THE EFFECT OF LOGISTICS MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE (CASE OF ETHIOPIAN COMMODITY EXCHANGE JIMMA BRANCH)

A RESEARCH PAPER SUBMITTED TO RESEARCH AND POSTGRADUATE OFFICE OF JIMMA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

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JIMMA ETHIOPIA, JUN, 2021 The Effect of Logistics Management Practices on Organizational Performance In The Case Of Ethiopian Commodity Exchange

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#### Abstract

Therefore logistics as a business function plays important role in company's performance through the planning, implementation and control processes linked to material, information and financial flows. The main objective of this study was to examine the effect of logistics management practices on organization performance in the case of Ethiopian commodity exchange. Specifically the paper was focused towards the logistics management practices such as; Strategies and policies, transport management, inventory management and Order processing management. During conducting this study the researcher has been applied descriptive and explanatory research designs as well as quantitative research approach.

The populations of the study were consisted of 81 employee's union members and transportation stakeholders were participated under this study. The operational areas include the workers working in forecasting and market shaping, warehouse and inventory management, procurement, distribution and fleet management, capacity building and Fund administration from which the sample will draw by stratified random sampling method. In the study both primary and secondary data were used. The primary data's collected using a survey method and applying questionnaire as a tool. Correlation and regression methods on SPSS version 21.0.The inferential analysis including Pearson correlation and multiple linear regressions will also employed. Especially during these years there was a wide gap in case of promoting awareness creating Medias regarding the opportunities of modern markets serving for trading partners as well as for the economy as a whole.

The study concluded that through improvement in Strategies and policies, transport management, inventory management and order processing management, the ECX can improve the effectiveness of the system so that effectiveness of organizational operations will be improved. On the other hand failure to properly implement the above practices is likely to weaken the effectiveness of organization.

**Key Words:** Logistics management, strategies policies, transportation management, inventory management, order processing management.

# List of Abbreviations and Acronyms

- ANOVA = Analysis Of Variance
- EDRI = Ethiopian Development Research Institute
- FDIF = foreign Direct Investment
- GTP = Growth and Transformation Plan
- ICT = Information and Communication Technology
- LPI = Logistics Performance Index
- NIP = Net Inventory Position
- ROI = Return On Investment
- SPSS = Statistical Package for Social Science
- UNIDO = United Nations Industrial Development Organization
- VIF = Variance Inflation Factor

## **CHAPTER ONE**

# **1) INTRODUCTION**

The topic of the paper is the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange This chapter deals with background of the study, statement of the problem, objectives of the study, significance of the study, delimitation of the study, definition of key terms and organization of the study

## **1.1. Background of the Study**

Today's fast paced economic climate, many firms increasingly realize that globalization has made the world smaller and more competitive. A change in one place impacts another quickly. Also, customers seek products that can respond well to their specific needs. As such, firms are now looking at securing cost, quality, technological and other competitive advantages as a strategy to pursue in a globally competitive environment. One currently popular competitive advantage for firms is to promote and provide value to its customers by performing its supply chain activities more efficiently than competition. As a result, one area of increasing focus is on the logistical management of a firm's set of operations (Mak, 2014)

Logistics is the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfillment of orders Martin (2011)

Define logistics as; Logistics has been described as being important for integrating the internal operations of an organization with the supply chain processes to increase customer satisfaction. All the supply management processes which can affect logistics and customer satisfaction and reported that a logistical value proposition and logistics have a big impact on customer satisfaction leveraging on order processing, inventory management, transportation, handling and packaging, as well as facility network design Chiarini, (2015)

To resolve market inefficiencies, particularly concerning prices along the agricultural marketing channel, a landmark proclamation was issued by the parliament in 2007 that paved the way for the establishment of the ECX under the supervision of the Ministry of Agriculture and Rural Development (MoARD) in Proclamation No-551/2007. The ECX was finally established in April 2008 with the aim of filling the gap created by missing institutions and infrastructure in agricultural commodity markets (Gabre-Madhin, 2001).

While the commodity exchange initially focused on trading maize, wheat and beans, it eventually included other commodities such as coffee, sesame and haricot bean (Rashid et al., 2010). In the case of coffee, in December 2008 it became mandatory to trade all coffee through the ECX. The volume of coffee traded through the ECX also rapidly increased in the following years; from about 64 thousand tons in the crop year of 2008/09 to more than 200 thousand tons in 2010/11, representing around 47 percent of the total volume of transactions of the ECX (GabreMadhin, 2012).

This rapid transaction growth could be attributed to the measures incorporated by the ECX to ensure the security of the transactions for its stakeholders. In the new system, trading through the ECX guarantees a trade day plus one payment schedule for agents, which reduced information asymmetries and boosted confidence among agents. To stimulate market transparency, the ECX also started to use several mechanisms to facilitate the disclosure of market information. Besides using the radio, television and print media to disseminate price information to farmers, the ECX started to rely on new information and communication technologies (ICTs); for example, displaying real time price information through electronic ticker boards located in 32 rural sites, instant messaging through mobile phones to more than 250,000 subscribers and providing website access to more than 107 countries (Gabre-Madhin, 2012).5 In sum, the priorities

Logistics plays key role in supporting organizations as they strive for more efficient management systems as in the business practices, the inefficient logistics system together with the inefficient internal management would disable the organization to respond to the needs of customers with the lowest price at the shortest feasible time frame including the quality level which does not meet customer expectation and would lead the organizations to the competitive disadvantage situation against their rivals (Nyaberi,2014). The ability to transport goods quickly, safely, economically and reliably (logistics) is seen as vital to success of businesses, and to a nation's prosperity and capacity to compete in globalized economy (Fekadu, 2013).

According to Martin, (2011), Effective logistics management provides a major source of competitive advantage if it can control cost and enhance service differentiation. This unique role will help firms become both cost and value leaders. Thus, good logistics management is increasingly recognized as the key enabler, which allows accompany to gain and maintain its competitive advantage and ensure maximum customer satisfaction. Truly, logistics is the last frontier in business competition

Logistics management had received much attention over the past decade from practitioners and government Achara, (2012). Realizing the importance of sustainability in logistics management was critical for competitive advantage because operational performance had a positive impact on company's financial performance. Since logistics management consisted of many activities including customer service, orders processing, inventory management, transportation, storage, packaging, demand and forecasting, production planning, purchasing and procurement, facility location, and distribution that were supported by enormous information flow every organization wanted to impress the efficiency on its formation. This could only be achieved when, logistics performance is managed in order to ensure sustainability of the firm (Varanyaet al., 2012).

According to Masresh on his unpublished research paper of (2015), Logistics plays an important role in facilitating the flow of goods in and out of the company. The company need to facilitate the smooth flow of incoming raw materials (inbound) to the company with the aim to facilitate the operations. The proper inbound management will impact several aspects in the company, such as, on production schedules, distribution effectiveness, customer satisfaction and firm performance. In fact, despite the role of logistics facilitating the incoming flows, logistics is also facilitating the outcome delivery. This role of logistics is expected to provide a better improvement of the quality of raw materials and the accuracy of

the amount of raw material by the company. The growing importance of logistics arose from companies becoming globalized to gain access to new markets, realize greater production efficiencies, and tap technological competencies beyond their own geographical borders. Therefore this paper tries to examine the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange

Performance is the act of doing the work, as well as being about the results achieved. It can be defined as the outcomes of work because they provide the strongest linkage to the strategic goals of an organization, customer satisfaction and economic contributions. In that sense Organizational Performance Management is quite different than individual Performance Management which specifically targets the personal performance of an employee although the latter comprises an essential part of the overall organizational performance framework (Erkan, 2010).

A Performance Management system aims at improving the results of people's efforts by linking these to the organization's goals and objectives. It is, ideally, the means through which employees' performance can be improved by ensuring appropriate recognition and reward for their efforts, and by improving communication, learning and working arrangements (Rani, 2012).

Garad and Mohamed (2015) posit that the measurement of organizational performance has undergone changes in relation to its measurement focus. From a uniquely financial perspective, it began to consider other nonfinancial perspectives, as well as to include a cause and effect relation between the operational dimension and the strategic dimension of organizations. Based on this current view, Performance Prism presents itself as a performance measurement system alternative to be used by organizations, with its main focus being the stakeholders in its field of operation (Wallenburg, 2009).

Many Performance Management systems borrow from or utilize some of the new approaches such as Balanced Scorecard, Total Quality Management (TQM), best practice Benchmarking, or Business Process Re-engineering (BRP). Performance Measurement must be considered as part of the overall Performance Management system and can be viewed as the process of quantifying the efficiency and effectiveness of actions. It is common practice in public sector performance management literature to talk about the three Es' of: Economy, Efficiency, and Effectiveness (Yu et al., 2013)

## **1.2.** Background of the organization

Ethiopia Commodity Exchange (ECX) was established in April 2008 with the following objective. Commitment to free market principles which the existing government has as its major agenda is aimed to be a problem-solving tactic. On the other hand, a floor for buyers and sellers is prepared to exercise reliability to one another in the trade connection. Market information would be easier to share under an organized and supervised marketing system. And hence the establishment of ECX was initiated and encouraged in order to level the playing field. Efficiency in discovering market prices was the other objective for the establishment of ECX.

Farmers' empowerment, the basis for production increase and fair income distribution needs an organization like ECX to come into reality. With all above points fulfilled, the question of quality in production and service could be practiced through an organ like ECX. Contract risk was the major setbacks of the previous marketing system. To avoid contract default there should have been some one responsible and authorized to regulate the flow of the process and establish a formal procedure which would straighten buyer-seller business relationship. That is why ECX is established,(ECX, 2008).

The Electronic Goods Received Notes are not negotiable, transferable or represent legal title to the deposited commodity. The depositor has to get Electronic Warehouse Receipt issued by the ECX Central Depository in order to establish legal title to the deposited commodity. The Deposited commodities are stored using global standards of inventory management which rely on First-In-First-Out principles, rotation, and careful environmental control. ECX Inventory Management system guarantees the quality and quantity of the commodity throughout the pre-determined period of storage.

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

Logistics management is a part of retail logistics that has become an important issue for practitioners and researchers especially when focusing on the "last mile" problem within an e-commerce context (Kopczak, 2001). The vast majority of retailers are losing up to 4 per cent sales annually from inefficient execution of critical day-to-day processes in the store emanating from stock out situations not being alerted on time, inconsistent and inefficient

store execution from limited standardization of store processes, low visibility of products and processes in the store and back room as well as poor execution of promotions and new products introductions.

A number of studies have been done in the area of logistic management practices and their influence on performance. Globally, Green, Whitten, and Inman (2008), established a positive relationship between logistics performance and organizational performance within the manufacturing sector. An interesting observation by Ojala, (2011); Logistics was being handled equally efficiently in the surveyed companies regardless of whether it had remained in-house or been outsourced. This finding suggests that the fit between the company context and its outsourcing decision might be more important an operational performance driver than the other.

According to the Ethiopian Development Research Institute (EDRI), without improving efficiency in logistics, attracting and retaining FDI would have been difficult. Furthermore, logistics costs related with transportation, distribution and communication are high, adding further difficulties for imports of raw materials and accessories and export of finished products (EDRI, 2017).

The subject case has been studied by different country researchers in case of service sector such as Megersa (2012), Meklit (2015) and Azezew (2016). Moreover, Tsegaye (2018) also undertook a research which is very similar to the subject under study but the study was also focused on specific variables like Logistics management practices of CBE; Customer service practice, Warehouse management practice, Inventory management practice, Transportation management practice, Information flow management practice and Supply Management practice. These studies were no address the effects of logistics management practice of Ethiopian commodity exchange market in this time.

Logistics Management has the mission of getting the right goods or services to the right place, at the right time, and in the desired condition at the lowest cost and highest return on investment but with real satisfaction of customers. Logistics has become a part of a company's strategic planning, management and controlling. Every company must develop their strategy and logistics competitiveness factors from their own point of view Asmamaw, (2010).

