichael (2012)	strategic supplier partnership, customer relationship, quality and degree of information sharing and internal lean practice
Valmohammadi, (2013)	Geographical proximity of suppliers, outsourcing, strategic planning, Information technology (IT)such as the EDI, ERP, e-procurement and CRM, holding safety stock, strategic supplier partnership, supply chain performance, information sharing and coordination, postponement and customization, supply chain benchmarking, subcontracting
Mwale (2014)	Outsourcing, strategic supplier partnership, customer relationship, information sharing, postponement, quality of information sharing and lean practices.

2.4.3 Organizational performance

Organizational performance is the ultimate dependent variable of interest for researchers concerned with just about any area of management. This broad construct is essential in allowing researchers and managers to evaluate firms over time and compare them to rivals (Richard *et al.*, 2009), that is, organizational performance is an indicator that measures how well an organization is achieving its goals (Ho, 2008).

Measuring organizational performance is inherently difficult process (Dess and Robinson, 1984; Venkatraman and Ramanujam, 1986) since there is no singled consensus definition as well as how it should be measured (Perry II, 2012). A number of prior studies had measured organizational performance using different dimensions. However, for over a long period of time financial metrics have served as a tool for comparing organizations and evaluating an organization's behaviour (Holmberg, 2000; Li *et al*., 2006; Karimi and Rafiee, 2014). Several studies have pointed out different dimensions of measuring organizational performance, whereby majority of these studies have utilized financial and market indicators as main measures of organizational performance (Li *et al*., 2006; Arifin and Baihaqi, 2012; Perry II, 2012; Bahri - Ammari, 2013; Hussain *et al*., 2014; Arun and Kumar, 2014) such as, market share, return on investment, the growth of market share, the growth of sales, growth in return on investment, profit margin on sales and overall competitive position of the organization (Li *et al*., 2006).

2.4.4 SCM practices and Organizational performance

SCM practices impact not only overall organizational performance, but also competitive advantage of an organization (Mwale, 2014). This means, SCM practices can act as the means for creating and sustaining a competitive advantage and enhancing organizational performance for the firm and for the entire supply chain (Perry II, 2012). This statement was empirically justified by Li *et al*., (2006), Bahri-Ammari (2013), Karimi and Rafiee (2014), Mbuthia and Rotich (2014). Regarding SCM practices in relation with organization performance a number of prior studies were conducted to determine such relationship (Li *et al*., 2006; Agus, 2011; Choon Ho, 2011; Deshpande, 2012; Valmohammadi, 2013; Qayyum *et al*., 2013; Ganesh Kumar and Nambirajan, 2013; Annan *et al*., 2013; Karimi and Rafiee, 2014; Mutuerandu, 2014; Arun and Kumar, 2014; Hussain *et al.,* 2014; Mensah *et al*., 2014; Kumar and Nambirajan, 2014). Major findings found from these studies justified presence of positive relationship between SCM practices and Organizational performance therefore the higher levels of SCM practice implementation can lead to higher levels of organizational performance and vice versa is true. Example; Li *et al*., (2006) had conceptualized and developed five dimensions of SCM practices (strategic

supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement) and tested the relationships between these SCM practices and organizational performance (market and financial performance). The result indicated that higher levels of SCM practice can lead to higher organizational performance. Furthermore, Mensah *et al*. (2014) have justified effective application of the principles of SCM practices as asserted by Li *et al*. (2006) as instrumental in ensuring sustainable business performance of Kasapreko Company Limited in Ghana. Karimi and Rafiee (2014) provided an empirical justification for a framework that identifies four key dimensions of SCM practices (Strategic supplier and partnership, customer relationship, level and Quality of information sharing) and their direct impact on organizational performance (market and financial performance, customer ok). In addition, these studies had empirically indicated some dimensions of SCM practices have large impact on overall organizational performance than other. Example, Choon Ho (2011) study's results have shown that SCM practices of information sharing, quality of information sharing and lean practices had strong relationship with organizational financial and non-financial performance. Adebayo (2012) found the impact of postponement is at relatively low significance in Nigerian manufacturing industry. Li *et al*. (2006) four dimensions of SCM practices (strategic supplier partnership, customer relationship, level of information sharing and quality of information sharing) have acted as strong indicators unlike postponement which had low impact. Perry II (2012) on his study had shown customer relationship management, order fulfilment, and return management process had positive implications on a firm's competitive position and performance.

2.4.5 The gap of the study from previous studies conducted in Tanzania

There is a lack of previous studies concerning SCM practices implementation and how it impacts the organisational performance in Tanzanian food processing firms. The researcher had hardly found such studies in the literature. Only few authors such as Ruteri and Xin (2009), Katunzi and Zheng (2010) conducted such studies.

Ruteri and Xin (2009)'s study investigated the existing supply chain operation, knowledge of SCM concept. They did the survey covered 23 food processing firms in Tanzania. The SCM practices used in the study include inventory management, pricing strategy, customer service and customer perceived value, marketing and distribution strategies, order processing and application of information technology. The findings from this study had shown the understanding of SCM concepts differed significantly when compared to respondents from multinational food processors and local invested food processors.

Multinational invested companies which were in the category of large scale processors had a clear understanding of the concept. However, most of them referred the term SCM as similar to operation management. The study suggested that a lot of efforts need to be addressed to ensure that food processors benefit from SCM concept. The understanding of SCM concept among the processors seems to be low, thus, hindering them from taping up the advantages that SCM concept offer. The main weakness of this study, it used qualitative data which based on researchers' interpretation and not based on probabilistic statistics which would have yielded best results (real picture) of the current situation free from researchers' bias. Therefore the study would have been more convincing if it could have included quantitative data for statistical analysis.

Katunzi and Zheng (2010) compared the differences in perceptions of SCM practices adoption in SMEs against large enterprises. A cross-sectional survey was used to collect data from Tanzanian enterprises engaged in agricultural processing. The findings clearly show that SMEs give less attention to supply chain management strategies, also reluctant to employ transparent integrated system to link them with other actors in the chain compared to LEs who put more emphasis in implementing SCM practices in terms of collaborating with customers and suppliers in the chain, automatization and standardization of planning and control systems, share specific type of information with other actors in the supply chain, emphasis on chain integration as well as show high importance on product quality and advanced information system. The study suggested it is an obligatory requirement for Tanzanian SMEs to adopt and implement scientific rules and principles of supply chain in order to maintain their competitiveness, operating economically, rationally and

systematically. Furthermore, Tanzanian SMEs should develop and implement supply chain systems which continuously, integrate all institutions and channels from suppliers of resources to the end-user customers in harmony with their structural features in order to maintain their existence in regional, national as well as international markets. The main weakness of this study was too general hence it failed to show the multi-category aspects found within the agro-processing sector in greater detail. The study would have been much better if the authors could include such aspects, that is, identify agro-processing companies' different categories involved in the study sample.

Therefore, this study had bridged the gap left behind by some previous studies; it included quantitative data for statistical analysis. Furthermore the study included the aspect of how SCM practices impact overall organisational performance in the company.

2.5Conceptual framework of the Research

Considering the various dimensions of supply chain management practices and measurement of organizational performance proposed by several researchers, the researcher adapted a research framework that encompassed the following six dimensions of supply chain management practices: strategic supplier partnership, customer relationship, outsourcing, quality and degree of information sharing and lean practices. For organizational performance measurement six financial/ operational (deliver dependability, cost saving, product and service quality, forecasting accuracy, reduced inventory level and flexibility,) and five market (sales growth, market share growth, profit margin, return on investment and return on assets) performance measurements were adapted.

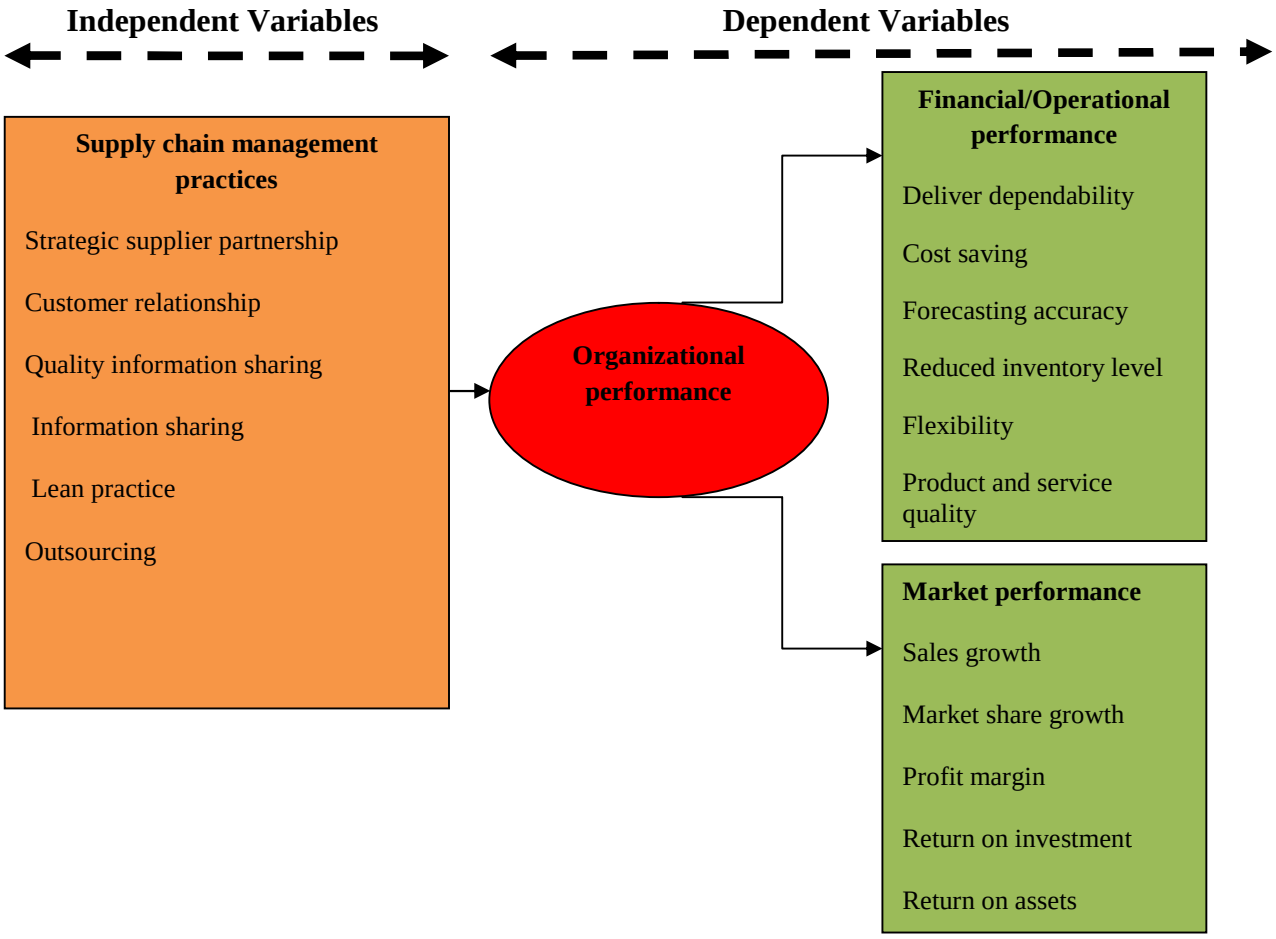

Fig: 2.5: Conceptual framework of the Research

Source: Researcher Construct (2015)

The Independent Variables

Based on theoretical and empirical findings from previous studies the researcher developed a number of dimensions in relation to the implementation of SCM practices. These dimensions were regarded as independent variables, discussed as follows:

- **Strategic supplier partnership**

The relationship is designed to control the strategic, tactical and operational capabilities of individual participating organizations to help them achieve major on-going mutual benefits (Jie *et al.*, 2007).

A strategic partnership emphasizes direct, long-term association and encourages mutual planning and problem solving efforts (Gunasekaran, 2001). Such strategic partnerships are entered to promote shared benefits among the parties and on-going participation in one or more key strategic areas such as technology, products, and markets. Strategic partnerships with suppliers enable organizations to work more effectively with 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. According to Noble (1997) an effective supplier partnership can be a critical component of a leading edge supply chain (Bratić, 2011; Karimi and Rafiee, 2014; Mbuthia and Rotich, 2014)

- **Customer relationship**

Customer relationship is the key element in today SCM practices implementation in any organization (Ho, 2011; Mbuthia and Rotich, 2014; Hussain *et al*., 2014). This is because the world today is in the era of massive growth of mass customization and personalised service which had forced organizations to maintain good relationship with customers for the sake of their survival (Jie *et al*., 2007). Close customer relationship allows an organization to differentiate its products from the competitors, and sustain customer loyalty (Bratić, 2011).

- **Lean practices**

The term ‘‘lean’’ is used to refer to a system that uses less input to produce at a mass production speed, while offering more variety to the end customers. Elimination of waste is a fundamental idea within the lean system. The core thrust of lean practices are that these practices can work synergistically to create a streamlined, high quality system that produces finished products at the pace of customer demand with little or no waste (Woldemichael, 2012). Today, lean is evolving into a management approach that improves all the processes at each level of an organization (Mwale, 2014).

- **Level of information sharing**

Information sharing has two aspects: quantity and quality. Both aspects are fundamental for the practices of supply chain and have been treated as independent constructs in the past supply chain management studies (Jie *et al*., 2007; Karimi and Rafiee, 2014). Simatupang and Sridharan (2005) brought forth some of the elements that comprised information sharing, including data acquisition, processing, storage, presentation, retrieval, and broadcasting of demand and forecast data, inventory status and locations, order status, cost-related data, and performance status (Somuyiwa *et al*., 2012). Shared information can vary from strategic to tactical in nature and from information about logistics activities to general market and customer information (Mentzer, 2001). Many researchers have suggested that the key to the seamless supply chain is making available undistorted and up-to-date marketing data at every node within the supply chain (Child House and Towill, 2003). By taking the data available and sharing it with other parties within the supply chain, information can be used as a source of competitive advantage (Jones, 1998).

