ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS SCHOOL OF COMMERCE

ASSESSMENT OF LOGISTICS MANAGEMENT PRACTICE: CASE OF PUBLIC SERVICE EMPLOYEES TRANSPORT SERVICE ENTERPRISE

BY
FADIL HAILEMICHEAL

ADVISOR
BUSHA TEMESGEN (Ph.D.)

A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF ART IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

June, 2018

ADDIS ABABA ETHIOPIA

Declaration

I, Fadil Hailemicheal Ambaye declare that this paper is a result of my independent research work on the topic entitled **Assessment of Logistics Management Practices –A Case Study of Public Service Employees Transport Service Enterprise (PSETSE)** in partial fulfillment of the requirements for the Degree of Masters of Art in Logistics and Supply Chain Management at Addis Ababa University. This work has not been submitted for a degree to any other university. All the references are also duly acknowledged.

Fadil Hailemicheal

Signature _____

Date: _____

Confirmation

This is to certify that **Fadil Hailemicheal Ambaye** has carried out this research work on the topic entitled "**Logistics Management Practice in Public Service Employees Transport Service Enterprise"** under my supervision. This work is original in nature and has not been presented for a degree in any University and it can be submitted for the partial fulfillment of the requirements for the award of the degree of Masters of Art in Logistics and Supply Chain Management.

Dr. Busha Temesgen

Signature_____

Date _____

Addis Ababa University, School of Commerce

Logistics and Supply Chain Management Graduate Program

THESIS APPROVAL FORM

Assessment of Logistics Management Practices "A case of Public Service Employees Transport Service Enterprise (PSETSE)"

By

Fadil Hailemicheal Ambaye

Approved by Board of Examiners and Advisor

Busha T. (PHD) Signature _____ Date _____

Tekelegiorgis A (Ass. Professor Signature _____ Date_____

Getachew Habtamu **(PhD)** Signature _____ Date_____

June, 2018

Addis Ababa

Acknowledgements

First and foremost I would like to express my unconditional gratitude to Almighty Allah for granting me this life, providing opportunities, giving courage to overcome problems and all the blessings He has been bestowed upon me throughout my life. Accomplishment of this work could not be possible without His immense blessings during this research period. Writing a thesis is like going on a mountain trip, never certain to reach the summit, but always aware of difficulties lying ahead. A complicating factor on this trip was the available time for research, which was limited to only few months. A very tight schedule and tremendous help from a great number of people have assisted me to complete this endeavor.

At the end of my thesis, it is a pleasant task to express my thanks to all those who contributed in many ways to the success of this study and made this thesis possible. At this moment of accomplishment, I would like to extend my gratefulness to my supervisor Dr. Busha Temesgen, for his encouragement, scholastic guidance, untiring help and support throughout the research work in bringing this research to a success. Indeed, without his guidance, I would not be able to put the topic together. I would also like to express my heartfelt thanks to Mr. Taye Wakgari,Mr. Bayu Wami, Mr.Abebaw Leyew, Mr.Sintayhu, Mr.Tessema, and Miss Felekche from Public Service Employees Transport Service Enterprise (PSETSE) and Mr. Faysal Kedir , for their valuable advice and discussions for the improvement of this work. I cordially thank my fellow course mates of LSCM-1 for their friendly support and cooperation they extended whenever needed and made it a remarkable experience for me. Together we shared countless unforgettable moments to cherish.

I take this opportunity to sincerely acknowledge the Logistics Department Head, for providing this opportunity and for allowing me to avail this opportunity, without this it could not be possible for me to continue my studies. I would also like to express my heartfelt thanks to Miss. Sisay, warehouse Supervisor, PSETSE for her strong support and encouragement. I am also thankful to each and every respondents of my research questionnaire, without which the thesis would have remained incomplete.

I thank wholeheartedly to express my profound gratitude and pay homage to my parents and thanks to family members for their consistent dedication, love and encouragement that enlightened me.

Last but not the least, I express my thanks to all of them whose names are not spelled out here but they helped me in many ways for the successful completion of this dissertation.

Sincerely,

Fadil Hailemicheal

Addis Ababa, May 2018.