In addition, all the above studies and reports confirm that; every company must develop their strategy and logistics competitiveness factors from their own point of view and the fit between the company context and its outsourcing decision might be more important an operational performance driver than outsourcing as well as others were methodologically not fit towards their objective and old. Didn't show the positive or negative influence of logistical practices and this study therefore will empirically examine how transport management practice, inventory management practice, order processing management practice of the company influence the overall performance.

Therefore to fill the gap of this study the researcher intended to investigate the effect of logistics management practice on organizational performance in Ethiopian commodity exchange taking service sector into account and also to explore the current Logistics practice performed and assesses organizational performances measures

#### **1.4. Research Question**

- 1. What strategies and policies are being followed by the company in overcoming the problems of inventory?
- 2. What is the effect of transport management on performance of Ethiopian commodity exchange?
- 3. How inventory management practice affects performance of the Ethiopian commodity exchange?
- 4. How Order processing management practice affects performance of the Ethiopian commodity exchange?

## **1.5.** Research objective

### 1.5.1. General Objective

The general objectives of this study was the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange

### **1.5.2.** Specific objectives

- 1. To examine strategies and policies being followed by the company in overcoming the problems of inventory
- 2. To describe the effect of transport management on performance of Ethiopian commodity exchange

- 3. To examine inventory management practice weather affects or not the performance of the Ethiopian commodity exchange?
- 4. To determine order processing management practice affects performance of the Ethiopian commodity exchange?

## **1.6.** Significance of the Study

The analysis is believed to provide a chance of broadening the skill of analyzing and interpreting the current effect of logistics management strategy on the organizational performance (the case of ECX Jimma branch). On policy level, the findings of the study will have policy implications at the firm and industry levels. The study was definitely provide insights for supply chain managers on the centrality of adopting best practice of logistics management practices as a critical success factor in enhancing logistics management and organizational performance. The results of the study was provided vital information on how companies in the country can build their core competencies based on best logistics management practices. In light of this, the findings may provide insights into enhancing firm and national competitiveness through logistics management optimization approaches.

## **1.7.** The Scope of the study

Logistics management Strategy has vast areas of managerial practices. It is difficult and unmanageable to study the whole areas of it. Therefore, the study examines the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange Jimma branch and under this topic logistics management practice practices like strategies and policies, transport management, inventory management and order processing management was discussed. Moreover, the study was examining the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange. Geographically, the study was conducted in Jimma Zone south west, Oromia Region of Ethiopia, particularly in Jimma ECX branch.

# **1.8.** Organization of the study

This study was organized in to five chapters. The first chapter introduces the background of the study, research questions and the objectives of the project. Besides, it states the motivation of doing this study and also it includes delimitations of the study. Chapter two examines related literatures in the areas of logistics management and firm performance. Theoretical and empirical reviews are part of this chapter. At the end, the conceptual framework is presented. Chapter three deals with explaining the research design and methodology. The research approach, research design, population and sample, data collection procedures were included in this discussion. The chapter was comprised the data analysis methods and put ethical boundary uses in the study. Chapter four is about the presentation of the findings of data analysis and discussion was making based on the result of the findings. The last chapter is concerned on summarizing the findings of the study, and then conclusions have been drawn. After that recommendation was give to improve the performance of Park. Finally, the researcher was giving his view on future research direction.

# CHAPTER TWO RELATED LITERATURE REVIEW

## Introduction

This chapter deals with theoretical and empirical review of the related literature on logistics management, transport management, inventory management, order processing management, information flow management and manufacturing firm performance. Finally, conceptual framework is presented.

## 2.1. Theoretical Review

This section discusses the theoretical foundations in which this study is based which include Resource based view theory, institution theory and unified theory of logistics. The relationships of these theories with this study are elaborated at the end of description of each theory.

## 2.1.1. Logistics

"Logistics is the management of the flow of goods, information and other resources, including energy and people, between the point of origin and the point of consumption in order to meet the requirements of consumers. Logistics involve the integration of information, transportation, inventory, warehousing, material-handling, and packaging Logistics is defined as the planning, organization, and control of all activities in the material. flow, from raw material until final consumption and reverse flows of the manufactured product, with the aim of satisfying the customer's and other interest party's needs and wishes i.e., to provide a good customer service, low cost, low tied-up capital and small environmental consequences" (Mattsson, 2005).

"Logistics is defined as those activities that relate to receiving the right product or service in the right quantity, in the right quality, in the right place, at the right time, delivering to the right customer, and doing this at the right cost (The seven R's)" (Shapiro, Heskett,1985). In most of the cases logistics is seen from the perspective of an operative way of transporting or moving materials from one point to another or producing service. The credibility of this operation is based on how good is the design of the system that leads to this kind of logistics. "Logistics systems encompass operative responsibilities, which include administration, operation and purchase and constructive duties as well as detailed design" (Lumsden, 1998) "Logistics management is that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer's requirements.

Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third party logistics services providers. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution – strategic, operational, and tactical. Logistics management is an integrating function which coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions, including marketing, sales, manufacturing, finance, and information technology." (Logistics Management, council of Supply Chain Management Professionals CSCMP, 2004)

The main objective of logistics is defined as the right products in the right place at the right time at the right cost and in the right condition (See Graph 1for examples of these). Logistics primarily includes the organization and implementation of goods movement in circulation. By logistic activities legitimately includes the following features: the formation of economic relations; determining the need for transportation of goods, their volumes and destinations, consistency and movement of products through the storage site; coordination of operational supply chain management and transportation; the formation an deregulation of product inventories; development, deployment and organization of storage facilities; perform operation immediately pre-ceding and trailing carriage of goods azhin, 2003)



#### Source: Tony 2005

#### 2.1.2. Logistics Management concepts

Logistics is considered to have a significant impact on a manufacturing organizational performance (Michael, 1998) the function of traditional logistics is to achieve profit through cost reduction. This operational objective is too narrow to accommodate modern logistics activity management. Recent trends in business sustainability are to conduct business with a long-term goal of maintaining the well-being of the economy, environment, and society by efficiently utilizing the limited sources, flexibly coping with changing business environment, and timely responding to new customer demands (Varanya et al., 2012)

Logistics management has received much attention over the past decade from practitioners and government. Realizing the importance of sustainability in logistics management is critical for competitive advantage (Buyukozkan et al., 2008) because operational performance has a positive impact on company's financial performance (Horvath et al., 2005). In business, sustainability is defined as a capability to possess and hold continuous competitiveness (Kang et al., 2012).

14Logistics management consists of activities from customer service, orders processing, inventory management, transportation, storage, packaging, demand and forecasting, production planning, purchasing and procurement, facility location, and distribution that are supported by enormous information flow (Celebi et al., 2010). Therefore, logistics performance is managed in order to ensure sustainability of the firm. Many firms applied

information technology such as enterprise resource planning (ERP) and information systems (IS) in operational process management to cost effectively serve the customer's requirements Thus, IS and strategic partnerships can be integrated to achieve the desired service level.

However, the unavoidable uncertainties will have an influence on logistics performance management such as demand and price which are uncertainty parameters. These inherent uncertainties affect the performance of logistics operations (Hsiao et al., 2010). The advent of information technology (IT) revolutionizes logistics operation. Poor logistics performance reflects the firm's information capability which indirectly impacts financial performance (Shang and Marlow, 2005).

Logistics management plays an important role of adding competitive advantage to a firm in customer support and business excellence (Buyukozkan et al., 2008). Effective logistics management provides the right product in the right place at the right time. It involves control of product and information flow to create value-added activities such that delivery is accomplished through suitable distribution channels (Kim, 2001).

It is managed to yield minimize cost and time but maximize service level, for example, on time delivery, minimum stock level, high quality or non-damage products (Celebi et al., 2010). Thus, logistics management is one of the contributing operations that encompass activities ranging from customer service, order processing, inventory management, transportation, warehouse management, packaging, demand and forecasting, production planning, purchasing and procurement, facility location, and distribution. All of these are supported by enormous information flow. Performance measurement is usually carried out in financial and non-financial terms, focusing on planning and controlling to monitor and improve logistics management (Garcia et al., 2011).

Nevertheless, financial measures are not sufficient for decision making in strategic and policy planning. Additional non-financial measures such as quality, reliability, flexibility, and delivery performance must be incorporated to complement the decision(Laitinen, 2002).In today's highly competitive environment, many companies are striving to gain a share of the global market and to take advantage of higher production and sourcing efficiency. A key determinant of business performance nowadays is the role of logistics management functions in ensuring the smooth flow of materials, products and information throughout the company's

supply chain (Kilasi et al., 2013). Due to the trend of nationalization and globalization in recent decades, the importance of logistics management has been growing in various areas. For firms, logistics management helps to optimize the existing production and distribution processes based on the same resources through management techniques for promoting the efficiency and competitiveness of enterprises (Tseng et al., 2005).

Logistics management plays an important role of adding competitive advantage to a firm in customer support and business excellence (Buyukozkan et al.,2008). Effective logistics management provides the right product in the right place at the right time that is why it has received much attention over the past decade from practitioners and government (Tang 2011). However, for logistics management to be considered contributing to a firm's performance, logistics performance needed to be measured (Keebler & Plank, 2009).

In their study Fugate et al. (2010) confirmed that, due to increasing awareness of logistics management implications in firm performance and growing awareness of the benefits of leveraging logistics to increase customer value, measuring of performance of logistics had become a high priority. There were at least three basic reasons why a firm would want to measure logistics performance: firms could reduce operating costs, use these measures to drive revenue growth, and hence enhance shareholder value. Even valuable customers could be attracted and retained by improving the price value relationship of products offered through cost reductions and service improvements. Finally, returns to stockholder investments and the market value of the firm could have been significantly impacted by logistics performance improvements working through the processes that led to share price and dividend policy.

The study concentrated on evaluating the influence of logistics management core activities transportation, inventory, order processing and information flow Ballou (2004) on garment factories performance in Bole Lemi Industry Park. The support functionality of logistics warehousing, materials handling, and packaging also represents an integral part of a logistics operating solution. However, these functions do not have the independent status of those (core) previously discussed (Bowersox et al., 2010). This research focused on forward logistics rather than reverse logistics (which refers to the activities involved in customers returning goods) and analyzed both physical activities and non-physical activities that were

transportation management, Inventory management, order processing management and information flow management as independent variables.

## 2.2.2. Logistics Management Practices

Adebayo (2012) defined logistics management practices as a set of activities undertaken in an organization to promote effective management of its logistics. Logistics management organizations are tasked with the responsibility of formulating and implementing strategies that if adopted will lead to achievement of a sustained competitive advantage. Logistics refers to the flow of resources between the point of origin and the point of consumption in order to meet requirements of customers or corporations (Vikapia, 2005). The resources managed in logistics can include physical items such as food, materials, animals, equipment, and liquids; as well as abstract items, such as time and information. Logistics management is the part of supply chain management that plans, implements, and controls the efficient, effective forward, and reverses flow and storage of goods, services, and related information between the point of origin and the success of any company's operations and has a direct impact on its bottom line.

More importantly, logistics processes play a big part in customer satisfaction, which is more important than low product costs. Logistics professionals should think of themselves as a customer-facing portion of the company and strive every day to add value for their customers. Logistics management practices involve the operations that manage the inventory flow from the store's receiving dock to the point of sale passing through the stock room (store warehouse). Logistics operations include *handling, ordering, arranging and processing of merchandise* within the store (Samli, 2005). It involves returns from the customers as well as end of season returns from the store to the Distribution Center (DC).Logistics operational activities can be grouped into two main categories: the inbound and out bound logistics. Inbound logistics refers to the transport, storage and delivery of goods coming into a business. Inbound and outbound logistics combine within the field of supply-chain management, as managers seek to maximize the reliability and efficiency of distribution networks while minimizing transport and storage costs (Dinesh 2007).