Lalonde (1998) considers sharing of information as one of five building blocks that characterize a solid supply chain relationship. According to (Stein and Sweat, 1998) supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker. Moreover, (Tompkins and Ang, 1999) consider the effective use of relevant and timely information by all functional elements within the supply chain as a key competitive and distinguishing factor. The empirical findings of (Child house and Towill,2003) reveal that simplified material flow, including streamlining and making highly visible all information flow throughout the chain, is the key to an integrated and effective supply chain (Jie*et al*., 2007).

- **Quality of information sharing**

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 (Holmberg, 2000). Literature is replete with example of the dysfunctional effects of inaccurate/delayed information, as information moves along the supply chain (Stock *et al*., 2010). Divergent interests and opportunistic behaviour of supply chain partners,

and informational asymmetries across supply chain affect the quality of information (Kroes *et al*., 2010). It has been suggested that organizations will deliberately distort information that can potentially reach not only their competitors, but also their own suppliers and customers (Karimi and Rafiee, 2014). This is because information is generally viewed as providing an advantage over competitors (loss of power), and organizations resist sharing with their partners due to the fear of giving away competitive and sensitive information such as inventory levels, production schedules (Somuyiwa *et al.,* 2012). Given these predispositions, ensuring the quality of the shared information becomes a critical aspect of effective SCM (Feldmann *et al*. 2003). Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

Furthermore, various authors proposed various lists of metrics for assessing the quality of information sharing (www.tutorialspoint.com, 2015). A list of the most essential characteristic features for information quality includes the following:

Reliability - It should be verifiable and dependable.

Timely - It must be current and it must reach the users well in time, so that important decisions can be made in time.

Relevant - It should be current and valid information and it should reduce uncertainties.

Accurate - It should be free of errors and mistakes, true, and not deceptive.

Sufficient - It should be adequate in quantity, so that decisions can be made on its basis.

Unambiguous - It should be expressed in clear terms. In other words, in should be comprehensive.

Complete - It should meet all the needs in the current context.

Unbiased - It should be impartial, free from any bias. In other words, it should have integrity.

Explicit - It should not need any further explanation.

Comparable - It should be of uniform collection, analysis, content, and format.

Reproducible - It could be used by documented methods on the same data set to achieve a consistent result.

- **Outsourcing**

Outsourcing means the sub-hiring of activities, services or product parts that are not the core business of the company, usually aiming cost reduction, quality improvement, delivery lead time reduction and increase on the productive flexibility (Narasimhan and Jayaram, 1998). Many firms in our contemporary business have been revising their priorities and focusing their resources on a limited number of selected activities and processes to gain more competitive advantages. The outcome of this trend is that firms increasingly outsource some selected activities and processes (Sink and Langley, 1997). As competition becomes more intense, many firms are considering the option of logistics outsourcing in order to streamline their value chains (Franceschini *et al*., 2003). Boyson et al. (1999) noted that outsourcing relationships historically are based on routine functions, such as warehousing operations and freight payment, whereas today they are based on logistics activities that require more strategic knowledge and expertise, such as information systems, inventory management and customer order fulfilment (Koh *et al*., 2007).

The dependent Variables

The study main dependent variable is organizational performance which divided into two categories financial/operational and market performance. A total of twelve (12) construct measures were used to measure organizational performance. They are briefly described as follows:

Financial/ operational performance

- **Deliver dependability**

Is the ability of an organization to provide on time the type and volume of product required by customer (Somuyiwa *et al.,* 2012). According to Zhang *et al.* (2002)

delivery dependability includes on-time delivery, order fill rate, frequency of delivery, and delivery speed (Thatte *et al*., 2009). . This has far been made possible by the implementation of lean practices such as Just-in-Time. Hill (2000) states that "if companies continue to miss due dates, customers will increasingly stop considering them as potential suppliers, leading to loss of market share or even the whole business" (p. 60). These firms will need to improve upon their delivery dependability without which they may not get a chance to compete in the marketplace (Hill, 2000). According to Fawcett *et al.* (1997) have empirically justified delivery dependability to positively and significantly impact organizational performance. Thus in today's competitive business environment, delivery dependability is considered as critical and vital source of competitive advantage (Thatte *et al*., 2009)

- **Cost saving**

With appropriate strategic planning, it may be anticipated that the utilization of resources will be optimized leading to cost savings. For example, reduced cycle time in production could be materialized through reducing set-up time and/or eliminating non value-added activities. With a shortened cycle time, more orders could be processed, which would then result in improved efficiency and reduced production cost per unit (Koh*et al*., 2007).

- **Product and service quality**

The ability of an organization to offer product quality and performance that creates higher value for customers (Somuyiwa *et al*., 2012). A lot of companies emphasize quality as a means to stay competitive in the marketplace over the long run. They have a reputation of high quality as representing future market share for new customers and maintaining market share for existing customers over their lifetime. Further, improving quality can provide term financial savings (Bratić, 2011). Implementation of SCM practices like customer relationship, strategic supplier partnership, information sharing, lean practices will ensure production of high quality products as well as provision of quality services. Example, good cooperation and close exchange of information with customers will ensure production of quality products that customers' desire.

- **Forecasting accuracy**

Forecasting accuracy is the most important feature in the performance of supply chains. It is a joint performance of a combination of resources such as supply of material, manufacturing, production planning and customer demand prediction. Wickramatillake *et al.* (2006) applied the baseline forecast to consider the major milestones of a large-scale project in order to measure the performance of the supply chain with respect to meeting the delivery targets. Through closer partnerships with suppliers and customers, it is anticipated that information could be shared, and thus, fed into demand forecasts to improve the accuracy of predictions. This forecast will in turn enable the firm to deliver the order more confidently (Koh *et al.*, 2007). Example, sharing of quality information among the members along the supply chain minimizes bullwhip effects.

- **Reduced inventory level**

Lean practices such as Just-in-Time supply allows minimum inventory holding through supplies delivered when they are needed. This SCM practice will not only reduce inventory level, but will also free up warehouse space and free cash flow (Mistry, 2006). Therefore, effective implementation SCM practices can reduce the level of high inventory keeping which in return will lead to problems such as piling up of the stocks in the processors' warehouses, spoiled products due to obsolescence, increased distribution and recall costs, increased inventory cost and significant decrease in profit margin resulted from spoiled products (Ruteri and Xi, 2009).

- **Flexibility**

SCM practices may enhance a firm's flexibility, which could be defined as the firm's ability to adapt to the changes in its business environment. Example, the adaptation of the postponement practice could increase flexibility by creating a balance between market demand and company capabilities to fulfil that demand hence reduce supply chain risk. Building long-term partnership relations with suppliers and customers also helps to improve the flexibility of the supply chain by creating a mutual understanding among the members (Chang *et al*., 2005).

Outsourcing is frequently used by firms to provide flexibility to internal capacity to ring fence their resources for the core activities (Koh *et al*., 2007).

Market performance

- **Market share growth**

A competitive supply chain in the market might be characterized by efficient use of chain resources which would lead to lower product cost, better product quality, faster response and therefore eventually higher market share (Koh *et al*., 2007).

- **Sales growth**

This is the change in sales over the period, expressed as the difference between sales last period and those this period as a percentage of the sales last period (Richard *et al.*, 2009). Through practice of supply chain benchmarking, emerging as a leader in the industry would provide a firm with the opportunity of increased sales. If an industry leader position is still far reaching, benchmarking the supply chain performance against the best practice in the industry would provide incentives for further improvement that will eventually lead to increased sales (Koh *et al.*, 2007).

- **Profit margin**

Profit margin is the ratio of net operating profit to sales (Richard *et al.*, 2009). It refers as a measure of profitability since it measures how much out of every dollar of sales a company actually keeps in earnings. Implementation of SCM practices such as customer relationship, information sharing improve organizational profit margin because it allow organizations to access valuable information which will enable them to differentiate its products from the competitors, and hence sustain customer loyalty.

- **Return on investment (ROI)**

ROI is usually defined as the ratio of net operating profit to the net book value of assets. The net book value of assets is equal to the firm's assets less the value of intangibles and total liabilities (Richard et al., 2009). Return on investment (ROI) is one of the most popular performance measurement and evaluation metrics used in business analysis (Andru and Botchkarev, 2011).

- **Return on assets (ROA)**

This is a very popular measure of performance. It is defined as the ratio of net operating profit to the firm's assets recorded on its balance sheet (Richard *et al.*, 2009). ROA is fundamental gauge of efficiency, measuring how well your business is using its assets to generate profit. Supply chain management, meanwhile, is all about improving efficiency, gaining a competitive advantage by streamlining the way you get products into your company and then out to your customers. Improving supply chain management boosts ROA through its effect on both profit and assets (Merritt, 2015). Lean practices like just-in-time boost profits (reduces operating costs) by eliminating excess inventory.

2.6 Research hypotheses

To investigate the understanding of SCM practices implementation among Tanzanian food processing firms

Ho1: The understanding of SCM practices implementation among Tanzanian food processing firms is not low

Ha1: The understanding of SCM practices implementation among Tanzanian food processing firms is low

To assess the level of practical implementation of SCM practices in Tanzania food processing firms

Ho2: Strategic supplier partnership practice is not weak in Tanzanian food processing firms.

Ha2: Strategic supplier partnership practice is weak in Tanzanian food processing firms.

Ho3: Customer relationship practice is not weak in Tanzanian food processing firms.

Ha3: Customer relationship practice is weak in Tanzanian food processing firms.

Ho4: The level of information sharing practice is not weak in Tanzanian food processing firms.

Ha4: The level of information sharing practice is weak in Tanzanian food processing firms.

Ho5: Quality of information sharing practice is not weak in Tanzanian food processing firms.

Ha5: Quality of information sharing practice is weak in Tanzanian food processing firms.

Ho6: Lean practice is not weak in Tanzanian food processing firms.

Ha6: Lean practice is weak in Tanzanian food processing firms.

Ho7: Outsourcing is not weak in Tanzanian food processing firms.

Ha7: Outsourcing is weak in Tanzanian food processing firms.

To examine the relationship between SCM practices and organizational performance in Tanzanian food processing firms

Ho8: There is no relationship between the strategic supplier partnership and organizational performance in Tanzanian food processing firms

Ha8: There is relationship between the strategic supplier partnership and organizational performance in Tanzanian food processing firms.

Ho9: There is no relationship between the customer relationship and organizational performance in Tanzanian food processing firms.

Ha9: There is relationship between the customer relationship and organizational performance in Tanzanian food processing firms.

Ho10: There is no relationship between the level of information sharing and organizational performance in Tanzanian food processing firms.

Ha10: There is relationship between the level of information sharing and organizational performance in Tanzanian food processing firms.

Ho11: There is no relationship between quality of information and organizational performance in Tanzanian food processing firms

Ha11: There is relationship between quality of information and organizational performance in Tanzanian food processing firms.

Ho12: There is no relationship between lean practices and organizational performance in Tanzanian food processing firms.

Ha12: There is relationship between lean practices and organizational performance in Tanzanian food processing firms.

Ho13: There is no relationship between outsourcing and organizational performance in Tanzanian food processing firms.

Ha13: There is relationship between outsourcing and organizational performance in Tanzanian food processing firms.

Whereas;

Ha: The Alternative Hypothesis- the effect observed in the data (the sample) reflects a "real" effect (in the population)

Ho: The Null Hypothesis- there is no "real" effect (in the population). The effect observed in the data (the sample) is just due to chance (sampling error).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the path of finding answers to the research questions (Woldemichael, 2012). In this chapter, the researcher provided brief explanation on how the study was conducted it included; the study design, area of the study, sample size, sampling techniques, data collection methods, data analysis, data reliability and validity and ethical issues.

3.2 Research design

The study adopted quantitative approach which involved the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute “alternate knowledge claims” (Creswell, 2003), whereby descriptive survey was used. A descriptive survey was used due to nature of study which requires an accurate portrayal of the characteristics without any intervention.

3.3 Measurement of Variables

The researcher used ordinal level of measurement. At this level numbers are assigned to cases specify only the order of cases permitting greater than and less than distinctions (Engel and Schutt, 2014). Therefore, the study used a five-point Likert scale to measure variables since it support such relationship. Also is commonly used in studies that employs questionnaire. The Likert scale used in this study was considered as categories, not numerical points (that is, 1 - not at all, 2 - to a small extent, 3 - to a moderate extent, 4 - to a great extent 5 - to a very great extent).

3.4 Validity and Reliability

3.4.1 Validity

The study adopted two approaches of validity to ensure validity of measurements. They included as follows;

Criterion validity- is established when the results are obtained from one measure are similar to results obtained with more direct or already validated measure of the same phenomenon (criterion) (Engel and Schutt, 2014). The study used measures which were validated from previous studies to measure the same phenomenon hence increased confidence the measures have measured what they were intended in the first place.

Construct validity – is demonstrated by showing that a measure is related to a variety of other measures of other concepts as specified in the theory (Engel and Schutt, 2014). The study's variables were derived from accepted theories that were tested in previous studies and shown positive results. Example, resource dependent theory supported strategic supplier partnership, customer theory supported customer relationship, transaction cost economics supported outsourcing, and communication privacy management theory supported information sharing.

In addition, the validity of research results was increased by using the concept of triangulation. Bryman (2003) defined triangulation as "the use of more than one method or source of data in the study of a phenomenon so that findings may be cross-checked". In the study, triangulation was seen in sampling techniques in order to overcome the weaknesses and biases in selection of respondents which can arise from the use of only one method.