Table of Contents

Acknowledgements I

ABSTRACT VIII

CHAPTER ONE 1

1.1Background of the Study 1

1.2 Statement of the problem 2

1.3 Research questions 4

1.4 Research Objectives 4

1.4.1General Objective 4

1.5 Significance of the Study 4

1.6 Scope of the Study 5

1.7 Limitation of the Study 5

1.8 Definition of terms 5

1.9 Organization of the Study 6

Chapter Two 8

2.1 Concepts and Ideas of Logistics Management 8

2.1.1 Workplace Logistics 12

2.1.2 Facility Logistics 12

2.1.3 Corporate Logistics 12

2.1.4 Supply Chain Logistics 13

2.1.5 Global Logistics 14

2.1.6 Next-Generation Logistics 14

2.2 Logistics activities 14

2.2.1 Customer Response 14

2.3.2 Inventory Planning and Management 16

2.3.3 Supply 19

2.3.4 Transportation 21

2.3.5 Warehousing 23

2.4 The mission of logistics management 26

2.5 Conceptual Frame Work 28

CHAPTER THREE 31

RESEARCH METHODOLOGY 31
3.1 Description of Study Area 31
3.2 Research Approach and Design 31
3.3 Population and Sample Design 32
3.4 Data Sources & Types 33
3.5 Data collection, instrument and procedures 33
3.6 Ethical consideration 33
3.7 Data Analysis and Presentation 34
3.8 Reliability and Validity Tests 34
3.8.1 Reliability Test 34
3.8.2 Validity Test 34
CHAPTER FOUR 36
Data Analysis, Discussion and Interpretation 36
CHAPTER FIVE 65
FINDINGS, CONCLUSION & RECOMMENDATION 65
5.1 Major Findings 65
5.2 Conclusion 67
5.3 Recommendation 68
References 69

LIST OF FIGURES PAGE

Figure 1: Diagram of Organization of Study 7

Figure 2: Logistics Management Process 26

Figure 3: Conceptual framework of the study 29

LIST OF TABLES PAGE

Table 1: Overall Response Rate. 38

Table 2: Respondents Demographic Information. 38

Table 3.Customer service management practice 39

Table 4: Transportation management practice. 44

Table 5: Inventory planning and management practice 50

Table 6: Warehouse management practice 55

Table 7: Procurement management practice 61

List of Annex

Annex I 71

Annex II 72

Annex III 73

Annex IV 76

LIST OF ACRONYM AND ABBREVIATIONS

IT	Information Technology
PSETSE	Public Service Employees Transport Service Enterprise
ICT	Information and Communication Technology
CSCMP	Council of Supply Chain Management Professionals
LIS	Logistics Information System
CLM	Council of Logistics Management
NCPDM	National Council of Physical Distribution Management
CSP	Customer Service Policy
OE	Order Entry
OP	Order Process
EDI	Electronic Data Interchange
CR	Customer Response
IP&M	Inventory Planning and Management
TAC	Total Acquisition Cost
SSP	Supplier Service Policy
FMS	Flexible manufacturing System
MRP	Material Requirement Planning
JIT	Just In Time
TQM	Total Quality Management
WM	Warehouse Management
SPSS	Statistical Package for Social Services
CSM	Customer Service Management

ABSTRACT

The purpose of this study is to assess logistics management practices in Public Service Employees Transport Service Enterprise (PSETSE). To address this study descriptive design method was employed and also mixed approaches were used. The total number of employees (65), from Public Service Employees Transport Service Enterprise (PSETSE) all employees from the Logistics and other departments were selected for the study. To gather data for the study questionnaire and interview for selected people have been used. Data obtained through questionnaire has been analyzed by using descriptive statics: mean and standard deviation were supported by SPSS 20.0 software version. Moreover, the data obtained using interview has been analyzed. There are so many various challenges in performing those logistics activity: Poor transportation and distribution management, lack of adequate and experienced staffs, poor customer service management pertaining logistics, lack of technology support/innovation, poor warehouse management frequent stock out and poor procurement have been found the major challenges of the enterprise that needs due attention. Despite the limitation, the study is believed to create awareness about the concept, principle and practices of logistics management in the case enterprise. Therefore, it has been recommended to the enterprise to take corrective measures such as to create the mechanism to check the satisfaction of customers regarding logistics practices, to integrate the activities of warehouse and procurement, to make transport system responsive to requests of logistics and other departments.