Understanding the differences and correlation between inbound and outbound logistics can provide insight for developing a comprehensive supply-chain management strategy. Companies work with different supply-chain partners on the inbound and outbound side of logistics. The inbound side concerns the relationship between companies and their suppliers, while the outbound side deals with how companies get products to their customers. Regardless of the source or destination, companies may work directly with third-party distributors on either side as well (Olfa, 2012). Logistics management practices comprised of the core practices and the support practices. The core practices are customer service, inventory management, transportation, and information flow. The related practices that support the core practices include, but not limited to warehousing, and packaging (Ballou, 2003).

#### 2.2.2.1. Order Process Management

Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer and it formed the basis for the information flow in a logistics system (Christopher, 2010). It had three principal functions that is create a flow of information that preceded the goods, accompanied them and followed them (Christopher, 2010).

The importance of accurate information to achieving superior logistical performance had historically been underappreciated. While many aspects of information were critical to logistics operations, the processing of orders was of primary importance (Bowersox, et al., 2010). Failure to fully comprehend this importance resulted from not fully understanding how distortion and operational failures in order processing impact logistical operations (Bowersox, et al., 2010). Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer (Stevenson, 2009).

#### 2.2.2.2. Inventory Management Practices

Inventory management practices provide for the upstream and down inventory visibility in the logistics or supply chain system. The aim of inventory is to provide both internal and external customer's with the required service level, ascertain the present and future requirement for all types of inventory, keep costs at minimum and provide for the (Farrington, 2012). In the firm, all inventory policies must be of benefit by driving period operating expenses and working capital requirements. According to Lysons and Farrington (2012), to measure the effective and efficient performance of inventory depends on to what extent the firm has the right quantity of inventory in the right place and at the right time. The indicators to measure such inventory are the lead time, the service time (safety stock), the rate of stock turn, stock outs in a given period and stock cover.

The main aim of inventory management is to ensure that organizations hold inventories at the lowest cost possible while at the same time achieving the objective of ensuring that the company has adequate and uninterrupted supplies to enhance continuity of operations (Mpwanya, 2005).

Inventory management is primarily involved with specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials. The scope of inventory management also involves managing the replenishment lead time, replenishment of goods, returns and defective goods and demand forecasting, carrying costs of inventory, asset management, physical inventory, available physical space, demand forecasting, inventory valuation, inventory visibility, future inventory price forecasting and quality management (Aget al., 2016).

Inventory management is a critical management issue for most companies –large companies, medium-sized companies, and small companies. Effective inventory flow management in supply chains is one of the key factors for success. The challenge in managing inventory is to balance the supply of inventory with demand. A company would ideally want to have enough inventories to satisfy the demands of its customers-no lost sales due to inventory stock-outs. On the other hand, the company does not want to have too much inventory staying on hand because of the cost of carrying inventory (Okoro al., 2016).

According to Augustine and Agu(2013), inventory is classified into three types which include Raw material inventory (all items purchased by an organization for processing), work-In-Progress Inventory (an intermediate stage of raw material inventory that is yet to be finished by the plant to enter into another stage of processing. These are materials that have been partly processed but are yet uncompleted) and finished Goods Inventory (stock of goods awaiting shipment or in the warehouse, the level of finished goods stock is a matter of coordination between the production and sales departments of the organization).

The cardinal objective of inventory management is the maintenance of an optimum level of inventory necessary to support the production system at any time and at the least cost possible. The attainment of this objective entails taking decisions with respect to the determination of an appropriate order quantity, when to place the order and how much inventory to carry per unit of time. Inventory ordering systems reflect part of the strategies available to an organization in meeting its inventory management objectives. Basically, there are three major inventory ordering systems, the fixed –order quantity system, the fixed-order interval system and the ABC inventory analysis system (Augustine 2013).

The Fixed-Order Quantity System -orders for a fixed quantity of items are placed for each inventory cycle. The time of ordering may vary but the quantity ordered per period is always the same. This system is sometimes referred to as the (Q, R) system. When inventory level gets as low as point R (reorder point), an order is placed for Q units of inventory.

The Fixed-Order Interval System -examines the status of inventory level at specific periods and tries to bring the inventory level toa desired point, if the inventory level has gone below the minimum required point in-between the time of the periodic reviews.

The ABC Inventory Analysis -Effective control of inventories can be costly, time and effort consuming. Experience has shown, however, that not all items kept in inventory require such meticulous and close-study monitoring particularly if such items are low-value items that are randomly used in the production system. There are some items, however, whose quantities are small but whose monetary values are exorbitant. They normally account for between 10-20 per cent of total items kept in inventory, while they account for as high as between 70-80 per cent of the total monetary value of investment in inventory. These are the so called "significant few" inventory items usually designated as belonging to the A group. There are also those items that account for between 30-40 per cent of total investment in inventory and at the same time, take as much as 15-20 per cent of the monetary value of total investment in inventory.

These groups of items are classified into group B for purposes of effective management. The last classes of inventory items fall into group C. These are the items that are usually greater in number but account for the smallest value of the total monetary investment in inventory. This group of inventory items is referred to as the "insignificant many" (Augustine and Agu, 2013).

#### 2.2.2.3. Transportation Practices

Transportation has the overriding objective that moves the cargo from point A to point B. Transportation is a vital strategic link between firms in a supply chain and must be managed effectively to meet customer due date and other shipping requirements at a reasonable cost (Wisner et al, 2011).

In logistics it is transportation that provides the flow of materials, products and persons between productions facilities, warehouses, the distribution centers, the terminals and the customers. Transportation is the only activity that provides the time and place utilities through the outbound and inbound logistics. An inefficient transportation system may lead to the firm incurring high cost to deliver product to customer, and this may lead to loss to the firm; and the transport system must be able to address the major issues of the mode selection, route selection and fleet size because it is the vital force for competition for the firm (Goldsby et. al., 2014).

Transportation in logistics system has also a role of service quality. By means of wellhandled transportation system, goods could be sent to the right place at the right time in order to satisfy customers 'demands. Specified pickup and delivery times, predictable transit time and zero loss and damage as well as accurate and timely exchange of information and invoicing are service related in transportation management. It all brings efficiency for the company to satisfy customers. Therefore transportation is the base for efficiency and economy in the business logistics and expands other functions in logistics system. In addition, a good transportation system performing in logistics activities brings benefits not only to service quality but also to company competitiveness (Fair and Williams, 2001)

A good transportation system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. Transportation system is the most important economic activity among components of business logistics systems. Around one-thirds of expenses of enterprises 'logistics costs are spent on transportation.

According to the investigation of National Council of Physical Distribution Management (NCPDM) in 1982 (Chang, 1988), the cost of transportation, on average, accounted for 6.5% of market revenue and 44% of logistics costs. So without well-developed transportation systems, logistics could not bring its advantages into full play. The operation of transportation determines the efficiency of moving products. The progress in techniques and management principles improves the moving load, delivery speed, service quality, operation costs, the usage of facilities and energy saving. Transportation takes a crucial part in the manipulation of logistics. Transportation in logistics system has also a role of service quality. By means of well-handled transportation system, goods could be sent to the right place at the right time in order to satisfy customers 'demands. Specified pickup and delivery times, predictable transit time and zero loss and damage as well as accurate and timely exchange of information and invoicing are service related in transportation management. It all brings efficiency for the company to satisfy customers. Therefore transportation is the base for efficiency and economy in the business logistics and expands other functions in logistics system. In addition, a good transportation system performing in logistics activities brings benefits not only to service quality but also to company competitiveness, Asma,(2011)

#### 2.2.2.4. Information Flow Practices

With the emergence of ICT, information flow provides a special advantage to link one activity with the others and make real-time data created in activity widely available, both within the firm and with outside suppliers, channels, and customers. For information flow to be effective and efficient; it must enhance the firm's logistics processes by planning, controlling, coordinating and monitoring the logistics process. According to Grunt (2007) the effective functioning of logistics information system requires the use of hardware and technology transfer; and the information system must be customized to serve the logistics system effectively to enhance the line of communication (Wisner et al. 2007).

#### 2.2.2.5. Warehousing Practices

Warehousing includes space determination, stock layout, configuration, and stock placement (Ballou, 2003). In logistics; delivering the right product in the right quantity relies on warehousing picking and dispatching accurately. Warehousing ensures that products are delivered to the right customer at the right place, on time.

It also ensures cost efficient operation by delivering the product at the right price, and in perfect order and condition. Pienaar (2006) proposed that effective customer service depends on the firm warehousing operations. Warehouse has three operational functions of the firm; the function that receives and transfer customer orders, the information transfer function that ensure the use of technology for warehousing efficiency and the storage function that store product temporarily or permanently.

### 2.2.2.6. Packaging Practices

In logistics, packaging activities are responsible for designing, handling, storage and protection from loss and damage. Products are packaged to serve the marketing need of branding and promotional purposes, whereas protection from loss and damage requires the packaging to enable the product to reach its required destination in the right condition (Ballou, 2003).

Packaging must be seen as a coordinated system that support logistics by preparing the product for secure, efficient and effective handling, transport, distribution, storage retailing, consumption and recovery, reuse or disposal to meet the customer value. Packaging supports logistics through protection, storage, transport, information and handling of the product and the correct design of the packaging can lead to the overall low logistics costs or supply or service delivery (Pfohl, 2004).

## 2.2.3. Definition of Organizational Performance

According to Richard, the organizational performance includes three specific areas of firm outcomes: Financial performance (profits, return on assets, return on investment, etc.); Product market performance (sales, market share, etc.); and Shareholder return (total shareholder return, economic value added, etc.).

Specialists in many fields are concerned with organizational performance including strategic planners, operations managers, finance directors, legal advisors, and entrepreneurs (owner of the organization).

In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as: financial performance (e.g. shareholder return), customer service, social responsibility (e.g. corporate citizenship, community outreach) and employee stewardship. The organization itself does not perform any work but its managers are performing their assigned works and in a combination of these performed works is called organization performance. Some factors are to be performed by organization such as human and cultural factors, technology, natural recourses, economic factors, regulatory measures, markets, management philosophy, organizational culture (Goals, Value, Beliefs & Norms), organizational climate, motivated behavior and teamwork, structure, technological and physical resources, financial resources, leadership style. In a combination of these resources, the organization gets some outcome such as effectiveness, efficiency, development and participant's satisfaction. After using all supports and efforts when the organization produces a product or service that is called the organizational performance, Steven (2015)

#### 2.2.3.1. Factors of Organizational Performance

Organizations vary according to the relative influence of a number of factors related to both the objective of the organization and the instruments and strategies chosen to achieve them. These factors, which determine the structure, aims, and activities of the organization, can be grouped into:

**External factors:** Those from the enabling environments which are not under the control of the organization but which affect its structure and development. They include:

Economic factors, Socio-economic factors, Political-administrative factors

**Internal factors:** Organizational characteristics, including: Purpose of the organization and Organizational instruments

**Individual choice factors:** Members joint or individual decisions regarding expected costs and benefits. Older studies, especially in the 1970s, focused on the influence of internal factors, while more recent work has emphasized the importance of all three sets of factors.

#### 2.2.4. Organizational Performance Model

A Causal Model of Organizational Performance and Change, or the Burke & Litwin Model, suggests linkages that hypothesize how performance is affected by internal and external factors. It provides a framework to assess organizational and environmental dimensions that are keys to successful change and it demonstrates how these dimensions should be linked causally to achieve a change in performance. The causal model links what could be understood from practice to what is known from research and theory. The model not only

discusses how different dimensions link with each other but also discusses how the external environment affects the different dimensions in an organization. The model focuses on providing a guide for both organizational diagnoses and planned, managed organizational change, one that clearly shows cause-and-effect relationships, Macoon (2014) the model also distinguishes between transformational and transactional organizational dynamics in organizations.