3.4.2 Reliability

The study adopted three approaches of reliability to ensure consistency of scores when measuring the phenomenon in the practical field. They included as follows;

Test-retest reliability – measure a phenomenon that does not change at two different time points, the degree to which the two measurements are related is the test-retest reliability of a measure.

Internal consistency- multiple items are used to measure a single concept. The stronger association among individual items and the more items are included the higher the reliability of scale.

Inter-rater reliability- more than one observer rate the same people, events, or places, inter-rater is their goal. If observers are using the same instrument to measure the phenomenon, their rating should be similar. The higher the same results the higher the reliability of scale.

Therefore, the reliability and validity's strength of the selected measures/instruments used in the study were proven in the context. Previous studies such as Li *et al.* (2005), Li *et al.*, (2006), Agus (2011), Choon Ho (2011),Sukati*et al* (2011),Bratić (2011),Chen, *et al.* (2014), Kumar and Nambirajan (2014), Hussain *et al.* (2014), Arun and Kumar (2014) and Karimi and Rafiee (2014) have tried to check the strength of these used measures/ scales through different phases such as item generation, pre-pilot study, pilot study, factor analysis, large-scale data analysis as well as interviews with academic experts and practitioners in the field. In this process the validity and reliabilities of instruments to measure SCM practices and organizational performance were properly assessed. Therefore, the researcher believed that the adapted instruments have high level of validity and reliability to conduct this study since they have already been tested and shown positive results.

3.5 Study population and units of analysis

Population is defined as the entire set of individuals or other entities to which study findings are to be generalized (Schutt, 2011). The study population was Tanzanian food processing firms located at Dar es Salaam. This place was chosen because majority of food processing firms are found here (Sutton and Olomi, 2012). This opportunity has created some convenience for researcher to collect data accurately by deriving a proportionate sample from such big population. The units of analysis for this study were private food processing firms whereby eight (8) sub sectors of food processing industry that is, fish and meat processing, grain milling, fruits and vegetables, tea and coffee, baking and confectionery, beverages, milk processing and edible oil production were selected.

3.6 Sampling techniques and Sample size

3.6.1 Sampling techniques

The study used purposive and simple random sampling method to select the study sample. This was because purposive sampling method is used when elements are selected due to a specific purpose, usually because of their unique position (Schutt, 2011). According to this study only managers, executive or any individual within the organization of the best knowledge of SCM practices implementation were selected. On the other hand, simple random sampling was used because nature of study was homogeneous (only concerned with food processing firms located at Dar es Salaam) hence each individual firm has an equal chance of being included in the sample.

3.6.2 Sample size

A sample is defined as a subset of a population that is used to study the population as a whole (Schutt, 2011). According to Peers (1996) regarded sample size as one of the four inter-related features of a study design that can influence the detection of significant differences, relationships or interactions (Bartlett II, *et al.*, 2001). The size of sample should neither be excessively large, nor too small. It should be optimum. An optimum sample is one which fulfils the requirements of efficiency, representativeness, reliability and flexibility (Kothari, 2004). There is, however, a rough benchmark for the minimum size: thus a sample of 30 is held by many to be the minimum number of cases if the researchers plan to use some form of statistical analysis on their data (Diamantopoulos and Schlegelmilch 2000; Woldemichael, 2012; Qayyum *et al.*, 2013). Therefore, the study adopted this benchmark for minimum sample size of 30 firms for statistical analysis. However, the study set higher sample size more than 30 firms in order to provide a necessary degree of precision while facilitating all desired data analyses, within the resource constraints applying.

The survey sample frame was based on three sources; Tanzania Food and Drug Authority (TFDA), Tanzania Bureau of Standards (TBS) and ministry of industry and trade (see Appendix C). The questionnaires were distributed to a total of 80 food processing firms whereby one questionnaire was distributed for each firm so as to prevent a mix-up response within the same firm.

64 questionnaires were received which represented a response of 80 percent (80%) but the study had used only completed questionnaires, which reduced the sample size to comprise only 53 firms for data analysis. The majority respondents were top managers and executives who were expected to have experience about the operation and management of supply chain practices in their respective organizations, such as general managers, investors/owners, production and operations managers, procurement officers, marketing managers and so.

3.7 Sources of Data

The study used secondary data sources from the books, articles, journal, websites and previous studies concerning SCM practices implementation and how it impact organizational performance. These sources provided the study with facts and concepts which later then were used to derive study variables. All the secondary data sources used in this study were listed in the reference section.

3.8 Data Collection techniques

The study collected primary data. Primary data are first-hand information, data collected directly from an original source. Primary data can be collected through observation, interviews, or the use of questionnaires (Saunders *et al.,* 2009). The study used questionnaire method to collect data.

Questionnaires

The study used questionnaires to collect primary data for quantitative analysis. The questionnaires were designed to inquire answers in the form of closed questions. The questionnaires had two major parts; part A had outlined some important guidelines to the questionnaire for the purpose of ensuring ethical issues were considered in the given study. It consisted of title, objectives, benefits of doing such study and specified the characteristics of people who were required to answer it while part B consisted of research questions. Furthermore, part B had four sections. The first section contained questions that helped to generate demographic profile of the respondents together with their respective firms, the second part; answered questions on objective one, the third part answered questions on objective two, while the last section answered questions on

objective three. The mode of administration was through three techniques; by telephone, e-mail and delivery and collection (self-administered). Though through the mode of delivery and collection technique the researcher had two options either to obtain the answers face to face or by drop and pick up later, in either way, this has totally depended on the circumstances the researcher found to be convenient for both parties. Moreover, follow-up and clarification were provided through telephone to ensure proper understanding of the asked questions as well as to remind the respondents to submit their (feedback) answered questionnaires on time.

3.9 Data processing and analysis

3.9.1 Data processing

Data processing implies editing, coding, classification and tabulation of collected data so that they are amenable to analysis (Kothari, 2004). There are three essential sequential operations as the data preparation (processing) step for enhancing data analysis. They include editing, coding and data entry (Jambwa, 2003).

Editing is a process of examining the collected raw data to detect errors and omissions and to correct these when possible (Kothari, 2004). The aim of checking and/or editing questionnaires is to achieve consistency within the data and to detect and verify, correct or eliminate outliers, since extreme values are major contributors to errors in summaries (Jambwa, 2003). Therefore, the completed questionnaires were edited for the purpose of ensuring completeness and consistency in the responses.

Coding is a process of assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classes (Kothari, 2004). Identifying responses with codes is necessary step if data is to be processed by computer. Since the data were processed by computer the questionnaires' responses were coded to simplify the process of data entry. Initially separations of firms were made by assigning ID number for each firm; also numerical codes were allocated to all questionnaires subdivision's variables.

Data entry is a process of transferring data on questionnaires into computer-readable data. The completed questionnaires' data were entered directly into the SPSS Data Editor. Each subdivision had then been taken in turn, beginning with particulars of the firm' and the data for each case was entered before moving on to the next subdivision. At the end of each line of input, all of the data in that line were checked immediately for accuracy.

3.9.2 Data analysis

Data analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-groups (Kothari, 2004). The data we reanalysed by the help of two sets of statistics namely, descriptive and inferential statistics. Descriptive statistics were used to describe, present and summarize quantitative information in the form of measures of central tendency (mean was used to describe the central position) and measures of spread (standard deviation was used to describe the spread of score). Furthermore, tabulated description (that is, tables) and graphical description (that is, charts) were used to analyse preliminary data. Inferential statistics were used to test statistical hypotheses so as to make conclusions, whereby on parametric tests such as chi-square test was used to test for significance of differences between the observed and the expected distributions of data, while Spearman's rank correlation was used to measure the direction and strength of relationship between the research variables. Moreover, Kruskal-Wallis test was used to test significance (effect) of such relationship of the dependent variable (organizational performance) from independent variables SCM practices.

3.10 Ethical issue

According to Leedy and Ormrod (2010), most ethical issues fall into one of the following four categories; informed consent, confidentiality, security and honesty. Therefore, the researcher considered all these issues in the questionnaire guidelines in the following manner:

Informed consent: all participants were briefly informed about the reason of conducting such study therefore enabled them to join with full consent.

Right to privacy (confidentiality): the researcher kept the nature and quality of participants' performance strictly confidential. No information was recorded to link respondents with their responses.

Security: the researcher did not expose the participants to unusual stress, embarrassment, or loss of self-esteem.

Honesty: the researcher reported the findings in complete honesty

CHAPTER FOUR

PRESENTATION OF FINDINGS AND ANALYSIS

4.1 Introduction

In this chapter the researcher presented the main findings from which the analysis was made. The researcher analysed the results with respect to research objectives and research questions from chapter one. The chapter was divided into two major parts; descriptive statistics analysis and inferential statistics analysis. Data analysis for both descriptive statistics and inferential statistics was made possible with the help of Statistical Package for Social Science (SPSS-16) software.

4.2 Descriptive statistics Analysis

This section basically analysed preliminary data for generating descriptive statistics whereby frequencies and percentages were used to present quantitative data in the form of tables and charts for demographic description of respondents and firms. Also calculation of arithmetic means and standard deviations was made to measure the extent of SCM practices implementation and organisational performance in the respective firms.

4.3Demographical description of respondents and their firms

Demographic information described both individual and firm profile. Individual profile section included aspects of level of education, job title/position and years of experience, whereas firm profile section included aspect of number of full time employees and categories of selected food processing firms by subsector.

4.3.1 Individual profile information

Job title/position of the respondents

As indicated in the below table 4.1, the majority of respondents (54.7%) stated their job titles specifically related to the SCM functions such as procurement manager, production/operation manager, supply chain manager, marketing manager, quality manager and so on.

The second group came from top management level (37.7%) such as investor/owners, general managers, plant managers and so on. Which accounting to a total of 92.4% of all respondents, this had increased validity of the study because these are the type of people who are well acknowledged in matters concern organizations' activities and performance hence are expected to be well informed about SCM practices implemented in their respective firms. Only few respondents (7.5%) were not specifically related to SCM functions, that is, they hold administrative positions such as finance/account manager, human resource manager and controller.

Table: 4.1: Job title of respondents

Position of Respondents	Frequency	Percentage
Top management		
Investor/owner	7	
General manager	8	
Plant manager	3	37.7
Director	1	
Chief operational officer	1	
SCM functions		
Production/operation manager	19	
Technical officer	1	
Marketing manager	2	
Regulatory & Scientific Affairs Manager	1	
Quality manager	2	54.7
Liaison officer	1	
Procurement manager	2	
Supply chain manager	1	
Administrative positions		
Accounts/finance manager	1	7.6
Human resource manager	2	
Controller	1	
Total	53	100

Source: Survey data, 2015

Education level of the respondents

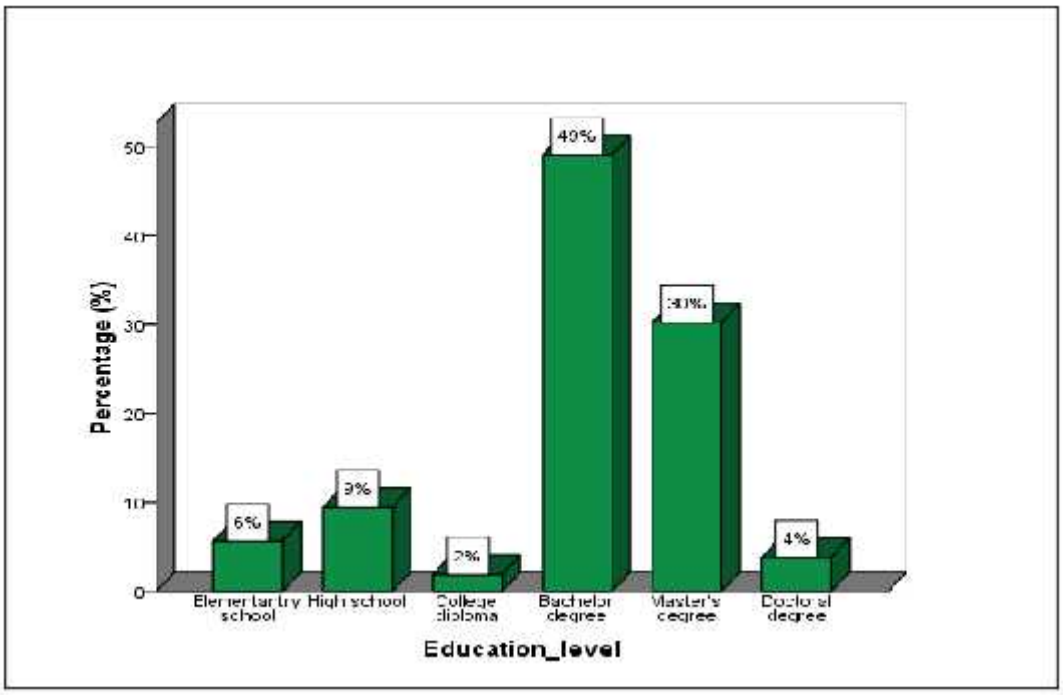

Fig 4.1 Education level of respondents

As demonstrated from the above fig 4.1, it showed clearly majority of respondents possessed bachelor degree (49%), advance degree such as master's degree (30%) and doctoral degree (4%). Respondents with level of college diploma and high school were of 2% and 9%respectively. Which accounting to total of 96% of respondents. This implied majority of respondents were well educated and had the ability to understand the questions they were presented with.