Key words: logistics practices, logistics management, logistics activity

CHAPTER ONE

1.1 Background of the Study

Logistics management plays a significant role in the success of any company‘s operations and has a direct impact on its existence. More importantly, logistics processes play a big role in customer satisfaction which is more important than low service or product cost. Business logistics consists of inventory management, purchasing, transportation and warehousing or depot which can be defined as having the right item in the right quantity at right time at the right place for the right price. Logistics management has always been an important preoccupation of military operation but paradoxically it was only recently that it is being accorded attention in the academic and business world (Obiora, 2008).

Logistics according to Rushton &Osley, (1991) is a concept based on total system view of the material goods and services flow activity from the source of supply chain through to the final point of consumption. The ability to transport goods quickly, safely, economically and reliably is seen as vital to success of business and to a nation‘s prosperity and capacity to compete in globalized economy. Logistics is defined by council of logistics management as the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from point of origin to point of consumption for the purpose of conforming to customers ‘requirements. According to Fikadu, (2013), Ethiopian logistics system is characterized by poor logistics management system and lack of coordination of goods transport, low level of development infrastructure and inadequate fleets of freight vehicles in number and age, damage and quality deterioration of goods while handling, transporting and in storage. This coupled with lack of sea port resulted in poor linkage of producers (farmers) to the consumers (market) and non- competitiveness of Ethiopian goods on global market, which compromised livelihood of the people and economy of the country.

Logistics becomes more important and complex today because of new requirements of service oriented economy, disparate business functions, the impact of various contemporary information technologies (IT). In logistics management unwise decision create multiple issues failed or delayed deliveries lead to buyer dissatisfaction. Damage of goods, due to careless transportation is another potential issue. Poor logistics planning gradually increases expenses and

issues may arise from implementation of ineffective logistics system. To resolve these issues organizations should implement efficient logistics management practices.

Key efficient logistics management practice indicators-are used to assess the current logistics management practice of the enterprise to be researched.

1. Transportation is assessed in terms of on-time delivery service.
2. Customer service/response is investigated in terms of response time.
3. Inventory planning & management is assessed based on inventory accuracy.
4. Supply/procurement management is assessed in terms of cost reduction/ saving.
5. Warehousing management is investigated in terms control the movement and storage of materials

Currently in Ethiopian transport industry fierce competition has emerged from day to day. In these competitions each company in the country makes their last endeavors attempting to win the competition through strategic planning targeting excellence in customer services.

The Public Service Employees Transport Service Enterprise (PSETSE), which was established in November 2013 with a total capital of one billion Birr, is to be merged with Walia Intercity Bus Services Enterprise to commence providing transportation services for government employees.

The researcher has been motivated to solve the problems of inefficient logistics management practice that is whether transportation, customer service, inventory management, Procurement management and warehousing management are efficient or not to be tested by applying efficient logistics management practice indicators that had been observed during preliminary survey by using discussions and informal interview with staffs.

Hence, the main purpose of this study is to assess the efficiency of logistics management practice that are implemented in Public Service Employees Transport Service Enterprise/PSETSE/ using efficient logistics management practice indicators

1.2 Statement of the problem

The main purpose of this study is to assess how logistics management practice in a enterprise affects customer (internal and external) satisfaction, profitability and agility.

According to the researcher's observations and information collected from the enterprise current logistics management system of Public Service Employees Transport Enterprise seems to be characterized by lack of coordination in the chain, lack of skilled manpower in inventory management and giving less attention to warehouse management, lengthy purchasing process, lack of adequate transportation in distribution of stocks.