2.2.4.1. Internal and External Environment of Organizational Performance Environmental factors play a major role in determining an organization's success or failure. Managers should strive to maintain the proper alignment between their organizations and their environment. An organization's internal environment is composed of the elements within the organization, including current employees, management, and especially corporate culture, which define employee behavior. Although some elements affect the organization as a whole, others affect only the manager. A manager's philosophical or leadership style directly impacts employees. Traditional managers give explicit instructions to employees, while progressive managers empower employees to make many of their own decisions. Changes in philosophy and/or leadership style are under the control of the manager. The following sections describe some of the elements that make up the internal environment. The internal environment consists of the organization's owners, the board of directors, employees, physical environment, and culture, Macoon (2014)

Owners are those who have property rights claims on the organization. The board of directors, elected by stockholders, is responsible for overseeing a firm's top managers. Individual employees and the labor unions they sometimes join are other important parts of the internal environment. The physical environment, yet another part of the internal environment, varies greatly across organizations. The external environment is composed of general and task environment layers. The general environment is composed of the nonspecific elements of the organization's surroundings that might affect its activities. It consists of five dimensions: economic, technological, sociocultural, political-legal, and international. The effects of these dimensions on the organization's surroundings that are very likely to influence the organization. It also consists of five elements: competitors, customers, suppliers, regulators, and strategic partners. Because these dimensions are associated with specific organizations in the environment, their effects are likely to be more direct and immediate.

#### 2.2.5. Internal factors that affect organizational performance

The internal factors over which management and employees' both have a great deal of control. In particular, management has extensive control over the organization's human resources policies and practices, the financial, technological and physical resources it uses, its structure, management philosophy, and leadership style. Factors that are managed less directly include organizational culture, organizational climate, motivated behavior, and teamwork. These concepts tend to overlap, as we will see. "Human" appears at the center of the internal factors because the effective use of human resources is of primary importance to the organization's survival and long term success. People form the organization and people manage the processes that create the product or service for which the organization is in business. In fact, how well these human resources are managed is probably the most critical factor in an organization's overall performance. Internal factors are connected, that they all tend to affect or interact with each other. It is enough to say that for an organization to be highly successful; all these internal factors must be intelligently and harmoniously managed.

#### 2.2.6. Mention the environmental factors that affect HR activities.

The environmental factors are as follows which affect the HR activities of the organization. External factors comprised by; Political and legal and Technological and Internal factors comprised by; Strategy (Task and Leadership), Organizational culture and conflict and Professional bodies. It is the duty of the HR department to obtain environmental information and feeds it to key decision makers. In fact, the department may play a major role in making the decision. The department also has the responsibility to obtain internal organizational information for consideration by strategic decision makers. But the role of the HR department is confined to a boundary spanning role in that it helps link the organization to its environment through environmental scanning. All these duties are to be performed by the HR department for making an excellent performance by HR leading to achieving the organizational objectives.

#### 2.2.7. Performance Measurement

Organizational performance has always had a significant influence on the actions of companies. One of the consequences of this influence is the increase in the number and variety of the means and methods to accurately measure the performance and, gradually

establishing an important research field for both companies and academics. The last twenty years have, in effect, witnessed performance measurement (PM) gaining the interest of the academics in an ever-increasing number of research fields.

Some researchers' attempts, like Marr and Schiuma in different functional fields, have made available a wide variety of basically different information on PM, which has contributed to the field being well known as a vital part in the literature of the manufacturing strategy. However, PM does not specifically belong to any specific discipline or academics. This feature of PM has rendered the researchers from various backgrounds and disciplines to be reluctant in removing and widening the traditionally set functional boundaries in their studies on the topic .

Facing new conditions and organizational realities and due to the upcoming challenge for industrial supremacy, the concept of PM has been developing and evolving drastically in recent years. However, the new environment is apparently turning into a new frontier for PM. More expectedly, in the near future, inter-organizational PM will experience a significant development in fields, such as supply chain as well as extended enterprise. Jagdev and Browne described the extended enterprise PM to be a closer formation of co-ordination in the design, development, co-ordination of the relative plans of manufacturing and co-operating independent manufacturing enterprises and related suppliers schedules, and costing. This As mentioned above, performance itself is composed of two essential parts, namely, one part tends to deal with achievements and accomplishments in the past resulting from past actions, while the other looks at the predictions or inferences of future performance based on current actions.

The role of PM is connecting these two parts through discovering accomplishments and measurements from which future performance can be inferred or predicted. Sink believed that "measurement is complex, frustrating, difficult, challenging, important, abused and misused," nevertheless, in the words of Das if we cannot measure it, we cannot manage it". Since the 1980s, when literature on PM first emerged, it has been continuously evolving and expanding. In the traditional context, small companies' operations were simple and the most important PM focused on cash flow. As a result of the expansion of the size of organizations during the post-Industrial Revolution, the measures of productivity were extensively used in various production phases. In a span of time from the late nineteenth-century to the 1930s,

both practical and theoretical management accounting methods were set up and widely used. Later, traditional management accounting was included as part of PM for distribution operations and their manufacturing plants. As research on PM developed and expanded more, some scholars, like Purcell, shifted their focus on the PM of the whole business unit (typically plant level and division level) and attempted to investigate the standards, criteria, and measures of performance. Nevertheless, after all these studies, there seems to be no cohesion in the traditional literature on PM.

Some drastic and dramatic changes have occurred in the corporate world in the past few decades in terms of the introduction of national and international awards, improvement initiatives organizational roles, work maturity, external demands, increased competition and advanced technology. These changes have resulted in companies encountering dramatic competition resulting from the improvements occurring in product quality, enhancement of flexibility and reliability, the expansion of product variety, and emphasis on innovation. The critical business features for corporate success are emphasized more than mere financial reporting. In view of the new challenges and changes happening in the corporate world, organizational managers are required to consider appropriate PM paradigms if promotion of managerial improvement is desired

**Measures:** In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as: Financial performance (e.g. Shareholder return), Customer service, Social responsibility (e.g. corporate citizenship, community outreach) and Employee stewardship.

The organization itself does not perform any work but its managers are performing their assigned works and in a combination of these performed works is called organization performance. Some factors are to be performed by organization such as human and cultural factors, technology, natural recourses, economic factors, regulatory measures, markets, management philosophy, organizational culture (Goals, Value, Beliefs & Norms), organizational climate, motivated behavior and teamwork, structure, technological and physical resources, financial resources, leadership style. In a combination of these resources, the organization gets some outcome such as effectiveness, efficiency, development and

participant's satisfaction. After using all supports and efforts when the organization produces a product or service that is called the organizational performance

### 2.3. Empirical Literature Review

This section review what other researchers have done in the field of logistics management. The section considers the research arguments, their findings as well as their recommendations. Waweruet al. (2015) opined that to gain superior performance, the logistics management or supply chain management must have the ability to meet customer satisfaction, response to customer complaints, deliver on timely basis, have a fill rate, stock-out probability and accuracy.

The Japan Institute of Logistics System (2011) argued that, logistics management is an enhancement of corporate superior performance; and for management, logistics as a management strategy is required to contribute to gain profits. Chan (2003) opined that the quality performance of a firm logistics management or the supply chain management are determined by qualitative factors of customer complaints, customer response time, on time delivery, lead time, fill rate and accuracy. Logistics affects many procedures and activities in a business, bad logistics management leads to increasing operational costs and decreased customer service.

Logistics interferes with many business areas and, thus it is suggested to identify and determine service cost trade-offs in order to provide positive benefits to the logistics system as a whole (Rushton et al.2006). A study done by Baileyet al.(2005), suggest that increasing global competition is changing the environment facing most companies today. For them, as trade barriers fall and transaction costs decline, new global competitors are entering previously more isolated domestic markets. In response to this intensified competitive pressure, local companies are pushed to enhance their performance by innovating and adopting process and product improvements (Panje al., 2010).

However, Olavarrieta and Ellinger (2004) argued that in a turbulent and dynamic environment, firms must have agility in the market place to survive and succeed, and logistics has become an increasing area of strategic concern for firm performance, and important source of sustainable competitive advantage (SCA). Their finding was that a firm must combine its logistical resources (Input, Assets and Capabilities, its strategic resources) and organizational learning (information acquisition, information distribution, information interpretation and knowledge storage) to gain a relative superior performance. Wisner et al.(2011) posit that for the supply chain or the logistics system to stay performing, costs management and containment must be an ongoing concern while also customers must be satisfied with the products and services they are purchasing. In recent years, logistic management has evolved as the intra and inter-firm management of the upstream and downstream supply chain, which has the capability to cut the overall environmental impact of both the forward and reverse flows (Johnson, 2004).

18Suppliers, manufacturers, customers and disposal companies must be incorporated in implementing logistic management practices (Müller, 2010). Previous studies exploring ecological initiatives have focused primarily on selected functional areas (Holt, 2005). The incomplete and developing conceptualizations have generated unconvincing results about the relationship between logistic management practices and firm performances (Zailani et al., 2012).

To explore the conceptualizations of logistic management practices and its impact on performance, there is a need to investigate how individual dimensions of logistic management are related to selected dimensions of operational performance. In order to fully understand logistic management, it is important to focus logistic management study on the totality of the supply chain from both upstream and downstream sides and internal processes (Tagay, 2005). Cross-functional integration within a firm and integration with suppliers and/or customers on implementing environmental management practices is required to achieve sustainable firm performance (Yitagesu, 2006).

Many organizations the world over have been forced to adopt reverse logistics practices in order to conform to set environmental regulations. Recently however, several voluntary reverse logistics programs have been adopted by organizations in order to reduce the pressure for new or expanded legislation. Many organizations have tried to improve their own performance and others by having their industry association impose more stringent requirements on its entire membership. This is all in a bid to avoid the consequences of non-compliance which include heavy financial penalties and / or withdrawal of licenses (Amin, 2011)

# 2.7. Conceptual framework of the study

Conceptual Frame work In order to study the relation between logistics management practices and organizational performance of Ethiopian commodity exchange a conceptual framework is necessary to develop on how the relation is correlated and the direction between the pairs.

# Figure 1.2. Conceptual model

#### **Independent Variables**

#### **Dependent Variables**

#### Logistics management practice

- Strategies and policies
- Transport management
- Inventory management
- Order processing management

Source: developed from researchers2021

- Organizational performance
- Financial performance
  Social responsibility (corporate citizenship,

community outreach).

## **CHAPTER THREE**

# 3. Research Methodology

#### Introduction

The aim of this section is to highlight the overall methodological considerations of the thesis. The methodology section is divided into six sub-sections. The first section outlines the general research design and approach which the paper relies on, and the second encompass discussion of the study target area. The following third section elaborates on the sampling method used and the justification for it and the sample size determined for the research. Section four and five respectively constitute data source and method of data collection and the description of the data analysis method. Finally the six section presented ethical consideration.

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

Research design is a blueprint for the overall research operations, making research as efficient as possible generating maximal information with minimal expenditure of effort, time and money. Research design stands for advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used in their analysis, keeping the objective of the research and the availability of staff, time and money. Preparation of the research design should be done with great care as any error in it may upset the entire research.

The study was used descriptive and explanatory research design in order to identify the extent and nature of cause-and-effects of relationships between the given variables. Descriptive research is a research type which describes phenomena as they exist and it was used to identify and obtain information on the characteristics of a particular problem or issues. In addition to this Explanatory research focuses on analysis of a situation or a specific problem to explain the patterns of causal relationships between variables Zikmund (2002).

#### **3.2. Research Approach**

The study specifically tries to ascertain effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange. The study was employed mixed research approach methods. Thus, the quantitative approach of descriptive is appropriate for this study because it is the easiest and economical method of obtaining information through different mechanism. Quantitative method is a study involving analysis of data and information that are descriptive in nature and qualified (Sekaran, 2003). Qualitative approach is one in which the instruments that yield statistics data. Qualitative approach is one in which the inquirer often makes knowledge claims based primarily on constructivist perspective or advocacy/ participatory perspectives or both (Creswell, 2003).