Work Experience of respondents

Table: 4.2: Work Experience of respondents

Work Experience	Frequency	Percentage
under 2 years	8	15.1
3 to 5 years	17	32.1
6 to 10 years	15	28.3
Over 10 years	13	24.5
Total	53	100

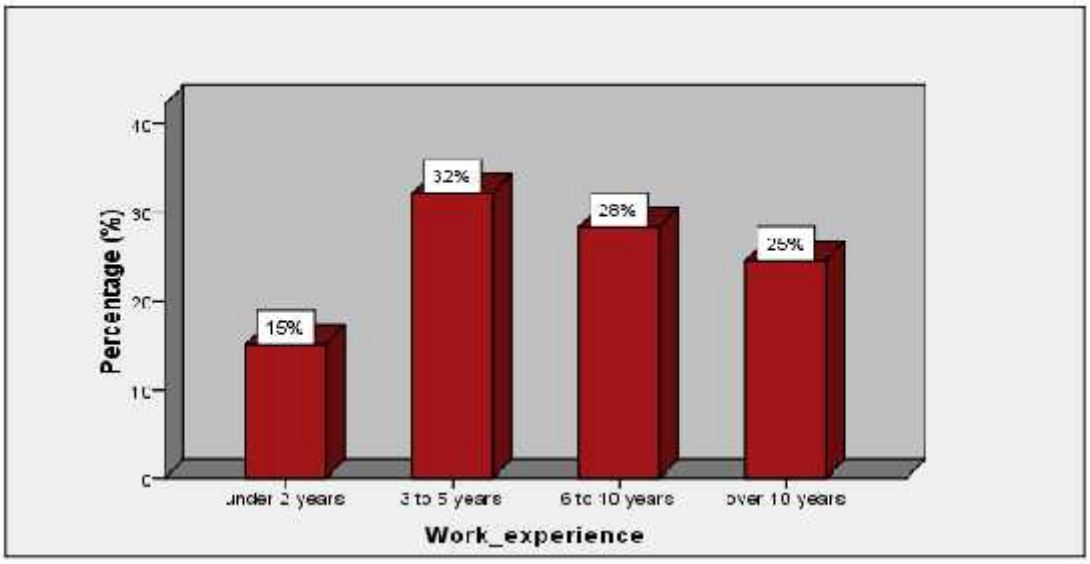

Fig 4.2: Work Experience of respondents

A large number of respondents' work experience lies between 3 to 5 years (32%), followed by 6 to 10 years (28%) and over 10years (25%). Only few respondents' work experience is under 2 years (15%). Therefore, since majority of respondents lie above 3 years of work experience, this confirmed their accustomedness with activities done within their respective companies hence were able to provide a clear picture regarding supply chain management practices implementation and how it affect their organizational performance.

4.3.2 Firm profile information

Firm profile information was also provided by the respondents from those respective firms.

Number of employees

Table: 4.3: Number of employees

Number of employees	Frequency	Percentage
1-50	21	39.62
51-100	13	24.53
over 101	19	35.85
Total	53	100.0

Number of employees was used as a measure for firm size. From Small Industries Development Organization (SIDO) website it defined small enterprises as enterprises

with less than 50 employees while medium enterprises employ between 51 and 100 people hence firms with more than 101 employees are regarded as large scale enterprises. 21 respondents (39.62%) represented firms with less than 51 employees, 13 respondents (24.53%) represented firms with number of employees lies between 51-100 employees while the remaining 19 respondents (35.85%) represented firms with more than 101 employees.

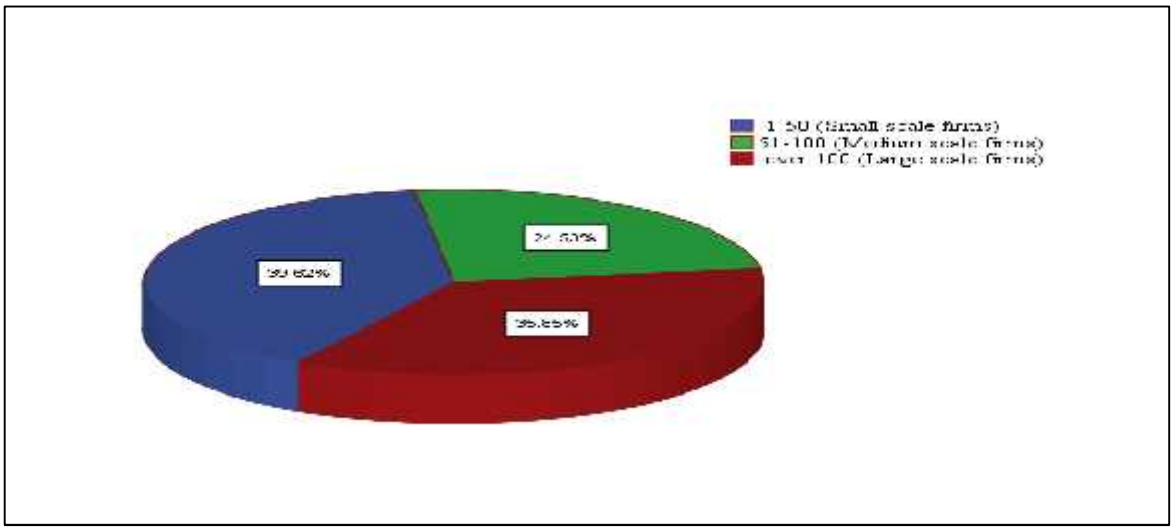

Fig 4.3: Firm profile: number of full time employees (size of firm)

Categories of selected food processing firms by subsector

Table 4.4: Categories of selected food processing firms by subsector

S/N	Sub sector	No. of respondents	%
1	Fishing and meat processing	3	5.7
2	Beverages	13	24.5
3	Grain milling	11	20.8
4	Tea and coffee	4	7.5
5	Edible oil production	3	5.7
6	Milk processing	4	7.5
7	Bakeries and confectionery	7	13.2
8	Fruits and vegetables	8	15.1
	Total	53	100

Source: Survey data, 2015

From table 4.4, it showed classification of food processing firms by sub sector. Thirteen respondents represented firms from beverage industry (24.5%), eleven respondents represented grain milling industry (20.8%), eight respondents represented firms from fruits and vegetables industry (15.1%), seven respondents represented firms from bakeries and confectionery industry (13.2%), four respondents represented firms from tea and coffee industry (7.5%), four respondents represented firms from milk processing industry (7.5%), three respondents represented firms from fishing and meat processing industry (5.7%) and three respondents represented firms from edible oil production industry (5.7%).

4.4 Means and Standard Deviations of Study Variables on the extent of SCM practices and organizational performance

This section has presented the extent of practical implementation of SCM practices in Tanzanian food processing firms and their respective organisational performance. The main goal was to calculate the percentage, mean and standard deviation of study variables. A number of questions were asked to the respondents who gave their responses on a scale of 1-5 where 1 represents to not at all practiced,2 - to a small extent, 3 - to a moderate extent, 4 - to a great extent and 5 to very great extent.

4.4.1To investigate the understanding of SCM practices implementation among Tanzanian food processing firms

Respondents were asked to indicate their understanding of SCM practices implementation whereby six SCM practices were listed. They included strategic supplier partnership, customer relationship, level and quality of information sharing, lean practices and outsourcing. As shown from table 4.4, based on the means calculated to each variable, customer relationship is the concept that was well understood by many respondents to a ‘great extent’ (4.02). SCM practices such as strategic supplier partnership, lean practices, level and quality of information sharing and outsourcing lie between 3.08 and 3.68 hence were understood to a ‘moderate extent’. Nevertheless, many respondents from different firms have shown to understand these practices at great extent that is 67.9%, 67.9%, 66.1% and 58.5%

respectively. Therefore, from these figures, it is crystal-clear majority of Tanzanian food processing firms understood how to implement SCM practices.

Table 4.5: Extent of understanding SCM practices implementation

Variables	**N (%)**	**S (%)**	**M (%)**	**G (%)**	**V (%)**	**M**	**S**
Customer Relationship	9.4	7.5	5.7	26.4	50.9	4.02	1.323
Strategic Supplier Partnership	13.2	1.9	17.0	39.6	28.3	3.68	1.283
Lean Practices	17.0	1.9	13.2	43.4	24.5	3.57	1.352
Quality Information Sharing	13.2	5.7	15.1	49.1	17.0	3.51	1.234
Level of Information Sharing	13.2	1.9	26.4	39.6	18.9	3.49	1.219
Outsourcing	17	26.4	11.3	22.6	22.6	3.08	1.452

Source: Survey data (2015)

Whereas:

N - Not at all

S- Small extent

M- Medium extent

G- Great extent

V- Very great extent

M- Mean

4.4.2 To assess the level of practical implementation of SCM practices in Tanzanian food processing firms

As seen in the Appendix A, it confirmed Tanzanian food processing firms implement SCM practices at different rate. This can be well explained in the following manner:

Strategic supplier partnership

Strategic supplier partnership included six variables, whereby quality as number one criterion in selecting suppliers was practiced at great extent as it has a mean of 4.21. Means of values for variables such as regularly solving problems jointly with suppliers, continuous improvement programs that include key suppliers and helping suppliers improve their product quality were between 3.30 and 3.75 ('moderate extent'), while the remaining two variables had mean range between 2.60 and 2.93. Therefore, from this analysis it can be concluded by saying strategic supplier partnership practices in Tanzanian food processing firms were not inclusive practiced.

Customer Relationship

With regards to customer relationship, all variables point out to be moderately practiced that is, range from 3.30 to 3.87. Frequent measure and evaluation of customer satisfaction was (71.7%), facilitation of customers' ability to seek assistance from firms (69.9%) and frequent determination of future customer expectations (69.8%) were practiced at great extent. Furthermore, it implied all these variables were equally practiced since the means of values were closely related. Frequent interaction with customers to set reliability, responsiveness, and other standards for firms was highly practiced (75.5%) while long term agreement with reliable customers was least practiced (26.4%).

Level of Information Sharing

The means of variables such as inform supply chain partners in advance of changing needs, supply chain partners share proprietary information, exchange information that help establishment of business planning, supply chain partners fully informed about issues affecting firm and supply chain partners keep each other informed about events or changes that may affect the other partners, range between 3.02 and 3.58 hence were practiced at 'moderate extent'. However, respondents from many firms had reported

practices such as inform supply chain partners in advance of changing needs and sharing of proprietary information between supply chain partners were practiced at great extent (67.9%) and (52.9%) respectively.

Sharing knowledge of core business between supply chain partners was practiced at very small extent (11.3%). Moreover, 24.5% of firms did not practice at all.

Quality Information Sharing

Under quality of information sharing, all variables that is, reliable information exchanged among supply chain partners, adequate information exchanged among supply chain partners, complete information exchanged between supply chain partners, timely information sharing among supply chain partner and accurate exchange of information between supply chain partners were moderate practiced (range between 3.58 and 3.85). Additionally, in terms of implementation at great extent were equally practiced, that is, 69.8%, 60.3%, 62.2%, 69.8% and 58.5% respectively.

Outsourcing

Practices such as firm outsources product design, firm outsources logistics, firm outsources information systems, firm outsources pre-sales customer services were practiced at small extent, 28.3%, 28.3%, 11.3% and 9.4% respectively (mean range between 2.08 and 2.30). On the contrary, 52.8% of the firms completely neglected to outsource information systems and pre-sales customer service. Furthermore, majority of firms (71.7%) did not outsource after-sales customer services and manufacturing with mean 1.55 and 1.49 respectively.

Lean Practices

At great extent majority of firms practiced continuous quality improvement program (71.7%) subsequent to pushes suppliers for shorter lead-times (69.62%) and continually improve their own performance with small incremental lean procurement improvements (Kaizen) (62.2%) with mean of 3.87, 3.68 and 3.43 respectively (‘moderate extent’ in general). Pull production system and firms not rely on inspecting their procured products were practiced at small extent (18.9%) and (7.5%) respectively. Nonetheless, many firms used ‘‘Pull’’ production system at moderate

extent (45%), while majority of firms did rely on inspecting their procured products (84.9%).

4.4.3 Extent of organizational performance

Table 4.6: Extent of organizational performance

Variables	N (%)	S (%)	M (%)	G (%)	V (%)	M	S
Product and service quality	3.8	11.3	11.3	34.0	39.6	3.94	1.151
Forecasting accuracy	3.8	13.2	15.1	41.5	26.4	3.74	1.112
Sales growth	3.8	11.3	18.9	50.9	15.1	3.62	1.004
Market share growth	9.4	5.7	22.6	47.2	15.1	3.53	1.120
Deliver dependability (on-time delivery, order fill rate, frequency of delivery, and delivery speed)	3.8	13.3	22.6	50.9	9.4	3.49	.973
Return on investment (ROI)	5.7	11.3	32.1	30.2	20.7	3.49	1.120
Flexibility	15.1	7.5	17.0	41.5	18.9	3.42	1.307
Return on assets (ROA)	3.8	17.0	37.7	20.8	20.7	3.38	1.113
Cost saving	17.0	5.7	20.8	35.8	20.7	3.38	1.348
Profit margin	3.8	13.2	37.7	39.6	5.7	3.30	.911
Reduced inventory level	17.0	5.7	32.1	32.0	13.2	3.19	1.257

Source: Survey data (2015)

Whereas:

N - Not at all

S- Small extent

M- Medium extent

G- Great extent

V- Very great extent

M- Mean

S- Standard deviation

In this segment, the extent of organizational performances was determined. Market and operation indicators were used. They include; product and service quality, forecasting accuracy, flexibility, reduced inventory level, cost saving, sales growth, market share growth, deliver dependability, return on investment (ROI), return on assets (ROA) and profit margin.

As seen in table 4.6, all variables had mean range between 3.19 and 3.94 hence the overall level of organisational performance among Tanzanian food processing firms was at moderate extent. However, majority of respondent had reported performance in product and service quality, forecasting accuracy, flexibility, sales growth, market share growth and deliver dependability were greatly achieved, 73.6%, 67.9%, 66.0%, 60.3% and 60.4%.

4.5 Inferential Statistics Analysis

This section, tried to reach conclusions that extended beyond the immediate data provided by description statistics. To go through this, hypothesis testing as one of the method of inferential statistics was used.