In business, logistics is having the right item in the right quantity at right time at the right place for the right price. Some of the key logistics management practices that impact performance are related to estimation of customer needs, efficient and effective delivery, integration and collaboration throughout the supply chain, sharing of information and vision using ICT as well as informal methods and use of specialists for performing specific job across the supply chain, all of these practices affects logistics performance in a company Cited by Koykka, (2010). According to *Janssen et al. (2010),* logistics management unwise decision, lack of skilled manpower and poor logistics planning gradually increase expenses and affect profitability of the company. Accordingly, the researcher tried to look up whether Public Service Employees Transport Service Enterprise/PSETSE/ poor inventory management, long-lasting purchasing process, and inadequate transportation for distribution of stock lack of technologies support and poor warehousing management affects the company's profitability. In addition, the researcher will assess to what degree poor logistic management practice affects the company's customer service satisfaction pertaining logistics management and looks up to the problem produced due to decisions made on logistics practices. Hence, the research is to assess the logistics management practice of Public Service Employees Transport Service Enterprise /PSETSE/ and tries to propose better logistics management practice to be implemented and tries to answer to the problem stated.

1.3 Research questions

This research is primarily aimed to answer what are the inefficient logistics management practices in Public Service Employees Transport Service Enterprise, more specifically the study answers the following basic research questions:

1. How efficient is the current logistics management practices at PSETSE?
2. What are the major challenges in the current logistics management practice at PSETSE?
3. What is the level of customers satisfaction pertained to logistics practice at PSETSE?

1.4 Research Objectives

1.4.1General Objective

The main objective of the research is to investigate current logistics management practice of the PSETSE.

1.4.2Specific Objective

The specific objectives of this study are:

- To assess problems related to transportation and warehouse
- To assess problems related to inventory/stock management and procurement
- To assess the level of customer satisfaction on the existing logistics practice

1.5 Significance of the Study

This research document is of significance in terms of the following aspects:-

i. The outcomes of this study will able to assess the logistics management practice in Public Service Employees Transport Service Enterprise from as many angles as possible such as transportation management and warehouse management and other logistics activities. Hence the end result will give a comprehensive overview of the constraints as well as the potentials that this logistics management offers.

ii. The outcome of this research can also be used as a springboard for further studies in the transport industry.

iii. This study will also be significant in terms of providing the necessary resource in light of the possibility of future investors that participates in the industry.

1.6 Scope of the Study

The scope of this study is very much limited to the study of logistics management activities such as transportation in terms of on-time delivery, warehouse in terms of Control the movement and storage of materials, inventory/stock management in terms of inventory accuracy, procurement in terms of cost reduction and customer service in terms of response time by first reply as it pertains to the Public Service Employees Transport Service Enterprise. Thus the paper have greatly dwelled upon discussions about efficient logistics management practice indicators of the enterprise. These are central warehouse, transport dispatching department and procurement department to be targeted at Public Service Employees Transport Service Enterprise Head Office in Addis Ababa.

1.7 Limitation of the Study

The following challenges were an covered when the conductive the study

- Unwillingness of the subjects of the survey to disclose some important data such as financial income, and so on.
- Unavailability of up to date resources for and research and literature review.
- Financial limitation, and finally due to the fact that this study deals with wide to be difficult and it make asses to all of them but it figures out the logistics management system in the Public Service Employees Transport Service Enterprise and it helps to give attention for the problem and furthers study.

1.8 Definition of terms

Logistics: Defined that logistics is 'part of the supply chain process that plan, implements, and controls the efficient, effective forward and reverse flow and storage of goods service and related information between the point of origin and the point of consumption in order to meet customers' requirements. Council of Logistics management (1991)

Customer Response:-The purpose of the logistic system is to serve customers as well or better than the competition and at the same time to make profits. Customer service is the chain of sales

activities and meeting customer requirements, which begins with receiving the orders and ends with the delivery of the products to customers, in some cases continuing with equipment maintenance services *(Adriana & Daniela 2010).*

Inventory Planning and Management:-The main objective of inventory planning and management is to determine and maintain the lowest inventory levels possible that will meet the customer service policy requirements expressed in the customer service policy. The logistics of inventory planning and management includes: order quantity engineering, service level optimization, replenishment planning, inventory deployment Inventory what inventory should be stocked at each stage in a supply chain? How much inventory should be held as raw materials, semi-finished, or finished goods? *(Meng, 2006)*

Supply:-The overall objective of supply chain management/SCM/ is building inventory (through manufacturing and/or procurement) and to minimize the total acquisition cost while meeting the availability, response time and quality requirement stipulated in the customer service policy (Meng 2006).