#### **3.3.** Source and Method of Data Collected

Appropriate questionnaires were prepared and use for the survey. Respondents were told what the research was all about in the language that they can understand. Respondents in this study were speakers of Amharic and Afan Oromo and they are aware of about English also. Therefore, no need of translating the questionnaire because they can easily answer the questionnaire and expressed their ideas comfortably the source of data were both primary and secondary type. Primary data was collected from stallholders and employees of the organizations as well as managers. Secondary data was received from ECX Jimma branch annual reports. Cross-sectional data were collected using Closed and open-ended questionnaires. Key informant interview and on spot observation of the trading practice at ECX was made to augment the data collected through the aforementioned data sources.

#### **3.4.** Target Population of The Study

Multi-stage sampling techniques were used to determine the sampling of unions. Firstly, Manna Woreda were purposively selected from twenty one woredas which found in Jimma Zone, secondly, the first two unions randomly selected from ten unions, thirdly 24 committees 12 from each selected out of 203 members. On the other way the target populations of the study were the whole higher managers and staffs of the marketing department, coffee trading unit and planning department's personnel department of ECX and active customers (transportation, stakeholders' and members of unions) of the current organizations. The total numbers of employees who are now working in such department were around 57, who were participated in the questionnaire. Therefore 260 was the target population of the paper. In selecting the sample, a proper stratified sampling technique, is used and the sample size is determined by Yemane (1967)

 $n = N \frac{N}{1 + Ne2} \quad \frac{260}{1 + 260(0.05)2} = 157$ 

Sectors	Total No	Sample in %	No. of sample of
			respondents
Unions	200	35	70
Employees	57	35	19
Transportations	3	100	3
Total	260		92

Table1. Number of the total and sample unions of employees and transport networks

#### 3.5. Data Collection Instrument and Techniques

The questioners were used as the main instrument to gather data for the major or primary approach (quantitative) in this stud. So, surveys consisting of sets of questioners and interview questions was prepared and administered for the sample employees' members to collect appropriate information to under so quantitative and qualitative data collection instruments and techniques were employed. Specifically, the quantitative data collected through closed ended questioner and qualitative data collected by employing semi structured interview with some of the selected employees of the organization through open-ended questions to gain information to supplement and triangulate the numeric information that were gained from respondent.

Questionnaires contain the general information of the respondents and Likert scale measurements of the variables. The general information included gender, age, educational level, job position in the company, unit of work and years of company experience. Five-point Likert scale was used to rate the independent and dependent variables, which ranges from Strongly-disagree (1) to Strongly-agree (5) level of agreement. These five-point Likert scale will be adapted from different literatures of scholars.

#### **3.6.** Methods of Analysis

The data were collected, verification was conduct and complete questionnaires were also identified. Then the data is coded in to SPSS (statistical package for social science) according to the variables selected and the questions asked. The data analyses were performed using descriptive and inferential statistics. SPSS /statistics (statistical Package for social scientists)

software version 21 has be used to process the data. The final reports of the relevant demographic variables were produced through central tendency measurements (frequency and frequency distribution, valid & cumulative percentage and comparison of mean and standard division). Correlation (r) was used to describe the strength and direction of relationship between two variables. Correlation "r" output always lies between -1.0 and +1.0 and if "r" is positive, there exists a positive relationship between the variables. If it's negative, the relationship between the variables is negative. While computing a correlation, the significance level shall be set at 95% with alpha value of 0.05 or a chance of occurrence of odd correlation is 5 out of 100 observations. Multiple regression analysis is a major statistical tool for predicting the unknown value of a variable from the known value of variables. And it is about finding a relationship between variables and forming a model.

#### **3.7 Model Specification**

In order to found the cause and effect relationship between dependent and independent variables, the study was used multiple regression model to measure the level of significant relationship between the dependent and independent variables. The model applied to show this influence is presented as follows;

 $Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \epsilon$ 

#### Where:

Y = Organizational performance of ECX

 $\beta 0$  = Constant (value of Y when X1, X2, X3, X4 and X5= 0)

 $\beta 1$  = Regression coefficient for Strategies and policies

X1= Strategies and policies

B2=Regression coefficient for Transport management

- X2= Transport management
- B3=Regression coefficient for Inventory management
- X3= Inventory management

B4=Coefficient of regression for Order processing management

X4= Level of Order processing management

 $\varepsilon$  = the error

#### 3.8 Validity and Reliability Test

#### 3.8.1 Validity Test

The scientific soundness of a research finding is determined by the validity of the instruments used. All possible efforts were exerted to make the data collected instruments easily understandable by the respondents so that the intended information collected thereby increasing trustworthiness of the ultimate findings. Pilot test will undertake prior to the main study by selecting 57 respondents. This is based on the justification of (Hazzi & Maldaon, 2015) which says, 10–20% of the main sample size is a reasonable number for conducting a pilot study. After the questionnaires were constructed, pre-testing with individuals who have knowledge of the area by allowing them to read and comment on it. Constructive comments were collected from the individuals and the questionnaires were adjusted accordingly. So, validation of the instrument was given by academic advisor prior to the data collected.

#### 3.8.2 Reliability Test

Reliability is essentially the dependability of an instrument to test what was design to test. The appropriate test for reliability is inter-item consistency reliability which is popularly known as the Cronbach's coefficient alpha. According to Joseph and Rosemary (2003), Cronbach's alpha reliability coefficient ( $\alpha$ ) normally ranges between 0 and 1. According to these authors, there is a greater internal consistency of the items if the Cronbach's alpha coefficient closes to 1.0. Based on the following rule of thumb of (George and Mallery, 2003, p. 231), if " $\alpha > 0.9 -$  'Excellent',  $\alpha > 0.8 -$  'Good',  $\alpha > 0.7 -$  'Acceptable',  $\alpha > 0.6$  'Questionable',  $\alpha > 0.5 -$  'Poor', and  $\alpha < 0.5 -$  'Unacceptable'."

#### 3.9 Ethical Consideration

The study was conducted by respecting the organizations policy and rights. The respondent's privacy kept strictly confidential and their responses were used only for academic purpose. Furthermore, the entire research participants were participated on voluntary and also treated with respect. All the materials and sources that were used in this study properly cited.

## **CHAPTER FOUR**

# 4. CHAPTER FOURDATA ANALYSIS, INTERPRETATION AND PRESENTATION

#### Introduction

This chapter presents data analysis, findings interpretation and presentation. Data in this study have been analyzed using descriptive techniques including percentages, mean, frequency and standard deviation. This chapter was organized in to two sections first demographic variables and second based on descriptive variables for example, independent variables of Logistics management practices: Strategies and policies, Transport management, Inventory management and Order processing management and dependent variables of Organizational performance: Financial performance and Social responsibility (corporate citizenship, community outreach).

Based on the methodologies, research design and tools of the thesis; data was expected to collect from 92 respondents. From the total 92 questionnaire distributed 82 were returned from which 10 were not correctly filled and rejected. Therefore 82 were effectively used for analysis that shows response rate of 88 percent. This is a good response rate based on (Fowler, 2002) a 75 percent response rate is considered adequate. Data analysis, discussion and interpretation of the results are presented in the following subheadings: presentation of demographic data and frequency of respondents, analysis of mean, analysis of correlation and regression coefficient.

#### 4.1. General Background of Respondents

In this section, the general characteristics of the respondents were presented in the following table. In The table, the sex and age of respondents, their educational qualifications, of respondents was presented. Description using cross tabulation has been deliberately selected to display the inclusion of the respondents with varies profile.

#### 4.1.1. Demographic characteristics of respondents

Demographic information described both individual and firm profile. Individual profile section included aspects of age, gender, level of education, job title / position therefore one of the variables used to discuss the demographic characteristics of the respondents is gender. As presented in Table 4.1, among the total respondents of 81 67(83%) were males whereas females comprise only514 (17%).There were more male respondent in the study than female because of most of the female respondent were inconvenient at the time of data gathering. The male respondents were found more active in this study.

With regard to age, 40 (49%) percent fall in the broad age range of 31-35, 25 (31%) percent were between an age of 36-45, between 25-30, 10 (12%) while those in the age group between greter than 46 were only 6(7.4%) percent.

The marital status distribution is: married respondent's makeup the majority 50 (61.7%) followed by single 25 (30.8%). Those widowed and divorced have been relatively smallest fractions of the respondents 6(7.4%) respectively.

The following table also presents the distribution of respondents by educational status. According to the collected data the majority of respondents had attained Secondary school 9-12 category 33(40.7%). Respondents who had attained the first cycle (grade 1-8), undergraduate and Diploma/tvt were 19(23.4%), 9(11%) and 20(24.6%) percent respectively of the total respondents. There were no respondents on the level of post graduate and above level of educational status.

Table 4.2 also indicates that the respondents have variable occupation. The majority of the respondents were farmers 56(69%) and employees are followed this in portion 14(17.3%). The rests were parts of other professional 11(13.6%) percent respectively. So here, other professionals were the for example transportations, and etc.

Char	Characteristics		
Sex	Male	67	83%
	Female	14	17%
Age	25-30	10	12%
	31-35	40	49%
	36-40	25	31%
	>46	6	7.4
Education	Primary 1-8	19	23.4%
	Secondary school 9-12	33	40.7%
	Diploma/tvt	20	24.6%
	Under graduate	9	23.4%
Marital status	Single	25	30.8%
	Married	50	61.7%
	Divorced	6	7.4%
	Widowed		
Occupation	Farmer	56	69%
	Employees	14	17.3 %
	Other	11	13.6%

Table: 4.1 Respondents Socio-demographic variables

Source: Survey Questionnaires, 2021

## 4.2. Descriptive Statistical Analysis

In this analysis of response, each specific variable are compared. The degree of satisfaction or dissatisfaction of the respondents for each statement is also analyzed by summarizing the five point Likert scale response in to mean and standard deviation. So this section of the chapter focuses on providing some general information about the respondents' as well as the individual participants. The main aim of this is to present a brief profile of the research sample. On the other hand, reliability test was used to confirm some of the findings.

# 4.2.1. The Effect of Logistics Management Practices on Organizational Performance in Ethiopian commodity exchange Jimma branch

The first objective of the study was to assess the effect of logistics management practices on organizational performance in Ethiopian Commodity Exchange Market Jimma Branch. Respondents were asked to indicate the state of logistics management practices in Ethiopian Commodity Exchange market. The logistics management practices included was customer service practices, warehouse management practices, inventory management practices, transportation management practices, information flow management practices and supply management practices. A five-point Likert scale with 1- Strongly Disagree, 2- Disagree, 3- Undecided, 4- Agree 5 - Strongly Agree was used to rate the state of logistics management

practices on organizational performance. Analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1-1.49 = Never practiced; 1.5-2.49 = rarely practiced; 2.5-3.49 = occasionally practiced; 3.5-4.49 = Very often practiced; 4.5-5.0 = Always practiced (Lady, 2016)

# 4.2.1.1. Strategies and policies Practice of Ethiopian Commodity Exchange Jimma Branch

The Council of Supply Chain Management defines logistics management as: that part of supply chain management that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements. Logistics management is the more practical, hands-on part of the supply chain where goods are transported into a facility, properly stored, handled and transported out. Logistics Management focuses on short-term procedures of goods and services in the organization.