4.6 Hypothesis testing

Hypotheses developed were based on study objectives. Hypothesis one (H1) was formulated for objective one, that is, to investigate the understanding of SCM practices implementation among Tanzanian food processing firms. Hypothesis two to eight (H2 to H7) were formulated for objective two, that is, to assess the level of practical implementation of SCM practices in Tanzanian food processing firms. Hypothesis nine to ten (H8 to H13) were formulated for objective three, that is, to examine the relationship between SCM practices and organizational performance in Tanzanian food processing firms. Three common nonparametric tests were used to test these hypotheses, they included, chi square, Spearman's correlation and Kruskal-Wallis test. Non parametric analysis was used because the empirical data were in form of frequencies and measured at the ordinal level hence did not follow any normal distribution. Therefore, all formulated hypotheses had alternative hypothesis and null hypothesis.

4.6.1 Chi square test

Chi-square goodness of fit test (simple chi-square) was used to compare the observed sample distribution with the expected probability distribution. The first eight hypotheses (H1 up to H8) were tested to determine whether there was a significance difference between the expected frequencies and the observed frequencies in one or more categories. To test the null hypotheses the researcher had entered the values for the null hypothesis proportions in numerical order by category value in order to compare sample distribution to a different sort of population distribution by specifying the expected values.

The test statistic value was compared with the p-value (significance value) whereby p= 0.05. If the test statistic value was greater than p-value (> 0.05), then the null hypothesis was accepted and concluded there was no significant difference between the observed and the expected frequency. If the test statistic value was less than the p-value (<0.05), then the null hypothesis was rejected and concluded there is a significant difference between the observed and expected value.

Hypothesis 1

Ho1: The understanding of SCM practices implementation among Tanzanian food processing firms is not low
Ha1: The understanding of SCM practices implementation among Tanzanian food processing firms is low

Table 4.7: Statistical chi-square test for understanding of SCM practices

	Strategic Supplier Partnership	Customer Relationship	Level of Information Sharing	Quality of Information Sharing	Outsourcing	Lean Practices
Chi Square	.79[a1]	.41[a2]	3.0[a3]	.84[a4]	12.6[a5]	5.4[a1]
Df	4	4	4	4	4	4
Asym Sig.	0.94	0.98	0.55	0.9	0.01	0.25

a1. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 1.1.
a2. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.7.
a3. 1cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 1.6
a4. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7
a5. 1cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 3.7
a7. 0 cells (0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.6

As seen from table 4.7, strategic supplier partnership had test statistic value of0.939, $p < 0.05$; customer relationship had test statistic value of 0.982, $p < 0.05$;level of information sharing had test statistic value of 0.55, $p < 0.05$;quality of information sharing had test statistic value of 0.933, $p < 0.05$and lean practices had test statistic value of 0.251, $p < 0.05$. Since the test statistic values for these variables were greater than p-value the null hypothesis was accepted "The understanding of SCM practices implementation among Tanzanian food processing firms is not low". This means majority of respondents had more understanding of SCM practices. However, they had poor understanding in outsourcing practices that is 0.013, $p < 0.05$.

Hypothesis 2

Ho2: Strategic supplier partnership practice is not weak in Tanzanian food processing firms.

Ha2: Strategic supplier partnership practice is weak in Tanzanian food processing firms.

Table 4.8: Statistical chi-square test for strategic supplier partnership practices

	Quality as number one criterion in selecting suppliers	Regularly solve problems jointly with suppliers	Actively involvement of key suppliers in new product development processes	Continuous improvement programs that include key suppliers	Involvement of key suppliers in planning and goal setting activities	Helped suppliers to improve their product quality
Chi-Square	0.74[a1]	1.87[a2]	15.18[a3]	3.93[a4]	13.51[a5]	3.91[a6]
Df	3	3	4	4	4	4
Asymp Sig.	0.87	0.60	0.004	0.415	0.009	0.418

a1. 2cells (50.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.1.
a2. 1 cell (25.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7
a3. 3 cells (60.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.7
a4. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 4.2
a5. 1 cell (0%) has expected frequencies less than 5. The minimum expected cell frequency is 10.6
a6. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 1.1

Quality as number one criterion in selecting suppliers, regularly solve problems jointly with suppliers, continuous improvement programs that include key suppliers and helped suppliers to improve their product quality had test statistic values greater than critical value, that is, 0.74, $p < 0.05$; 0.6, $p < 0.05$; 0.415, $p < 0.05$ and 0.418, $p < 0.05$ respectively. Therefore, the null hypothesis "Strategic supplier partnership practice is not weak in Tanzanian food processing firms" was accepted. On the contrary, Tanzanian food processing firms had weakness in involving key suppliers in new product development as well as in planning and goal setting activities.

Hypothesis 3

Ho3: Customer relationship practice is not weak in Tanzanian food processing firms.

Ha3: Customer relationship practice is weak in Tanzanian food processing firms.

Table 4.9: Statistical chi-square test for customer relationship practices

	Frequent interaction with customers to set reliability, responsiveness, and other standards	Frequent measure and evaluation of customer satisfaction	Frequent determine future customer expectations	Facilitate customers' ability to seek assistance	Entered into long term contract agreement with reliable customers
Chi-Square	1.60[a1]	1.13[a2]	4.01[a3]	4.65[a4]	6.44[a5]
Df	3	3	4	4	3
Asymp Sig.	0.659	0.770	0.405	0.325	0.092

a1.1 cell (25.0%) has expected frequencies less than 5. The minimum expected cell frequency is 4.2
a2. 0cells(0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.3

a3. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.1.
a4. 3 cells (60.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.1
a5. 0 cells (0%) have expected frequencies less than 5. The minimum expected cell frequency is 6.9.

As shown from table 4.9, all variables had test statistic values greater than critical value (0.05) that is 0.659, 0.77, 0.405, 0.325 and 0.092. Hence the null hypothesis "Customer relationship practice is not weak in Tanzanian food processing firms" was strongly accepted.

Hypothesis 4

Ho4: The level of information sharing practice is not weak in Tanzanian food processing firms.

Ha4: The level of information sharing practice is weak in Tanzanian food processing firms

Table 4.10: Statistical chi-square test for level of information sharing practices

	Inform Supply chain partners in advance of changing needs	Supply chain partners share proprietary information	Supply chain partners keep us fully informed about issues that affect our business	Supply chain partners share business knowledge of core business	Supply chain partners exchange information that help establish business planning	Supply chain partners keep each other informed about events or changes that may affect the other partners
Chi-Square	3.0[a1]	5.6[a2]	10.4[a3]	16.3[a4]	28.8[a5]	10.8[a6]
Df	4	4	4	4	4	4
Asymp. Sig.	0.55	0.24	0.03	0.00	0.00	0.03

a1. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.7.
a2. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7.
a3.1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7.
a4. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 4.8.
a5. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 1.1.

a6. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 4.2.

Table 4.10 showed all variables that is, supply chain partners fully informed about issues affect business, supply chain partners share business knowledge of core business, supply chain partners exchange information that help establish business planning and supply chain partners keep each other informed about events or changes that may affect the other partners had test statistic value less than p value, that is, 0.034, 0.003, 0.000 and 0.029 respectively. Thus, the null hypothesis "The level of information sharing practice is not weak in Tanzanian food processing firms" was rejected in favour of the alternative hypothesis which stated "The level of information sharing practice is weak in Tanzanian food processing firms". Nevertheless, practices such as inform supply chain partners in advance of changing needs and supply chain partners share proprietary information were strongly practiced.

Hypothesis 5

Ho5: Quality of information sharing practice is not weak in Tanzanian food processing firms.

Ha5: Quality of information sharing practice is weak in Tanzanian food processing firms.

Table 4.11: Statistical chi-square test for quality of information sharing practices

	Information exchange between supply chain partners is timely	Information exchange between supply chain partners and is accurate	Information exchanged between supply chain partners is complete	Information exchanged between supply chain partners is adequate	Information exchanged between supply chain partners is reliable
Chi-Square	1.29[a1]	2.91[a2]	0.51[a3]	0.44[a4]	0.43[a5]
Df	4	4	4	4	4
Asym Sig.	0.863	0.574	0.973	0.979	0.98

a1. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.7.

a2. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7.

a3. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.7.

a4. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.1.

a5. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 2.1.

From the above table, all variables were highly practiced since the test statistic value for all variables was above 0.5. Hence the null hypothesis "Quality of information sharing practice is not weak in Tanzanian food processing firms" was strongly accepted.

Hypothesis 6

Ho6: Lean practice is not weak in Tanzanian food processing firms.
Ha6: Lean practice is weak in Tanzanian food processing firms.

Table 4.12: Statistical chi-square test for lean practices

	Firm does not rely on inspecting products procured (six sigma)	Firm has continuous quality improvement program	''Pull'' production system	Firm continually improve their own performance with small incremental lean procurement improvements (Kaizen)	Firm pushes suppliers for shorter lead-times
Chi-Square	140.11[a1]	1.60[a2]	26.34[a3]	7.55[a4]	0.70[a5]
Df	4	3	4	4	4
Asymp Sig.	0.00	0.659	0.00	0.11	0.951

a1. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.6.
a2. 1 cell (25.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7.
a3. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.6.
a4. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 2.7.
a5. 2 cells (40.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.6.

Firm has continuous quality improvement program had test statistic value of 0.659, $p<0.05$; firm continually improve their own performance with small incremental lean procurement improvements (Kaizen) had test statistic value of 0.11, $p<0.05$ and firm pushes suppliers for shorter lead-times had test statistic value of 0.951, $p<0.05$.

Therefore, the null hypothesis "Lean practice is not weak in Tanzanian food processing firms"was accepted. However, practices like firm does not rely on inspecting products procured (six sigma) and ''Pull'' production system were poorly implemented.

Hypothesis 7

Ho7: Outsourcing practice is not weak in Tanzanian food processing firms.
Ha7: Outsourcing practice is weak in Tanzanian food processing firms.

Table 4.13: Statistical chi-square test for outsourcing practices

	Firm outsources information systems	Firm outsources manufacturing	Firm outsources logistics	Firm outsources pre-sales customer care	Firm outsources after-sales support	Firm outsources product design
Chi-Square[a]	37.5	63.6	22.8	39.0	90.3	13.32
Df	4	3	4	4	4	4
Asymp Sig.	0.00	0.00	0.00	0.00	0.00	0.01

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.6.

In Table 4.13 all the test statistic values for the six variables related to outsourcing practices were less than the level of significance 0.05. Therefore, the null hypothesis "outsourcing practice is not weak in Tanzanian food processing firms" was rejected and in favour of the alternative hypothesis which stated "outsourcing practice is weak in Tanzanian food processing firms" was supported.

4.6.2 Spearman's correlation and Kruskal-Wallis H test.

To examine the relationship between SCM practices and organizational performance in Tanzanian food processing firms

From hypothesis H8 to H13 were formulated to determine whether there was a relationship between SCM practices the organizational performance. Three key features from such relationship were considered that is, their strength, direction and level of significance. Nonparametric tests, that is, Spearman correlation coefficients and Kruskal-Wallis were used respectively. Spearman's rank-order correlation coefficient($r_{s)}$ranges from -1 to +1, whereby when $r_s$is +1 it indicates a perfect association between variables, asr_s = zero it indicates no association between variables and ifr_s is -1 indicates a perfect negative association of variables. Kruskal-Wallis H test was used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. Thus, from the study, Kruskal-Wallis H test was used to make a comparison between responses with high and low level of SCM practices. This means responses from 1 - "not at all" up to 3 - "to a moderate extent" were considered as low level of SCM practices while 4 - " to a great extent" and 5 - " to a very great extent" were regarded as high level of SCM practices.

Hypothesis 8

Ho8: There is no relationship between the strategic supplier partnership and organizational performance in Tanzanian food processing firms.

Ha8: There is relationship between the strategic supplier partnership and organizational performance in Tanzanian food processing firms

Table 4.14: Correlations between strategic supplier partnership and organizational performance

			Strategic supplier partnership	Organizational performance
Spearman's rho	Strategic supplier partnership	Correlation Coefficient	1.000	0.616
		Sig. (2-tailed)	.	0.001
		N	53	53
	Organisational performance	Correlation Coefficient	0.616	1.000
		Sig. (2-tailed)	0.001	.
		N	53	53

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

As shown from table 4.14, there was strong, positive correlation between strategic supplier partnership and organizational performance which was statistically significant ($r_s(53) = 0.669$, $p = 0.001$).Therefore, the null hypothesis" there is no relationship between the strategic supplier partnership and organizational performance in Tanzanian food processing firms" was rejected.

Table: 4.15: Kruskal-Wallis test result for strategic supplier partnership practices and organizational performance

	Organizational performance
Chi-Square	24.188
df	4
Asymp. Sig.	0.002

Grouping Variable: Strategic supplier partnership

The Kruskal-Wallis test value indicated that strategic supplier partnership did influence the organizational performance of Tanzanian food processing firms because the calculated p-value (0.002) was less than 0.05 significant values.

Hypothesis 9

Ho9: There is no relationship between the customer relationship and organizational performance in Tanzanian food processing firms.

Ha9: There is relationship between the customer relationship and organizational performance in Tanzanian food processing firms.

Table 4.16: Correlations between customer relationship and organizational performance

			Customer relationship	Organizational performance
Spearman's rho	Customer relationship	Correlation Coefficient	1.000	0.535
		Sig. (2-tailed)	.	0.002
		N	53	53
	Organisational performance	Correlation Coefficient	0.535	1.000
		Sig. (2-tailed)	0.002	.
		N	53	53

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

From table 4.16 there was strong, positive correlation between customer relationship and organizational performance which was statistically significant (r_s (53) = 0.535, p=0.002). Therefore, the null hypothesis "there is no relationship between customer relationship and organizational performance in Tanzanian food processing firms" was rejected.