Transportation:-Transportation physically links the sources of supply chosen in sourcing with the customers we have decided to serve chosen as a part of the customer service policy. The logistics of transportation includes: network design, and optimization, shipment management, fleet and container management, carrier management, freight management. (Sreenivas, 2013)

Warehousing:- It is the last of the five logistics activities because good planning in the other four activities may eliminate the need for warehousing or may suggest the warehousing activity be outsourced. The logistics of warehousing includes: receiving, put away, storage, order picking and Shipping. (Bartholdi III JJ,Hack man ST(2006).

1.9 Organization of the Study

This study has five main parts. I. The first chapter is the introductory section which depicts the existing logistics management practice in Public Service Employees Transport Service Enterprise. This part also includes the following subtopics, back ground of the study, statement of the problem, research questions, objectives, and significance of the study, scope and limitation of the study, definition of terms and organization of the study. II. In the second chapter of this study literature review of relevant topics, namely, logistics management is presented from various

sources. III. Chapter three explains about research methodology references with data collection instrument to be attached as an appendix. IV. Chapter four states about results, discussions and interpretation. V. Chapter five explains about summary, conclusion and recommendation.

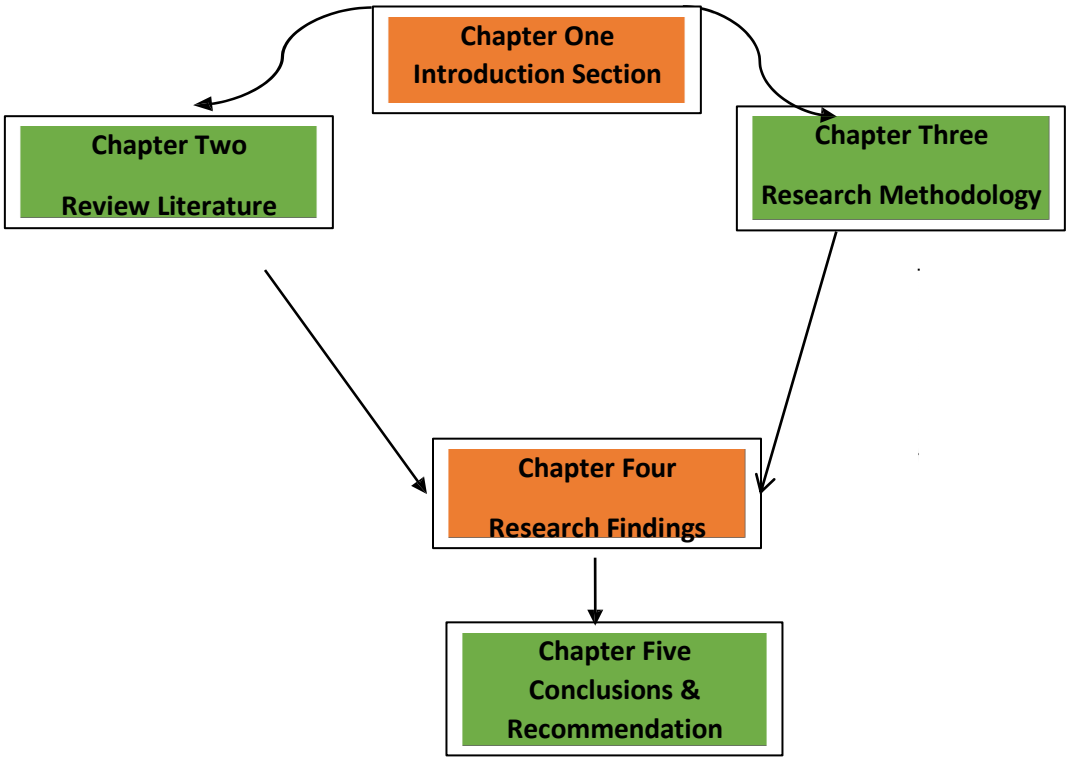

Fig1. Diagram of organization of the study

CHAPTER TWO

RELATED LITERATURE REVIEW

This chapter briefly introduced and provided a summary of literature specific to concepts and ideas of logistics Management Practice. The chapter starts with definition of Logistics and logistics management, which covers transportation, inventory planning, a warehousing management and procurement with stakeholders.