As we know Ethiopia is a landlocked country effective logistics management system will a must from the root level of any organization; but the current logistics management practice misses many different techniques in general and; the table below shows that, the averages mean value of logistics management practice in ECX is scored a Very often practiced (M=3.60 and SD=1.08) under this variable the strategy outlines details of single window and information platform initiatives, in the organization is high and scored a Very often practiced mean value of (M=3.94 and SD=0.96) next strategies of the organizations develop new forms of institutional support for the development of the logistics activities a very often practiced mean value of (M=3.89, SD= 0.95) and Strategies and policies of the organization contributes to the creation of a more efficient and effective logistics system scored a very often practiced mean value of (M=3.69, SD= 1.21) and the organizations strategy outlines general policies to improve the usage of technology for greater efficiency in logistics system scored a mean value of occasionally practiced a mean value of (M=3.48, SD= 1.07).

Therefore this statement shows the organization have its own weakness towards the point that the organizations strategy outlines general policies to improve the usage of technology for greater efficiency in logistics system. Therefore it needs working effectively towards this weakness unless it affects the overall efficiencies of the organizations performance. The same to this point, strategy highlights the importance of logistics to the wider economy scored a mean value of occasionally practiced a mean value of (M=3.40, SD=1.25) and finally the use of enterprise resource planning (ERP) system to control material transaction scored a mean value of occasionally practiced a mean value of (M=3.29, SD=1.05)

According to respondents from the open ended questioners, Logistics management is that part of the supply chains that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer requirements. However managing in this direction was unthinkable still in the organization and there is a problem or weakness around. Materials management, channel management, distribution (or physical distribution) and supply-chain management.

As a strategy the organization provided for efficient and effective agricultural marketing services as warehouse service, laboratory test, grading, trading platform/auction service, provision of communication links; and market related training services for agents. Once commodities are graded by experts in ECX, it is stored in ECX warehouse to prevent tampering; then bid on and sold to exporters. But the problem is each stakeholders and employees were not aware about the overall strategy of the organization because they were not aligned within the strategy they focus on the routine activities or day today activities rather than focusing on the strategy.

Thus according to the findings Ethiopian Commodity Exchange misses that technical skill which highlights the importance of logistics and links the overall corporate objective with the backward integration and to the wider economy in the grass root level very weak. However they focus market integrity, market efficiency and market transparency: by guaranteeing the product grade and quantity and Operating a system of daily clearing and settling of contracts, by operating a trading system where buyers and sellers can coordinate in a seamless way on the basis of standardized contracts and by disseminating market information in real time to all market players.

Therefore the Ethiopian Commodity Exchange market could better to integrate the whole logistics practices rather than focusing only market sustainability and finally, the organization is expected to work more towards those activities like; reducing change resistance, build management commitment and awareness to compete with other organizations by managing

logistics on the right way and working towards the grassroots level integration with farmers and modernization of logistics in general.

Strategies and policies	Ν	Mean	SD
The strategy outlines details of single window and information platform	81	3,94	0,96
initiatives,			
Strategies of the organizations develop new forms of institutional support for	81	3,89	0,95
the development of the logistics activities			
Strategies and policies contributes to the creation of a more efficient and	81	3,69	1,21
effective logistics system			
The strategy outlines general policies to improve the usage of technology for	81	3,48	1,07
greater efficiency in logistics system			
The Strategy highlights the importance of logistics to the wider economy	81	3,40	1,25
Use of enterprise resource planning (ERP) system to control material	81	3,29	1,05
transaction			
Total	81	3.6	1.08

Table 4.2,	Strategies	and policies
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Source: Researcher, 2021

#### 4.2.2. Transport Management Ethiopian Commodity Exchange Jimma Branch

Transportation has the overriding objective that moves the cargo from point A to point B. Transportation is a vital strategic link between firms in a supply chain and must be managed effectively to meet customer due date and other shipping requirements at a reasonable cost (Wisner et al, 2011).

In logistics it is transportation that provides the flow of materials, products and persons between productions facilities, warehouses, the distribution centers, the terminals and the customers. Transportation is the only activity that provides the time and place utilities through the outbound and inbound logistics. An inefficient transportation system may lead to the firm incurring high cost to deliver product to customer, and this may lead to loss to the firm; and the transport system must be able to address the major issues of the mode selection, route selection and fleet size because it is the vital force for competition for the firm (Goldsby et. al., 2014).

So as the following table 4.3 depicts, that the current transportation performance provides efficiency in logistics system of the organization scored a mean value of occasionally practiced (M=3.39, SD= 1.22) and the current transportation management system enable the organizations business to grow scored a mean value of occasionally practiced (M=3.35, SD= 1.22) next the current transportation management reduces the total lead time scores a mean value of occasionally practiced (M=3.45, SD= 1.24), the quality aspect of transportation is getting better /Speed and consistency combine create the quality aspect of transportation scores a mean value of occasionally practiced (M=3.20, SD= 1.11) and current transportation management enable Ethiopian Commodity Exchange business to grow scores a mean value of occasionally practiced (M=3.40, SD= 1.28) respectively. Thus the overall result shows that, the transportation management system of the organization have its own limitation as compared to the strategic plan of the organization and based on the overall finding.

Thus as it is known, transportation management system is the backbone of the operation and it is the key element in logistics management in distribution management, which joins the separated activities especially rural areas in the supply chain management system of Ethiopian commodity exchange market. Miss leading of this system has a great loss towards the organizations effectiveness and long term strategy.

Therefore having a good transportation management system has the following benefits: reduce costs from customers ,transportation stakeholders', and from the organization through better route planning, load optimization, carrier mix and mode selection, improved accountability with visibility into the transportation chain, greater flexibility to make changes in delivery plans, and completion of key supply chain execution requirement.

Transportation in logistics system has also a role of service quality. By means of wellhandled transportation system, goods could be sent to the right place at the right time in order to satisfy customers 'demands. Specified pickup and delivery times, predictable transit time and zero loss and damage as well as accurate and timely exchange of information and invoicing are service related in transportation management. It all brings efficiency for the company to satisfy customers. Therefore transportation is the base for efficiency and economy in the business logistics and expands other functions in logistics system. In addition, a good transportation system performing in logistics activities brings benefits not only to service quality but also to company competitiveness (Fair and Williams, 2001)

Transport management	Ν	Mean	Std. D
The current transportation performance provides efficiency in logistics system of the organization	81	3,39	1,22
The current transportation management enable your organization business to grow	81	3,35	1,12
The current transportation management reduces the total lead time	81	3,45	1,24
The quality aspect of transportation is getting better /Speed and consistency combine create the quality aspect of transportation/	81	3,20	1,11
	81	3,75	1,14
The current transportation management enable your organization business to grow	81	3,40	1,28
Total	81		

<i>Table 4.3</i> ,	Transport	management
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Source: Researcher, 2021

#### 4.5-5.1 Inventory Management Ethiopian Commodity Exchange Jimma Branch

Inventory management practices provide for the upstream and down inventory visibility in the logistics or supply chain system. The aim of inventory is to provide both internal and external customer's with the required service level, ascertain the present and future requirement for all types of inventory, keep costs at minimum and provide for the (Farrington, 2012).

In the firm, all inventory policies must be of benefit by driving period operating expenses and working capital requirements. According to Lysons and Farrington (2012), to measure the effective and efficient performance of inventory depends on to what extent the firm has the right quantity of inventory in the right place and at the right time. The indicators to measure such inventory are the lead time, the service time (safety stock), the rate of stock turn, stock outs in a given period and stock cover.

As shown from the following table, an overall or an average mean and standard deviation of (M=3.62, SD=1.06) recorded indicating that Inventory Management in Ethiopian Commodity Exchange Jimma Branch was occasionally practiced. As revealed from the following table,

the statement that there is enough inventory level at stock, every time, to satisfy your customers order scores a mean value of (M=3.66, SD= 1.14), indicating that it was occasionally practiced followed by the inventory model used target to minimize overall total inventory cost like holding cost and ordering cost valued a mean scores of (M=3.02, SD= 0.96), indicating that it was occasionally practiced.

The following table also revealed that, there is a feature within the inventory system that alerts the user if inventory levels are below or above valued a mean scores of (M=3.90, SD= 1.06), which was Very often practiced and the company's inventory policy is one of the factors to maximize its profitability valued a mean scores of Very often practiced (M=3.99, SD= 1.07), there is an automated inventory recording system in the overall functional units valued a mean scores of Very often practiced (M=3.81, SD= 1.02), and finally, The organization used a standardized inventory management system valued the smallest mean score which was(M=3.02, SD= 1.12) occasionally practiced.

According to the finding, a feature within the inventory system that alerts the user if inventory levels are below or above, the company's inventory policy is one of the factors to maximize its profitability and there is an automated inventory recording system in the overall functional units were on the best performance in the organization and in reverse of this the organization used a standardized inventory management system was have its own problem in the organization so shaping the overall activities and addressing problems will the main agenda for the organization as a whole.

The findings from the following table disagree with the study of Getamesay (2015) who concluded that companies are keen in managing their inventory so as to reduce costs, improve the quality of service, enhance product availability and ultimately ensure customer satisfaction

Garoma (2009) in his unpublished paper argues on that there is still a problem of high contact default, unreliable supply, volatile price, poor quality, unregulated actors, unreliable trading parameter, uncoordinated market, high cost and risks, and also poor information

Table 4	4, Invento	ory manag	ement
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Inventory management	Ν	Mean	SD
There is enough inventory level at stock, every time, to satisfy your	81	3,66	1,14
customers order			
The inventory model used target to minimize overall total inventory cost	81	3,02	0,96
like holding cost and ordering cost			
There is a feature within the inventory system that alerts the user if	81	3,90	1,06
inventory levels are below or above			
The company's inventory policy is one of the factors to maximize its	81	3,99	1,07
profitability			
There is an automated inventory recording system in the overall functional	81	3,81	1,02
units			
The organization used a standardized inventory management system	81	3,35	1,12
Total	81	3.62	1.06

Source: Researcher, 2021

#### 4.5-5.2 Order processing management Ethiopian Commodity Exchange Jimma Branch

Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer and it formed the basis for the information flow in a logistics system (Christopher, 2010). It had three principal functions that is create a flow of information that preceded the goods, accompanied them and followed them (Christopher, 2010).

The importance of accurate information to achieving superior logistical performance had historically been underappreciated. While many aspects of information were critical to logistics operations, the processing of orders was of primary importance (Bowersox, et al., 2010). Failure to fully comprehend this importance resulted from not fully understanding how distortion and operational failures in order processing impact logistical operations (Bowersox, et al., 2010). Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer (Stevenson, 2009).

As the following table depicts, accurate order fulfillment process Valued a mean scores of occasionally practiced (M=3.22, SD=1.16), Shortened order lead time Valued a mean scores

of occasionally practiced (M=3.04, SD=1.18) next the company improved its process efficiency Valued a mean scores of occasionally practiced (M=3.04, SD=1.18) and the order processing management of the company gives better customer experience also Valued a mean scores of occasionally practiced (M=3.24, SD=1.19) on the other way, order processing management of the company gives better customer experience Valued a mean scores of occasionally practiced (M=3.00, SD=1.04)

Finally respondents were tested by why order management is based on the organizations culture? So a higher mean value was tested here it valued a mean scores of Very often practiced (M=4.03 SD= 1.04) towards that order management refers to the process of receiving, tracking, and fulfilling customer orders respectively. Therefore the finding shows that occasionally practiced mean value i.e; (M=3.06 SD= 1.12) thus order processing management needs an immediate attention from all stakeholders' and leaders, officers and employees needs a continuous training. Because having the right order management strategy and system in place can help prevent backordered items and angry customers. On the other way, order management software streamlines the order fulfillment process by centralizing all of your critical data and helping you to make better business decisions and increase order accuracy while keeping costs down. Here there are many order management systems on the market, and the right one for your business will depend on your size, needs, and goals.