Table: 4.17: Kruskal-Wallis test result for customer relationship practices and organizational performance

	Organizational performance
Chi-Square	25.733
df	3
Asymp. Sig.	0.003

Grouping Variable: Customer relationship

The Kruskal-Wallis test value indicated that customer relationship did influence the organizational performance of Tanzanian food processing firms because the calculated p-value (0.003) was less than 0.05 significant value.

Hypothesis 10

Ho10: There is no relationship between the level of information sharing and organizational performance in Tanzanian food processing firms.
Ha10: There is relationship between the level of information sharing and organizational performance in Tanzanian food processing firms.

Table 4.18: Correlations between level of information sharing and organizational performance

			Level of information sharing	Organizational performance
Spearman's rho	Level of information sharing	Correlation Coefficient	1.000	0.653
		Sig. (2-tailed)	.	0.001
		N	53	53
	Organisational performance	Correlation Coefficient	0.653	1.000
		Sig. (2-tailed)	0.001	.
		N	53	53

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

From table 4.18 there was strong, positive correlation between thelevel of information sharing and organizational performance which was statistically significant (r_s (53) =0.653, p=0.001). Therefore, the null hypothesis “there is no relationship between the level of information sharing and organizational performance in Tanzanian food processing firms” was rejected.

Table: 4.19: Kruskal-Wallis test result for level of information sharing practices and organizational performance

	Organizational performance
Chi-Square	25.502
df	4
Asymp. Sig.	0.011

Grouping Variable: Level of information sharing

The Kruskal-Wallis test value indicated that the level of information sharing did influence the organizational performance of Tanzanian food processing firms because the calculated p-value (0.011) was less than 0.05 significant value**.**

Hypothesis 11

Ho11: There is no relationship between quality of information sharing and organizational performance in Tanzanian food processing firms

Ha11: There is relationship between quality of information sharing and organizational performance in Tanzanian food processing firms.

Table 4.20: Correlations between quality of information sharing and organizational performance

			Quality of information sharing	Organizational performance
Spearman's rho	Quality of information sharing	Correlation Coefficient	1.000	0.499
		Sig. (2-tailed)	.	0.002
		N	53	53
	Organisational performance	Correlation Coefficient	0.499	1.000
		Sig. (2-tailed)	0.002	.
		N	53	53

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

Table 4.20 indicated there was strong, positive correlation between the quality of information sharing and organizational performance which was statistically significant ($r_s(53) = 0.499$, $p= 0.002$). Therefore, the null hypothesis "there is no relationship between the quality of information sharing and organizational performance in Tanzanian food processing firms" was rejected.

Table: 4.21: Kruskal-Wallis test result for quality of information sharing practices and organizational performance

	Organizational performance
Chi-Square	21.653
df	4
Asymp. Sig.	0.002

Grouping Variable: Quality of information sharing

The Kruskal-Wallis test value indicated that the quality of information sharing did influence the organizational performance of Tanzanian food processing firms because the calculated p-value (0.002) was less than 0.05 significant value.

Hypothesis 12

Ho12: There is no relationship between lean practices and organizational performance in Tanzanian food processing firms.

Ha12: There is relationship between lean practices and organizational performance in Tanzanian food processing firms.

Table 4.22: Correlations between lean practices and organizational performance

			Lean practices	Organizational performance
Spearman's rho	Lean practices	Correlation Coefficient	1.000	0.410
		Sig. (2-tailed)	.	0.042
		N	53	53
	Organisational performance	Correlation Coefficient	.410	1.000
		Sig. (2-tailed)	0.042	.
		N	53	53

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

Table 4.22 indicated there was strong, positive correlation between the quality of information sharing and organizational performance which was statistically significant ($r_s(53) = 0.410$, $p= 0.042$).Therefore, the null hypothesis "there is no relationship between lean practices and organizational performance in Tanzanian food processing firms" was rejected.

Table: 4.24: Kruskal-Wallis test result for lean practices and organizational performance

	Organizational performance
Chi-Square	20.144
df	4
Asymp. Sig.	0.009

Grouping Variable: Lean practices

The Kruskal-Wallis test value indicated that lean practices did influence the organizational performance of Tanzanian food processing firms because the calculated p-value (0.009) was less than 0.05 significant value.

Hypothesis 13

Ho13: There is no relationship between outsourcing and organizational performance in Tanzanian food processing firms.

Ha13: There is relationship between outsourcing and organizational performance in Tanzanian food processing firms.

Table 4.24: Correlations between outsourcing and organizational performance

			Outsourcing	Organizational performance
Spearman's rho	Outsourcing	Correlation Coefficient	1.000	0.137
		Sig. (2-tailed)	.	.377
		N	53	53
	Organisational performance	Correlation Coefficient	0.137	1.000
		Sig. (2-tailed)	0.377	.
		N	53	53

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

As indicated in Table 4.24 calculated significance value 0.377 was above the significance value of 0.05; as a result, the null hypothesis "there is no relationship between outsourcing and organizational performance in Tanzania food processing firms" was not rejected. This implied that there was no relationship between outsourcing and organizational performance. The calculated correlation coefficient 0.164 revealed there was a weakness, which is almost zero, relationship between the two variables.

Table: 4.25: Kruskal-Wallis test result for outsourcing practices and organizational performance

	Organizational performance
Chi-Square	10.241
df	4
Asymp. Sig.	0.161

Grouping Variable: Outsourcing

The Kruskal-Wallis test value indicated that outsourcing did not influence the organizational performance of Tanzanian food processing firms because the calculated p-value (0.161) was greater than 0.05 significant value.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter made some discussion on research findings as presented in chapter four so as to extract meaningful information behind such outcomes. Discussion was made possible with the help of cross-referencing to other relevant previous studies. Centre of discussion based on research specific objectives, whereby the first section focused in the understanding of SCM practices implementation, the second section focused on the level of SCM practices implementation and the last section dealt with the relationship between SCM practices and organizational performance.

5.2 The extent of understanding SCM practices implementation.

In this study a new discovery was made with regards to an understanding of SCM practices implementation in Tanzanian food processing firms whereby majority of respondents reported to understand how to implement such practices. This was evidently proved when the null hypothesis which stated “The understanding of SCM practices implementation among Tanzanian food processing firms is not low” was accepted regardless the size of firm. The researcher randomly selected respondents from small scale to large scale food processors. This can be clearly seen from description analysis whereby 21 respondents (36.92%) came from small scale, 13 respondents (24.53%) - medium scale and 19 respondents (35.85%) came from large scale firms. On the contrary, majority of respondents reported some weakness in understanding outsourcing practices implementation. In addition to preliminary data analysis, it revealed Tanzanian food processing firms did not understand SCM practices implementation at very great extent in a way it can be concluded by saying they fully understood it at the maximum level since the mean value for practices such as strategic supplier partnership, lean practices, level and quality of information sharing and outsourcing lie between 3.08 and 3.68 which means were understood to a ‘moderate extent’.

5.3 The extent of practical SCM practices implementation.

To determine the extent of practical SCM practices implementation in Tanzanian food processing firms six key SCM practices were selected that is, strategic supplier partnership, customer relationship, degree and quality of information sharing internal lean practices and outsourcing. The measures used to measure these SCM practices implementation proved to be reliable and valid as indicated from previous studies by Li *et al*. (2006), Agus (2011), Bratić (2011), Choon Ho (2011), Arifin and Baihaqi (2012), Arun and Kumar (2014),Chen *et al.* (2014), Hussain *et al.* (2014),Karami *et al*.(2014) and Kumar and Nambirajan (2014).The preliminary data analysis indicated the general actual implementation of SCM practices in Tanzanian food processing firms was not to a very large extent this was evidently seen in the range of mean whereby many variables had mean around 3 which meant 'moderate extent'. Therefore, hypothesis 2 to 7 were formulated to test the degree of SCM practices implementation in Tanzanian food processing firms whereby chi square goodness of fit test was used to compare the expected and observed frequency distribution. The result can be discussed as follows:

5.3.1Strategic supplier partnership practice

The null hypothesis "Strategic supplier partnership practice is not weak in Tanzanian food processing firms" was accepted. This showed majority of Tanzanian food processors were implementing strategic supplier partnership practices in terms of considering quality as our number one criterion in selection of suppliers, regularly solve problems jointly with their suppliers, continuous improvement programs that include their key suppliers and helping their suppliers to improve their product quality. However they had a weakness in involving key suppliers in new product development as well as in planning and goal setting activities. Therefore, Tanzanian food processing firms included strategic supplier partnership practices in their operation. However, they need to increase the extent of implementation in order to take fully advantage of their key suppliers towards maximisation of their overall organisational performance since they had weakness in involving key suppliers in new product development as well as in planning and goal setting activities.

5.3.2 Customer relationship practice

Customer relationship practice was highly implemented in majority of food processors because all five factors had test statistic values above critical value of 0.05.This implied customer relationship practices in terms of frequently interaction with customers to set reliability, responsiveness, and other standards, frequently measure and evaluate customer satisfaction, frequently determine future customer expectations, facilitating customers' ability to seek assistance and entered into long term contract agreement with reliable customers were given paramount of importance in most of firms. The reason behind this outcome can be due to a fact the world today is in the era of massive growth of mass customization and personalised service which have force organizations to maintain good relationship with customers for the sake of their survival (Jie*et al*., 2007). Close customer relationship allows an organization to differentiate its products from the competitors, and sustain customer loyalty (Bratić, 2011). On the contrary, with regards to preliminary data analysis, all practices point out to be moderately practiced since the mean range from 3.30 to 3.87. Thus, there is a need for Tanzanian food processors to intensify their commitment towards identifying and satisfying customers' needs and exceeding their expectations since the main reason to why organization exists in the first place is solely because of customers.

5.3.3 Level of information sharing practices

The level of information sharing practice in Tanzanian food processing firms was weak. The null hypothesis was rejected in favour of alternative hypothesis which stated "the level of information sharing practice is weak in Tanzanian food processing firms". This was seen in terms of supply chain partners had a weakness in informing issues that affect business, supply chain partners did not share business knowledge of core business, supply chain partners did not exchange information that helped establish business planning and supply chain partners were not keeping each other informed about events or changes that may affect the other partners. These figures can only indicated one thing, that Tanzanian food processors had a serious problem of confining important information within the company instead of sharing it among the supply chain partners starting from end-consumer demand to the upstream stages of

the supply chain. Nevertheless, practices such as inform supply chain partners in advance of changing needs and supply chain partners share proprietary information were strongly practiced. Therefore, majority of Tanzanian food processors failed to realise the benefits one gets when supply chain partners exchange information because as the level of information flows increases so as the intensity of uncertainty and bullwhip effect along the supply chain reduces (Woldemichael, 2012).

5.3.4 Quality of information sharing practices

The quality of information sharing between supply chain partners was highly practiced in terms of accuracy, reliability, complete, adequacy as well as timely. The null hypothesis was strongly accepted since all five variables supported it. This fact implied most of food processors regarded quality of information sharing as important aspect for ensuring the success of organizations and the supply chain as a whole. It is the blood of the supply chain such that without it the chain is bound to fail (Mwale, 2014).Therefore, Tanzanian food processors need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

5.3.5 Lean practices

Implementation of lean practices was not weak in most of food processors. This was proved when null hypothesis was accepted, practices such as continuous quality improvement program, pushes suppliers for shorter lead-times and continually improve their own performance with small incremental lean procurement improvements (Kaizen) were practiced at great extent. Nonetheless, Tanzanian food processors had a weakness in implementing pull production system and they were completely did rely on inspecting their procured products which result to wastage of time and money.

5.3.6 Outsourcing practices

Tanzanian food processors had a weakness in implementing outsourcing practices. From preliminary data analysis, firms outsource product design, logistics, information systems, pre-sales customer services at small extent whereas majority of firms

completely neglected to outsource information systems, pre-sales customer, after-sales customer services and manufacturing. Poor understanding in the implementation of outsourcing practices could be the key attribute factor that made Tanzanian food processors to lag behind in the adoption of outsourcing practices in their respective companies.

5.4 The relationship between SCM practices and organizational performance.

The correlation analysis showed supply chain management practices in term of strategic supplier partnership, customer relationship, level and quality of information sharing and lean practices were positively related to organisational performance in term of financial/ operational performance (deliver dependability, cost saving, product and service quality, forecasting, reduced inventory and level flexibility) and market performance (sales growth, market share growth, profit margin, return on investment and return on assets). Furthermore Kruskal-Wallis test showed such relationship to be significant. However, outsourcing did not correlate or influence organizational performance.

Therefore, the result in this study was in accordance to the work of previous studies, that is, SCM practices have direct and positive influence on organizational performance. For example, Li *et al.* (2006), Bratić (2011), Adebayo (2012), Arifin and Baihaqi (2012), Bahri-Ammari (2013), Arun and Kumar (2014),Chen *et al.* (2014), Karimi and Rafiee (2014) and Mensah *et al.,* (2014)used similar dimensions of SCM practices (strategic supplier partnership, customer relationship and level and quality of information sharing) and their result showed that the implementation of SCM practices can directly improve an organization's financial and marketing performances in the long run. Studies done by Koh *et al.* (2007),Agus (2011) and Choon Ho (2011)had result that showed lean practices have direct positive and significant impact on organisational performance. Additionally, Choon Ho (2011) and Mwale (2014) had indicated outsourcing practices in their respective countries did not correlate or influence organizational performance.

However, from study findings, it indicated Tanzanian food processing firms need to increase their level of implementing SCM practices so as to increase their organizational performance which was not achieved at a very great extent since all organizational performance's variables from preliminary data analysis had mean value range from 3.19 to 3.94 which means was lowly (moderate) achieved. Consequently, the study empirically justified the statements made by previous studies done by Li *et al.* (2006), Mensah*et al.* (2014), Karimi and Rafiee (2014), just to mention the few, in relationship to effective SCM practices implementations within the company can lead to higher organisational performance and vice versa is true, that is, the lower SCM practices implementation the lower is the organisational performance.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

In this chapter conclusion and recommendations were made based on the research findings. Furthermore suggestions for future research were made.

6.2 Conclusion

The general objective of this study was to assess SCM practices implementation in Tanzanian food processing firms and their impact to the overall organizational performance. Key dimensions of SCM practices as well as operational and market-oriented performance indicators were used for the purpose of investigating the real scenario. Whereas, valid and reliable instruments for assessing study variables were used with the help of scientific methods such as chi square test, Spearman's correlation and Kruskal Wallis test. Thus from such analysis, the study had empirically justified and provided a proof to support the conceptual and prescriptive statements made in the previous studies regarding the role of supply chain management practices in enhancing organisational performance. Furthermore, the study noticed some important points regarding SCM practices implementation in Tanzanian food processing firms that is, the level of understanding and implementation of SCM practices is not to a very large extent in a way it could have enabled companies to fully take advantage of benefits SCM concept can offer for the success of their respective organisations. This was evidently seen when implementation of some of SCM practices were practiced at small extent or completely neglected in some of organizations example level of information sharing and outsourcing practices. Nevertheless, the general conclusion emerged in this study was that, SCM practices understanding and implementation in Tanzanian food processing firms can have a direct, positive influence in their respective organizational performance when effectively and efficiently implemented and vice versa is true.

6.3 Recommendations

Based on the study findings, it was confirmed that there is strong need for the implementation of SCM practices in Tanzanian food processing firms to enhance their overall organisational performance. Hence the researcher provided some recommendations that can easily be applicable to all Tanzanian food processing firms, as follows:

- ❖ It is essential for senior and middle managers are trained first so that they are more likely to understand the usefulness of SCM practices implementation and become committed to it. Furthermore, training programs should also be provided to other staff as the way to ensure they can put into consideration the SCM concept in greater detail so as to enable them to properly implement it since poor understand of the concept can hinder them from fully participating in the SCM practices implementation in their respective companies. Example of training programs include seminars, short courses or further studies like bachelor or masters of procurement supply chain management
- ❖ Starting a department of supply chain management that specifically deals with SCM practices implementation since most of food processors have interchangeably regarded supply chain management as operation management and it should consists of managers who are fully acknowledged in understanding and implementation of SCM practices from the highest level to the lowest possible level within the company and along the supply chain.
- ❖ Much more commitment is needed from senior management for the full potential of SCM practices to be realised. This should be a matter of priority and may be assisted by the development of learning materials aimed specifically at the higher echelons of management (example, by showing examples of SCM practices implementation drawn from their own work spheres).
- ❖ Lastly but not least, Tanzania food processing firms should conduct some evaluation within the company and along the supply chain from upstream (with company's suppliers) to downstream (with company's customers) for practices which were mentioned in this study as the way to measure their importance

and effect in the daily company's operations for enhancing organisational performance. That is, strategic supplier partnership, customer relationship, degree and quality of information sharing internal lean practices and outsourcing practices. In addition, they can include other useful dimensions of SCM practices which were not mention in this study but they were found to be very effectively and useful in the literature example; order fulfilment management, returns management, logistic integration, supply chain benchmarking, many suppliers, e-procurement, subcontracting, strategic planning, Third Party Logistics (3PL), inventory management, just to mention the few.

6.4 Suggestions for future research

The study portrayed the current trends of SCM practices understanding and implementation in Tanzanian food processing firms and how it impact their overall organisational performance. However the findings were confined to companies located at Dar es Salaam only. Thus further studies are needed to widen the scope of respondents by encompassing other regions of the country. More studies are needed specifically to deal with SCM practices implementation and how it impact organizational performance in Tanzanian food processing firms since there is shortage of such studies in the literature. The concept of supply chain management is very wide due to its multidisciplinary origin thus covering everything in one study is nearly impossible. Future research should consider other dimensions of SCM practices such as supply chain integration, strategic location, order fulfilment management, returns management, logistic integration, supply chain benchmarking, many suppliers, e-procurement, inventory management, just to mention the few. In addition, future research should consider control variables such as firm size, firm age, and multi-category aspects found within food processing industry. In terms of firm size, larger organizations may have higher levels of SCM practices since they usually have more complex supply chain networks necessitating the need for more effective management of supply chain (Li *et al*., 2006). Usually, firms with long years of operations are more experienced and competent thus they can efficiently implement SCM practices than younger firms which are new and inexperienced. Due to time constraints the study

failed to consider these controls variable. Furthermore, future studies should consider barriers that hinder effective SCM practices implementation in Tanzanian food processing firms.

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APPENDICES

APPENDIX A: Extent of actual implementation of SCM practices in Tanzanian food processing firms

Variables	N (%)	SE (%)	ME (%)	GE (%)	V (%)	M	S
Strategic supplier partnership							
Quality as number one criterion in selecting suppliers	17.0	1.9	0.0	7.5	73.6	4.21	1.511
Regularly solving problems jointly with suppliers	17.0	7.5	0.0	41.5	34.0	3.75	1.385
Continuous improvement programs that include key suppliers	17.0	9.4	15.1	30.2	28.3	3.43	1.435
Helping suppliers improve their product quality	22.6	1.9	22.6	28.3	24.5	3.30	1.462
Actively involving key suppliers in new product development process	30.2	9.4	15.1	28.3	17.0	2.93	1.517
Involvement of key suppliers in planning and goal-setting activities	34.0	9.4	26.4	22.6	7.5	2.60	1.364
Customer Relationship							
Frequent interaction with customers to set reliability, responsiveness and other standards	15.1	9.4	0.0	34.0	41.5	3.87	1.373
Frequent measure and evaluate customer satisfaction	17.0	11.3	0.0	37.7	34.0	3.72	1.392
Facilitate customers' ability to seek assistance from us	7.5	11.3	11.3	49.1	20.8	3.64	1.162
Frequent determine future	17.0	1.9	11.3	43.4	26.4	3.60	1.364

customer expectations							
long term contract agreement with reliable customers	22.6	26.4	0.0	26.4	24.5	3.30	1.449
Level of information sharing							
Inform supply chain partners in advance of changing needs	13.2	15.1	3.8	35.8	32.1	3.58	1.420
Supply chain partners share proprietary information	7.5	24.5	15.1	39.6	13.3	3.26	1.195
Exchange information that help establishment of business planning	18.9	15.1	24.5	28.3	13.2	3.17	1.438
Supply chain partners keep us fully informed about issues affecting our business	15.1	15.1	26.4	32.1	11.3	3.09	1.244
supply chain partners keep each other informed about events or changes that may affect the other partners	18.9	15.1	24.5	28.3	13.2	3.02	1.323
Supply chain partners share business knowledge of core business	24.5	11.3	26.5	24.5	13.2	2.91	1.377
Quality of information sharing							
Reliable information exchanged among supply chain partners	3.8	5.7	20.8	41.5	28.3	3.85	1.027
Adequate information exchanged among supply chain partners	1.9	9.4	28.3	37.7	22.6	3.70	.992
Complete information exchanged between supply chain partners	5.7	5.7	26.4	39.6	22.6	3.68	1.070
Timely information sharing among supply chain partners	3.8	11.3	15.1	56.6	13.2	3.64	.982

Accurate exchange of information between supply chain partners	3.8	9.4	28.3	41.5	17.0	3.58	1.008
Outsourcing							
Firm outsources product design	34.0	28.3	17.0	15.0	5.7	2.30	1.249
Firms outsources logistics	39.6	28.3	18.9	11.3	1.9	2.08	1.107
Firm outsources information systems	52.8	11.3	17.0	13.2	5.7	2.08	1.328
Firms outsources pre-sales customer services	52.8	9.4	20.8	11.3	5.7	2.08	1.313
Firm outsources after-sales customer services	71.7	13.2	5.7	7.5	1.9	1.55	1.030
Firm outsources manufacturing	71.7	11.3	0.0	15.1	1.9	1.49	.891
Lean practices							
Firm pushes suppliers for shorter lead-times	1.9	9.4	18.9	39.6	30.2	3.87	1.020
Firm has continuous quality improvement program	20.8	7.5	0.0	34.0	37.7	3.68	1.504
Firm continually improve their own performance with small incremental lean procurement improvements (Kaizen)	17.0	3.8	17.0	43.4	18.8	3.43	1.323
Firm uses a ‘‘Pull’’ production system	18.9	18.9	45.2	15.1	1.9	2.62	1.023
Firm does not rely on inspecting products procured	84.9	7.5	3.8	1.9	1.9	1.28	0.794

Source: Survey data (2015)

Whereas:
N - Not at all

SE- Small extent

ME- Medium extent

GE- Great extent

V- Very great extent

M- Mean

S – Standard Deviation

APPENDIX B: REASERCH QUESTIONNAIRE

A: Guideline to the Questionnaire

IMPACT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON THE OVERALL ORGANIZATIONAL PERFORMANCE OF FOOD PROCESSING INDUSTRIES IN DAR ES SALAAM, TANZANIA

INTRODUCTION
The main reason to why many companies in today's era of globalization are striving for ways to effectively implement the Supply Chain Management (SCM) is to achieve competitive advantage at the same time minimise the manufacturing operation costs.
OBJECTIVES
This study plans to investigate the understanding, adoption and practical implementation of SCM practices as well as their impact on the overall organizational performance in food processing industries located at Dar es Salaam. It is expected that both members within the supply chain, that is suppliers, manufacturers, distributors, retailers, and customers will benefit from this study in terms of improved quality and productivity, customer satisfaction, improved collaborative relationships, lower inventory levels, better responsiveness and lower throughput time, just to mention the few. Since supply chain management practices contribute 50% to the profitability and performance of any organization.
INSTRUCTIONS
I kindly request you to take your valuable time and complete the questionnaire. The data collected shall purely be for academic purpose only. Your responses will be kept absolutely confidential. All answered will be presented as honestly and truthfully in order to yield valid results.

Would you like to be contacted again regarding this questionnaire, if your answer is YES, please write down your name and contact details:

_____

If any part of the questionnaire is not clear, or if you have any question, please contact me, Miss Asha Ahamad Mollel, at cell phone number +255 652 02 34 63 or +255 756 99 86 73. Or email address: ashamollel@gmail.com

Note: This questionnaire can be answered by only managers or any employees within the same organization who possess relevant information to the asked questions.

B: Research Questions

PART 1

Demographic Profile

Please answer the following questions by marking "✓" in the blank spaces:

1. What is your highest education level?

Elementary school _____

High school _____

College diploma _____

Bachelor degree _____

Master's degree _____

Doctoral degree _____

2. Job Title/Position

Investor/Owner _____

General Manager _____

Plant manager _____

Production/ operations manager_____

Accounts/finance manager _____

IT manager _____

Marketing manager _____

Director _____

Other (please indicate) _____

3. The years you have worked for this company:

Under 2 years ___, (3 to 5 years) ____, (6 to10 years) _____, (over 10 years) ____

4. Number of employees in your company:

(1- 50) ___, (51- 100) ___,(101-300) ___,(301-500) ___,(501 – 700) __,(over 700) ___.

5. What type of products your company produces

PART 2

Please circle the box that accurately reflects your firm's present conditions.

To investigate the understanding of SCM practices implementation among Tanzanian food processing firms

Whereas; 1= not at all, 2= to a small extent, 3= to a moderate extent, 4 = to a great extent or 5= to a very great extent

1.0 The understanding of SCM practices implementation

1.1 Strategic supplier partnership				
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 on-going benefits				
1	2	3	4	5

1.2 Customer relationship				
The practices of serving the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction				
1	2	3	4	5
1.3 Level (degree/quantity) of information sharing				
The extent to which critical and proprietary information is communicated to one's supply chain partner				
1	2	3	4	5

1.4 Quality of information sharing				
Includes such aspects as the accuracy, timeliness, adequacy and credibility of information exchanged in order to make the entire supply chain more competitive and resourceful				
1	2	3	4	5

1.5 Outsourcing				
Process of having suppliers or vendors to provide goods and services which were previously provided internally. Transfer of responsibility for the part of an organization's noncore operations and management to a third party.				
1	2	3	4	5

1.6 Lean practices				
a multi-dimensional approach that encompasses a wide variety of management practices, including just-in-time, quality systems, work teams, cellular manufacturing, supplier management, and so on, in an integrated system so as to eliminate wastes (costs, time, etc.)				
1	2	3	4	5

PART 3

To assess the level of practical implementation of SCM practices in Tanzania food processing Industries as well as the relationship between SCM practices and organizational performance

	Strategic supplier partnership					
1.1	We consider quality as our number one criterion in selection of suppliers	1	2	3	4	5
1.2	We regularly solve problems jointly with our suppliers	1	2	3	4	5
1.3	We have continuous improvement programs that include our key suppliers	1	2	3	4	5
1.4	We include our key suppliers in our planning and goal setting activities	1	2	3	4	5
1.5	We actively involve our key suppliers in new product development processes	1	2	3	4	5
1.6	We have helped our suppliers to improve their product quality	1	2	3	4	5

	Customer relationship					
2.1	We frequently interact with customers to set reliability, responsiveness, and other standards for us	1	2	3	4	5
2.2	We frequently measure and evaluate customer satisfaction	1	2	3	4	5
2.3	We frequently determine future customer expectations	1	2	3	4	5
2.4	We facilitate customers' ability to seek assistance from us	1	2	3	4	5
2.5	We entered into long term contract agreement with reliable customers	1	2	3	4	5