 Table 4.5, Order processing management

Order processing management	Ν	Mean	S D
Accurate order fulfillment process	81	3,22	1,16
/Order fulfillment process refers to all the steps companies must take from the			
moment they receive an order until the items received in customers' hands/			
Shortened order lead time	81	3,04	1,18
/order lead time is the time period between placing of an order and receiving it/			
The company improved its process efficiency	81	3,24	1,19
The order processing management of the company gives better customer	81	3,00	1,04
experience			
Order management refers to the process of receiving, tracking, and fulfilling customer	81	4,03	1,04
orders			
Total	81	3.06	1.12

Source: Researcher, 2021

#### 4.5-5.3 Organizational performance of Ethiopian Commodity Exchange Jimma Branch

In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as: financial performance (e.g. shareholder return), customer service, social responsibility (e.g. corporate citizenship, community outreach) and employee stewardship. The organization itself does not perform any work but its managers are performing their assigned works and in a combination of these performed works is called organization performance. Some factors are to be performed by organization such as human and cultural factors, technology, natural recourses, economic factors, regulatory measures, markets, management philosophy, organizational culture (Goals, Value, Beliefs & Norms), organizational climate, motivated behavior and teamwork, structure, technological and physical resources, financial resources, leadership style. In a combination of these resources, the organization gets some outcome such as effectiveness, efficiency, development and participant's satisfaction. After using all supports and efforts when the organization produces a product or service that is called the organizational performance, Steven (2015)

In the shadow of the global financial crisis, the importance of sound regulatory frameworks has become more evident than ever. Good regulation is essential if our economies are to function efficiently, while meeting important social and environmental goals. However achieving good regulation is a demanding task and one that is never over. As the following table shows that through the implementation of logistics management practices ECX has grown its finance valued a mean scores of Very often practiced (M=3.35 SD= 1.21), there is a good practice to establish an environmentally friendly logistics system valued a mean scores of Very often practices (M=3.28 SD= 1.16), finally social regulation is to be reviewed to increase transparency and fair play in the organization respectively.

Thus the finding of this study shows that, there is a gap in cases of considering the need to improve welfare and working conditions and social regulation which was reviewed to increase transparency and fair play in the organizations. Therefore having a problem to this extent will impact the organization in the long run. Paying attention towards the internal part of the organization promotes stakeholders participation and become attractive for the external one.

Organizational performance	Ν	Mean	SD
Through the implementation of logistics management practices ECX has grown its finance	81	3,35	1,21
There is a good practice to establish an environmentally friendly	81	3,53	1,22
logistics system			
The organizations plan considers the need to improve welfare	81	3,28	1,16
and working conditions			
Social regulation is to be reviewed to increase transparency and	81	3,38	1,18
fair play in the organization			
Total	81	3,65	1,19

Table 4.7, Organizational performance

Source: Researcher, 2021

#### 4.3. Regression Analysis

In statistical modeling, regression analysis is a set of statistical processes for estimating the relationships between a dependent variable (often called the 'outcome variable') and one or more independent variables (often called 'predictors', 'covariates', or 'features'). The most common form of regression analysis is linear regression, in which one finds the line (or a more complex linear combination) that most closely fits the data according to a specific mathematical criterion. For specific mathematical reasons (see linear regression), this allows the researcher to estimate the conditional expectation (or population average value) of the dependent variable when the independent variables take on a given set of values. Less common forms of regression use slightly different procedures to estimate the conditional expectation across a broader collection of non-linear models (e.g., nonparametric regression), Bluman (2009),

Regression analysis is primarily used for two conceptually distinct purposes. First, regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning. Second, in some situations regression analysis can be used to infer causal relationships between the independent and dependent variables. Importantly, regressions by themselves only reveal relationships between a dependent variable and a collection of independent variables in a fixed dataset. To use regressions for prediction or to infer causal relationships, respectively, a researcher must carefully justify why existing relationships have predictive power for a new context or why a relationship between two variables has a causal interpretation. The latter is especially important when researchers hope to estimate causal relationships using observational data

According to Bluman (2009), the purpose of the regression line is to enable the researcher to see the trend and make prediction on the basis of the data. However, the value of correlation coefficient is significant. Therefore via the instrumentalism of multiple linear regressions analysis effort was made to determine the prediction power of the independent variables.

#### 4.3.1. Tests and Statistical Analysis of the study

The inferential statistics used in this study was concerned with the various tests of significance for normality, and multicolinearity in order to determine the validity of data. The data was sorted to group questions according to applicable constructs under test. Finally correlation and standard multiple regression analysis were performed. Tests and analysis of the data are presented below:

#### 4.3.1.1. Reliability Analysis

Reliability is the overall consistency of a measure. A measure is said to have a high reliability if it produces similar results under consistent conditions. "It is the characteristic of a set of test scores that relates to the amount of random error from the measurement process that might be embedded in the scores. Scores that are highly reliable are precise, reproducible, and consistent from one testing occasion to another. That is, if the testing process were repeated with a group of test takers, essentially the same results would be obtained. Various kinds of reliability coefficients, with values ranging between 0.00 (much error) and 1.00 (no error), are usually used to indicate the amount of error in the scores.

Cronbach's alpha reliability test was used to check for the internal consistency of the data. The closer the Cronbach's alpha value to 1 is the higher is the internal consistency reliability. the Cronbach's alpha values are above than 0.6 therefore the data of this study is reliable.

#### Table 4.8 Reliability Statistics

	Reliability Statistics
Cronbach's Alpha	N of Items
0.939	32

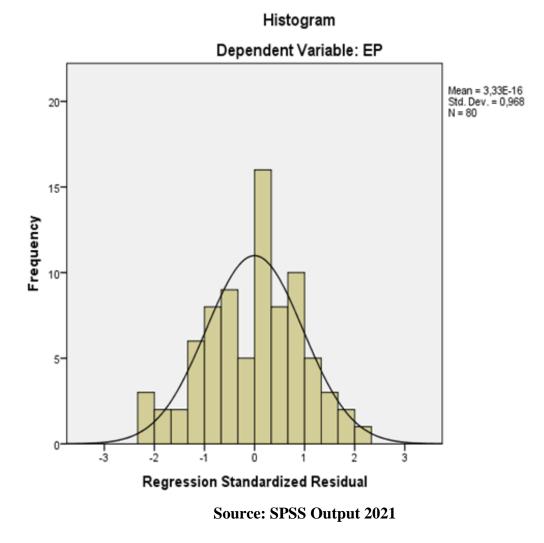
Source: SPSS Output 2021

#### 4.3.1.2. Normality Test of the study

In statistics, normality tests are used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed. It is conventional to assume that the observations are normal or distributed symmetrically around the center of all scores. The data would be distributed symmetrically around the center of all scores. As such, if we drew a vertical line through the center of the distribution then it should look the same on both sides. This is known as a normal distribution and is characterized by the bell-shaped curve. This shape basically implies that the majority of scores lie around the center of the distribution so the largest bars on the histogram are all around the central value (Field, 2006).

Figure 4.1 Test of Normality

The independent variables Strategies and policies Transport management Inventory management Order processing management and dependent variables Organizational performance



#### 4.3.1.3. Test for Regression Model

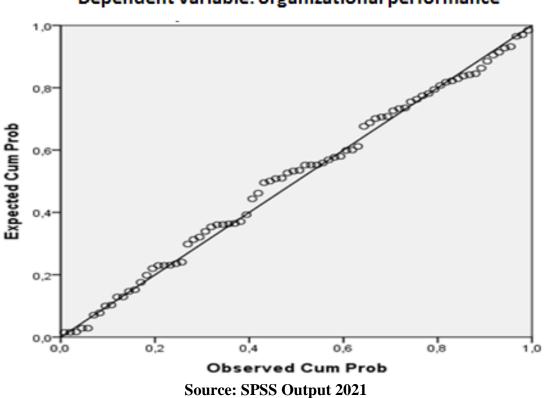
Assumptions Regression analysis is sensitive to different factors. The following factors/assumptions should be checked before the regression analysis is made. The main assumptions of regression tests are normality, linearity, test of homogeneity of the variance and absence of multicollinearity and checking for outliers.

#### 4.3.1.4. Test for Linearity

The test for linearity has a significance value smaller than 0.05, indicating that there is a linear relationship between independent and dependent variables level. The test for deviation from linearity also has a small significance value, which means that there is a nonlinear relationship in addition to the linear component. These results coincide with what you observed in the Means table, in

regression analysis the assumption of linearity is to be tested as the following figure. In this case the relationship between the dependent variable and each independent variable should be linear. This is checked and presented is in the figure 4.2.below:

#### Fig.4.2 Test for Linearity



Dependent variable: organizational performance

Normal P-P plot of regression standardized residual

4.3.1.5. Multiple Regression Analysis Result

In multiple linear regressions analysis of such sort ANOVA test shows the acceptability of the model from statistical perspective. Accordingly, the regression row indicate the extent of variation explained by the model, whereas the residual row indicates information about the variation that is not accounted for the model, that is variation on the dependent variable explained by factors not included on the model

#### Table 4.9 ANOVA<sup>a</sup>

	ANOVA <sup>a</sup>						
Mod	lel	Sum of	df	Mean	F	Sig.	
		Squares		Square			
1	Regression	17.235	5	3.447	24.851	$0.000^{b}$	
	Residual	10,265	74	0.139			
	Total	27.500	79				
a. De	a. Dependent Variable: Organizational performance						
b. Predictors: (Constant), Strategies and policies, Transport management,							
Inve	ntory manageme	ent, Order proce	ssing mana	gement			
		Sou	rce SPSS	Output 2021			

Source: SPSS Output 2021

As shown in the above table the ANOVA test results demonstrated that the models are acceptable from statistical perspective. In other word 0.000 level of significance are obtained in all cases (i.e. Strategies and policies, Transport management, Inventory management and Order processing management); this statistical condition further revealed that the regression model are statistically appropriate to the data. The computed F statistics is 24.851 with an observed significance level of .000 implying that statistically fitness of the regression model to the data. Independent variable the effect of logistics management practice / and dependent variables outcome/

#### Table 4.10 Model summary

Model Summary <sup>b</sup>						
Mod	R	R	Adjusted R Square	Std. Error of the Estimate		
el		Square				
1	0.792 <sup>a</sup>	0.627	0.602	0.37244		
a. Predictors: (Constant), Strategies and policies, Transport management, Inventory management and Order processing management						
b. Dependent Variable: Organizational Performance						

#### Source: SPSS Output 2021

As shown in the above model summary table the adjusted R square is 0.602, this suggest that 60.2% of the variation in the model is explained by the variables already incorporated into the model. Therefore in this particular case 0.627 R square values revealed that 60.3 % of the variation in the organizational performance explained by the variables existed in the model. This furthers that only 39.7% of the variation in the dependent variable is to be determined by the variable outside of the model.

	Coefficients <sup>a</sup>							
Model Unstandardized		Standardized	t	Sig.	95,0% Confidence			
		Coefficients		Coefficients			Interval for B	
		В	Std. Error	Beta			Lower	Upper
						Bound Bound		
1	(Constant)	2.063	0.340		6.066	0.000	1.385	2.741
	SP	0.105	0.095	0.152	1.105	0.273	0.294	0.084
	ТМ	0.304	0.090	0.496	3.385	0.001	0.125	0.483
	IM	0.235	0.098	0.242	2.411	0.018	0.430	0.041
	OP	0.053	0.077	0.070	0.689	0.493	0.101	0.207

Table4.11 Multiple Regression Analysis between variables

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Strategies and policies, Transport management, Inventory management and Order processing management

#### Source: SPSS Output 2021

With reference to the above coefficient table revealed that the organizations Strategies and policies, Transport management, Inventory management and Order processing management are statistically significant (at P<.05) and their standardized coefficient beta ( $\beta$ ) values 0.152, 0.496, 0.242, 0.070 and 0.576 respectively. This implies that effect of logistics management practices significantly influences organizational performance in the Ethiopian commodity exchange and thus have has a significant positive relationship with effective implementation of organizational performance. Similar to the result found in the course of the correlation analysis, the direction of the relationship is positive this implies that the above independent variables adversely affect the implementation of the Organizational Performance. Therefore, as clearly depicted on the table, along with the predictive power of the dimension, the major variables that hinder the Organizational Performance in ECX, were followed by Strategies and policies, transport management, inventory management and order processing management.