Quality of information sharing							
3.1	Information exchange between our supply chain partners and us is timely	1	2	3	4	5	
3.2	Information exchange between our supply chain partners and us is accurate	1	2	3	4	5	
3.3	Information exchanged between us and our supply chain partners is complete	1	2	3	4	5	
3.4	Information exchanged between us and our supply chain partners is adequate	1	2	3	4	5	
3.5	Information exchanged between us and our supply chain partners is reliable	1	2	3	4	5	

Level (degree) of information sharing						
3.1	We inform supply chain partners in advance of changing needs	1	2	3	4	5
3.2	Our supply chain partners share proprietary information with us.	1	2	3	4	5
3.3	Our supply Chain partners keep us fully informed about issues that affect our business	1	2	3	4	5
3.4	Our supply chain partners share business knowledge of core business with us	1	2	3	4	5
3.5	We and our supply chain partners exchange information that help establishment of business planning	1	2	3	4	5
3.6	We and our supply chain partners keep each other informed about events or changes that may affect the other partners	1	2	3	4	5

Outsourcing .						
5.1	Our firm outsources information systems	1	2	3	4	5
5.2	Our firm outsources manufacturing	1	2	3	4	5
5.3	Our firm outsources logistics(this includes transportation, distribution and warehousing)	1	2	3	4	5
5.4	Our firm outsources pre-sales customer care	1	2	3	4	5
5.5	Our firm outsources after-sales support	1	2	3	4	5
5.6	Our firm outsources product design	1	2	3	4	5

Lean practices						
6.1	Our firm does not rely on inspecting products procured(six sigma)	1	2	3	4	5
6.2	Our firm has continuous quality improvement program	1	2	3	4	5
6.3	Our firm buys products in smaller batches only when they are needed at the place where they are needed and exactly in the quantity required (Just in Time) ‘‘Pull’’ production system	1	2	3	4	5
6.4	Our firm continually improve their own performance with small incremental lean procurement improvements (Kaizen)	1	2	3	4	5
6.5	Our firm pushes suppliers for shorter lead-times	1	2	3	4	5

Organizational performance						
8.1	Deliver dependability (on-time delivery, order fill rate, frequency of delivery, and delivery speed)performance	1	2	3	4	5
8.2	Cost saving	1	2	3	4	5
8.3	Product and service quality	1	2	3	4	5
8.4	Forecasting accuracy	1	2	3	4	5
8.5	Reduced inventory level	1	2	3	4	5
8.6	Flexibility (firm’s ability to adapt to changes in the business environment)	1	2	3	4	5
8.7	Market share growth	1	2	3	4	5
8.8	Sales growth	1	2	3	4	5
8.9	Profit margin	1	2	3	4	5
8.10	Return on investment (ROI)	1	2	3	4	5
8.11	Return on assets (ROA)	1	2	3	4	5

Other comments:

APPENDIX C: FOOD PROCESSING FIRMS IN DAR ES SALAAM

	NAME		NAME
	2000 Industries Ltd		BaranMkate House Ltd
	21st Century Food & Packaging Ltd		Baruti Bread Bakery
	A To Z Oil Mill		Basic Element Ltd
	A To Z 'S Supermarket Ltd		Batoul Investments Ltd
	A.A. Pharmaceuticals Ltd		Ben EsHaq Ltd
	Abudhabi Modern Bakery		Best Animal Feed
	Afri Bakers Ltd		Best Drinks Ltd
	Afri Tea And Coffee Blenders (1963)		Best Tigra Industries Ltd
	Afro American Industries Ltd		Bestate Bakery
	Afya Bakery		Beta Bakery
	Agape Milling		Bidco Oil And Soap Industries Ltd
	Agatha Food Processing		BitanInterna. Enterp.Ltd
	Agro Processing & Allied Products Ltd		Bombay Flour Mill
	Agro Processing Business Agency Ltd		Bright Choice Ltd
	Al Ridha Industries Ltd		Britania Biscuits Ltd
	Alfa Pet Bottlers Limited		Brown Leaf Commodities Ltd
	Al-Hak Enterprises		Butcher Shop Ltd
	Al-Hamum Company Ltd		Cardburry Bottlers Ltd
	Ali Haji Mohamedi		Caro's Cake & Hot Bread Bakery
	Ally, S. Bakery		Cb Spices Ltd
	Aloha Miller Ltd		Chai Bora Ltd
	Alpha Krust Ltd		Chai Leo Ltd
	Al-Qayam Venture (T) Ltd		Chemi And Cotex Industrial Ltd
	Amaka Investment Ltd		Coast Canners Ltd
	Amani Food Supplies		Coast Miller Ltd
	Amfa Beverages Co. Ltd		Coastal Oil Industries Ltd
	Amoni Denis Libena		Coca-Cola Kwanza Ltd
	Anepa Food Products Ltd		Cool Storage Ltd
	Aneth Musa Shehiza		Crispy Kist Foods
	Anil Packers Company		Crm Investment Products
	Anna J.H. Temu (Mrs), Power Foods Industries Ltd		Dabaga Vegetable & Fruit Canning Co. Ltd
	A-One Products& Bottlers Ltd		Dar Brew Ltd
	Aqua Cool Ltd		Dar Food Products Ltd
	Aqualink Desalination (T) Ltd		Dar Sembe
	Asilia Fruit Products		Dubai Refreshment And Beverage Ltd
	Associated Breweries (T) Ltd		DurDur Company Limited
	Azam Bakeries & Co. Ltd		E.R Flour Mills Ltd
	Azania Fresh Food Ltd		East Coast Oils And Fat Ltd
	B & G Mills		Edgewood Investments (Pvt) Ltd
	Baana Group		Edgewood Investments (Pvt) Ltd
	Baba Industries Ltd		Elegant Enterprises
	BahariBakeriy Limited		El-Wataniya Man. Ltd
	Baked Food International		Fairy Delight Limited

	Bakhresa Food Products Ltd		Fatema Milling
	Banco Products Ltd		Fida Hussein And Company Ltd
	BanitTamim Food Products Ltd		Flamingo Cafeteria Ltd
	Four Flower Bakery		Kikundi Cha KijamiiKiboko, KongwaMnyakongo
	Frabho Enterprises		KilomberoPlantantions Ltd
	Fruits De La Mer Ltd		Kimvuli Grain Mills
	G M Bakery & Confectionery Co. Ltd		Kings No 1 Food Processor
	Gng Bakery		King's Original Food Processors
	Gold N' Chicks Ltd, Meat		Kingsway Internatinal (T) Ltd
	Golden Bakes		Kishenga Enterprises
	Grand Confectionary Bakery Ltd		Kiteto Milling
	Great Zone Investments Co. Ltd		Kiwango Super Sembe
	Gulled Industry Ltd		Kizigo Super Sembe
	H.J. Stanley & Sons Ltd		Kyimbila Tea Packaging Co. Ltd
	HaibaYaAfrika Ltd		Kym's Enterprises
	Hakika Breweries Limited		Ladulay Bakery Limited
	Hekima Quality Foods		Lambada Mini Bakery
	Hemina Benedictine Drinks Ltd		Lambada Trading Company
	Hilltop Investments		Lily Foods
	Honey Care Africa (T) Ltd		Lucy Super Sembe
	Honeyking Limited		Lukeisa Enterprises
	Hot Loaf Bakery		M. B Bakery
	Hot Oven Bakery		Madibai Natural Seed Oils
	Hussein Cold Drinks House		Maji Africa
	Ideal Chicks Ltd		MajiMasafi Ltd
	Imtiyaz Ltd		Maji Safi Ltd
	Interchick Co. Ltd		Mama's Fresh Produce
	Isack Milling Mashine		Marimor's Oven
	Izigo Super Sembe		Mary Malaika Fresh Juices
	Janet Mlowe, Bev		Masasi Food Industries Company Ltd
	Jap Traders Ltd		Mawenzi Brew Company
	Jeffrey Bottlers Ltd		Maxam Tanzania
	Jumbo Food Industries Ltd		MeryMalumo Mill
	Kadogoo Super Sembe		Mikoani Traders
	Kazco Farm Ltd		Milk Com Dairies Limited
	K-Cool Water Enterprises Co. Ltd		Mini Bakeries (T) Limited
	Kigoma One		Miyombo Golden Resource Company
	Kijichi Bakery		Modern Confectionery Bakery Ltd
	Kijiji Cha Furaha		Mohamed Ali
	Kikundi Cha KijamiiKiboko, KongwaMnyakongo		Mojata Dairy Farm
	KilomberoPlantantions Ltd		Moning Group
	Kimvuli Grain Mills		Mpakani Bakery
	Kings No 1 Food Processor		Mrawira Tiny Oil Mill Ltd
	King's Original Food Processors		Mrimbo Investment Ltd
	Kingsway Internatinal (T) Ltd		Msk Solutions Ltd
	Kishenga Enterprises		MtotoWa Africa Super Sembe
	Kiteto Milling		MufaDistibutors,
	Kiwango Super Sembe		Mufindi Mineral Water Co Ltd
	Kizigo Super Sembe		Mukwano Industries (T) Ltd
	Kyimbila Tea Packaging Co. Ltd		MunawarCashewnut
	Kym's Enterprises		Murza Oil (T) Ltd

	Ladulay Bakery Limited		Mwasa Business Development Services
	Lambada Mini Bakery		Mwenge Bakery
	Lambada Trading Company		My Bakery T Ltd
	Lily Foods		Mzizima Farms Ltd
	Lucy Super Sembe		National Com.&Ind. Co. Ltd
	Lukeisa Enterprises		National Man.& Sales Agency
	M. B Bakery		Natureripe Kilimanjaro Ltd
	NdacCo.Ltd		Sam Enterpreneur General Supp
	Ndula Products		Sarafine Enterprises
	Nes Confectionary Ltd		Sayona Drinks Ltd
	Nestle Equatorial African Region Tanzania		Sbc (T) Ltd
	New Tradeco Inv.(2000) Ltd		Sea salt Limited SadaniChangwahela
	Nmc Bakery-Siha		See Sweet Royal Confectionary Ltd
	NmcKurasini Mills		Sena Industries Ltd
	Noble Distilleries Ltd		Serengeti Breweries Ltd
	Noble Food & Beverages Ltd		Serengeti Instant Coffee
	O.K Foods Ltd		SfKhamis Traders
	O.K Holdings Ltd		Sharif A. Sharif
	Olam Tanzania Ltd		Shesi Holdings
	One Star Milling		Shop N Save Supermarket
	Osana		Sino-Tz Fu Food&Beverage
	P & R Group Co. Ltd		Somo Contractors Ltd
	Pambano Super Sembe		Soya Nyama Investment
	Party Bakery		Sozaplast Industries Ltd
	Patman International Ltd		Star Beverage Tanzania Limited
	Popular Oil Mills (1974) Ltd		Starlight Manufacturers Ltd
	Power Foods Industries Ltd		Succession General Ent. Co
	Power Foods, Tandale Branch		Sugar Board Of Tanzania
	Premier Cashewnut Ltd		Super Meals Ltd
	Premier Flour Mills Ltd		Super Sip Ltd
	Presidents Food & Beverages Intl. Ltd		Swaziland Breweries Ltd
	Prince & Pierre Investment Co Limited		Swish Foods & Beverages Limited
	Profate Investment Ltd		Syeb Limited
	Promasidor (T) (Pty) Ltd		Tabisco Enterprises Ltd
	Pubu Company Limited		Tai Milling Industries Ltd
	Pure Drinks Ltd		Tan Dairies Ltd
	Pvr Trading Company Ltd,		Tan Natural Company
	Qingdao Indust. Inv. Co.Ltd		TanganeMiling
	Quality Food&Beverages		Tanganyika Wattle Co. Ltd
	Quality Snacks&Beverages Ltd		Tanpesca (T) Ltd
	R.K Industries		Tanzan Tea Traders
	Raha Pure Drinking Water		Tanzania Breweries Ltd
	Rainbow Beverage (T) Limited		Tanzania Dairies Ltd
	Rajani Flour And Pulse Mills Ltd		Tanzania Dairy Board
	Rajani Industries Ltd		Tanzania Distilleries Ltd
	Real Foods Ltd		Tanzania Distilleries Ltd
	Relim Water & Juice Co. Ltd		Tanzania Flour Mills (1975) Ltd
	Renna Holdings Ltd		Tanzania Milky Tea & Coffee Co. Ltd
	Rico Milling		Tanzania Pride Meat
	Rocky Products		Target Brands Ltd
	Royal Bakery		Tbt Enterprises Ltd
	Royal Dairy Products		TcbTemeke
	Royal Oven Limited		The Organic Valley Company
	Rtj Bakery		The Organic Valley Company

	Rugantino Ltd		Tip Top Enterprises Ltd
	Saafa Pet Bottle Man. Ltd		Tommy Dairy Farm Products Ltd
	Saafalis Super Sembe		Tommy Dairy Farm Products Ltd
	Saas Bakery		Top Bakery Ltd
	Sado Farm		Trader Daniel's
	Said SalimBakhresa And Co. Ltd		Trans-Tech Ltd
	SaidiMtuli Bakery		Treats Bakery C/O Icon Investment Ltd
	Sam Enterpreneur General Supp		Tri Clover Industries (T) Ltd
	Sarafine Enterprises		Triple S Investment Company
	Sayona Drinks Ltd		Tropical Foods Ltd
	Sbc (T) Ltd		Tukuyu Packaging Co. Ltd
	Tukuyu Tea Estates Ltd		Water Com T Ltd
	Tungane Milling		Wonder Foods Ltd
	Uhuru Bakery		Y.K.A. Brother Bakery
	Unilever Tanzania Ltd		Yamiyami Garden Restaurant
	UsanguRetreads		Yummies Bakery
	Uzima Drinking Products		Yummy Bread Bakery
	Victoria Water Company Limited		Zahra Bottlers Ltd
	Village Supper Market Ltd		Zamzam Confectionery Co. Ltd
	Vin Mart Limited		