From the research findings, the following multiple regression model was developed;

 $Y = \beta 0 + \beta 1 X 1 + \beta 2 X 2 + \beta 3 X 3 + \beta 4 X 4 + \epsilon$ 

#### Where:

Y = Organizational performance of ECX

 $\beta 0$  = Constant (value of Y when X1, X2, X3, X4 and X5= 0)

 $\beta 1$  = Regression coefficient for Strategies and policies

X1= Strategies and policies

B2=Regression coefficient for Transport management

- X2= Transport management
- B3=Regression coefficient for Inventory management
- X3= Inventory management
- B4=Coefficient of regression for Order processing management
- X4= Level of Order processing management
- $\varepsilon =$  the error

The above model presents the linear relationship of the research variables. The coefficients implies that change in company's lack of supervisor support impact by one unit lead to change in employee performance -0.152, training, increases employee performance -.496 and relation with coworkers lead to decrease employee performance by -0.242 percent etc

Therefore the study concluded that through improvement in Strategies and policies, transport management, inventory management and order processing management, the ECX can improve the effectiveness of the system so that effectiveness of organizational operations will be improved. On the other hand failure to properly implement the above practices is likely to weaken the effectiveness of organization.

### **CHAPTER FIVE**

#### 5. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

This chapter provides the summary of major findings, conclusions and recommendation of the study. The study was conducted to assess the effect of logistics management practices on organizational performance (case of Ethiopian commodity exchange Jimma branch) this chapter presents the conclusions, limitations of the study, and recommendations for further research.

#### 5.2. Summary of the Major findings

In this study, the researcher looked for the the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange Jimma branch. The study also illustrated the relationship that exists between the the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange and factors affecting dimensions and also along the dimensions of the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange and factors affecting dimensions and also along the dimensions of the effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange with the intent of knowing the strength of the relationship of the dimensions in this particular case. In order to achieve these objectives, data were collected from the stalk holders and employees of the organizations as well as managers. employees in quantitative of descriptive approach and also used regression analysis.

The demographic characteristic consists of sex, age, educational background, experience, of the employees. From the demographic characteristics of respondents male were 83%; and the remaining 17% were female respondents. Finally, when we came to the work experience of the respondents, they had adequate exposure to the work area and had a potential of bringing change to the enterprise which reasonably increase the validity (as a whole the quality) of this research. The analysis result depicts that the mean score values for Strategies and policies (3.6), Transport management (3.4), Inventory management (3.62), Order processing management (3.06) dimensions were above the average mean value, which really indicates the agreement of the respondents towards independent variables.

The study also found a positive correlation among the four (Strategies and policies, Transport management, Inventory management, Order processing management) the effect of logistics management practice on organizational performance.

Under this study, the major effect of logistics management practices on organizational performance in the case of Ethiopian commodity exchange identified based on the response of employees were Strategies and policies (B=0.152), Transport management (B=0.496), Inventory management (B=0.242), Order processing management (B=0.070), These values showed that Strategies and policies, Transport management and Inventory management factor have a positive effect on logistics management practice on organizational performance.

#### 5.2. CONCLUSION

The study established that modern service oriented organizations in Ethiopia employed logistics management practices including transportation management practices which enabled timely delivery of products and services to customers, inventory management practices which enable the firm to avoid inventory bottleneck. In addition, the study found that order processing management practices facilitated products delivery at the right quantity to the customers and the overall strategies and policies of the organization. Therefore the overall conclusion was conducted based on the dour listed independent variables finding as:

Based on the regression analysis the study established positive beta coefficients with all study variables, Strategies and policies, Transport management, Inventory management and Order processing management. In that vein the study concludes that any change made is expected to positively impact organizational effectiveness and efficiencies.

Thus as it is known, transportation management system is the backbone of the operation and it is the key element in logistics management in distribution management, which joins the separated activities especially rural areas in the supply chain management system of Ethiopian commodity exchange market. Miss leading of this system has a great loss towards the organizations effectiveness and long term strategy.

Therefore having a good transportation management system has the following benefits: reduce costs from customers ,transportation stakeholders', and from the organization through better route planning, load optimization, carrier mix and mode selection, improved

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accountability with visibility into the transportation chain, greater flexibility to make changes in delivery plans, and completion of key supply chain execution requirement.

Transportation in logistics system has also a role of service quality. By means of wellhandled transportation system, goods could be sent to the right place at the right time in order to satisfy customers 'demands. Specified pickup and delivery times, predictable transit time and zero loss and damage as well as accurate and timely exchange of information and invoicing are service related in transportation management. It all brings efficiency for the company to satisfy customers.

According to the finding, a feature within the inventory system that alerts the user if inventory levels are below or above, the company's inventory policy is one of the factors to maximize its profitability and there is an automated inventory recording system in the overall functional units were on the best performance in the organization and in reverse of this the organization used a standardized inventory management system was have its own problem in the organization so shaping the overall activities and addressing problems will the main agenda for the organization as a whole.

Order processing management needs an immediate attention from all stakeholders' and leaders, officers and employees needs a continuous training. Because having the right order management strategy and system in place can help prevent backordered items and angry customers. On the other way, order management software streamlines the order fulfillment process by centralizing all of your critical data and helping you to make better business decisions and increase order accuracy while keeping costs down. Here there are many order management systems on the market, and the right one for your business will depend on your size, needs, and goals

Thus the finding of this study shows that, there is a gap in cases of considering the need to improve welfare and working conditions and social regulation which was reviewed to increase transparency and fair play in the organizations. Therefore having a problem to this extent will impact the organization in the long run. Paying attention towards the internal part of the organization promotes stakeholders participation and become attractive for the external one.

Therefore the study concluded that through improvement in Strategies and policies, transport management, inventory management and order processing management, the ECX can improve the effectiveness of the system so that effectiveness of organizational operations will be improved. On the other hand failure to properly implement the above practices is likely to weaken the effectiveness of organization.

#### 5.2. **RECOMMENDATION**

- In order to enhance agricultural trade, (ECX) was establish a modern and technologically assisted warehouse services system in order to improve their services by using the stored commodities as collateral for loan in order to solve finance related problems for the trading partners however having this only is not a target but the organization better to work towards the internal and external environment integration.
- Especially during these years there was a wide gap in case of promoting awareness creating Medias regarding the opportunities of modern markets serving for trading partners as well as for the economy as a whole.
- A modern market (ECX) has to improve transport service from market conduct variables category because most of lorry buses waiting idle up to two or three weeks. There has to be time adjustment for right arrival and loading because it increases additional cost for the drivers as well as for the organization.
- The finding identifies also a gap in cases of considering the need to improve welfare and working conditions and social regulation which was reviewed to increase transparency and fair play in the organizations so everybody could work to overcome such problems.
- Standardized inventory management system was have its own problem in the organization so shaping the overall activities and addressing problems will the main agenda for the organization as a whole

#### 5.3. Direction for Further Research

It obvious that any study cannot be free from limitations, accordingly there are some limitation incurrent studies. It was focused only on effect of logistics management practices on organizational performance variables of ECX in Jimma area branch office. Consequently the findings of this study may be difficult to generalize about all branches at national level. Finally, other researcher can also make comparative study on the performance of other branch by including different determinant variables through nation-wide

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## **APPENDIX**

#### JIMMA UNIVERSITY

# BUSINESS AND ECONOMICS COLLEGE DEPARTMENT OF MANAGEMENT LOGISTICS AND SUPPLY CHAIN MANAGEMENT QUESTIONNAIRE TO BE FILLED BY STAFF MEMBERS OF ECX JIMMA BRANCH

#### QUESTIONNAIRE

Dear respondents, the purpose of this questionnaire is to gather data on the effect of logistics management practices on organizational performance (case of Ethiopian commodity exchange Jimma branch). The study is purely for academic purpose and thus not affects you in any case. So, your genuine, frank and timely response is vital for successfulness of the study. Therefore, I kindly request you to respond to each items of the question very carefully.

The item has five-point Likert type scales; the scales have the following meaning

- 1. Strongly Disagree
- 2. Disagree,
- 3. Neutral,
- 4. Agree,
- 5. Strongly Agree

#### **General Instructions**

- No need of writing your name
- Where answer options are available please tick (□) in the appropriate box for part

#### Thank you for spending your precious time in advance!

# SECTION A: General Information

<b>Respondent information</b>	
Respondent Function:	
Company Name:	
Core Activity:	
Position	

## 1. Gender:

1.	Gender.
	a) Male
	b) Female
2.	Age
	a) Less than
	b) 25-30
	c) 31-35
	d) 36 - 40
	e) Above 41
3.	Level of education
	a) illiterate
	b) One - eight
	c) Nine -Twelve
	d) Diploma/TVT
	e) Bachelordegree
	f) Other sate here
4.	Marital status
	a) single
	b) Married
	c) divorce
	d) widowed
5.	What is your occupation?
	a) Farmer
	b) business
	c) civil servant
	d) Not Employed
	e) Explain, if others

# Part Three: -

Questions With Respect to \_\_\_\_\_\_ Using the following Rating Scales under the columns, " $\sqrt{}$ " only on one number from the given numbers in the box after reading the variable on the left hand side.

# <u>The numbers represent: 1- Strongly Disagree, 2- Disagree, 3- Undecided, 4- Agree 5 -</u> <u>Strongly Agree</u>

Logistics management practice			ee	id		ly
	1. Strategies and policies	Strongly Disagree	Disagree	Undecid ed	Agree	Strongly Agree
1.	The strategy outlines details of single window and					
	information platform initiatives,					
2.	Strategies of the organizations develop new forms of					
	institutional support for the development of the logistics					
	activities					
3.	Strategies and policies contributes to the creation of a more					
	efficient and effective logistics system					
4.	The strategy outlines general policies to improve the usage					
	of technology for greater efficiency in logistics system					
5.	The Strategy highlights the importance of logistics to the					
	wider economy					
	Transport management	11				
1.	The current transportation performance provides efficiency					
	in logistics system of the organization					
2.	The current transportation management enable your					
	organization business to grow					
3.	The current transportation management reduces the total lead					
	time					
4.	The quality aspect of transportation is getting better /Speed					
	and consistency combine create the quality aspect of					
	transportation/					
3.	Inventory management	<u>ı                                    </u>				
1	There is enough inventory level at stock, every time, to					
	satisfy your customers order					
2	The inventory model used target to minimize overall total					

	•			
	inventory cost like holding cost and ordering cost			
3	There is a feature within the inventory system that alerts the			
	user if inventory levels are below or above			
4	The company's inventory policy is one of the factors to			
	maximize its profitability			
5	There is an automated inventory recording system in the overall functional units			
	4. Order processing management			
1	Accurate order fulfillment process			
	/Order fulfillment process refers to all the steps companies			
	must take from the moment they receive an order until the			
	items received in customers' hands/			
2	Shortened order lead time			
	/order lead time is the time period between placing of an			
	order and receiving it/			
3	The company improved its process efficiency			
4	The order processing management of the company gives			
	better customer experience			
	5. Organizational performance			
5.1.	Financial performance			
1	Through the implementation of logistics management practices ECX has grown its finance			
5.2.	Social responsibility (corporate citizenship, community			
	outreach).			
1	There is a good practice to establish an environmentally			
	friendly logistics system			
2	The organizations plan considers the need to improve			
	welfare and working conditions			
3	Social regulation is to be reviewed to increase transparency			
	and fair play in the			
L		I		I

# 1. How can you see logistics management system of your organization?

\_\_\_\_\_

3. If you have any other comment\_

4.	Please specify if there are other logistics management challenges that Ethiopian commodity exchange market must address in order to improve the logistics management practices

Thank you for your response