2.1 Concepts and Ideas of Logistics Management

Many people believe that logistics is a word, but from a semantics point of view its origin was from ancient Greek and meant the ―science of computation.‖ In fact, it is originally from combat environments and not from business or academia. It seems the ancient Greeks referred the word logistikos to military officers who were expert in calculating the military needs for expeditions in war. As a science, it seems the first book written on logistics was by Antoine-Henri Jomini (1779_1869), a general in the French army and later in the Russian service, titled Summary of the Art of War (1838). The book was on the Napoleonic art of war Jomini defined logistics as ―the practical art of moving armies‖ and included a vast range of functions involved in moving and sustaining military forces: planning, administration, supply, billeting and encampments, bridge and road building, and even reconnaissance and intelligence insofar as they were related to maneuvers off the battlefield.

Many different definitions for logistics can be found. The most well-known are the following:
(a) **―Logistics** is the management of all activities which facilitate movement and the co-ordination of supply and demand in the creation of time and place utility‖. (b) **―Logistics management** is . . . the planning, implementation and control of 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‖ *CSCMP, (2006*)

(c) **—Logistics** is the positioning of resources at the right time, in the right place, at the right cost, at the right quality"*(Chartered Institute of Logistics and Transport, UK, 2005).*

(d) **—**In civil organizations, logistics 'issues are encountered in firms producing and distributing physical goods" *Farahani, et. al (2011)*

(e) **—Logistics** is that part of the supply chain process 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" *(Council of Logistics Management 2003).*

(f)According to GRAGHURAM.N RANGARAJ(2000), a formal definition of logistics management can be design and operation of the physical, managerial, and informational systems needed to allow goods to overcome time and space(from the producer to the consumer)? The definition implies that an integrated view of a number of different activities or functions may be required.

Logistics has an ancient history. A quick look back can be enlightening. Its history dates to the wars of the Greek and Roman empires in which the military officials called logistiks were responsible for supplying and distributing needed resource and services. Providing them had an important and essential role in the outcomes of these wars. These logistiks also worked to damage the stores of their enemies while defending their own. This gradually guided the development of current logistics systems. Logistics systems developed extensively during World War II (1939_1945). Throughout this war, the United States and its allies 'armies were more efficient than Germany's. German army stores were damaged extensively, but Germany could not impose the same destruction on its enemies 'stores. The US army could supply whatever was needed by its forces at the right time, at the right place, and in the most economical way. From that time, several new and advanced military logistic techniques started to take off. Gradually, logistics started to evolve as an art and science. *R.Farahani, et. al (2011)*

Throughout the history of mankind wars have been won and lost through logistics strengths and capabilities –or the lack. Martin Christopher (2011)

Today, experts in logistics perform their duties based on their skills, experiences, and knowledge. In modern industries, the task of logistics managers is to provide appropriate and efficient logistics systems. They guarantee that the right goods will be delivered to the right customers, at the right

time, at the right place, and in the most economical way. Although logistics is a dilemma for many companies, logistical science can bring some relief to them. In today‘s business environment, logistics is a competitive strategy for the companies that can help them meet the expectations of their customers. Logistics helps members of supply chains integrate in an efficient way *R. Farahani, et. al (2011)*

There are a growing number of ever-changing definitions and classification options offered in print as well as on the Internet for the term logistics. Of these, we would like to use the functional, flow-oriented definition of the American logistics society―Council of Supply Chain Management Professionals": As per Council of Supply Chain Management Professionals for the purpose of this research Logistic 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 customers‘ requirements(*Council of Supply Chain Management Professionals,2006)* According to this definition, logistics serves to move goods within the entire value chain and requires coordination and integration between companies. It focuses primarily on real goods, tangible assets and services that provide benefit to the customer, and it integrates them into the core logistics functions of transport, transfer and storage. Logistics therefore comprises the planning, control and execution of goods and information flow – between a company and its suppliers, within a company, and between a company and its customers. Logistics is the flow of material, information, and money between consumers and suppliers. In the 1950s and _60s, the military was the only organization using the term logistics. There was no true concept of logistics in private industry at that time. Instead, departmental silos including material handling, warehousing, machining, accounting, marketing, and so on, were the norm *(R.Farahani, et. al 2011)*
The commonality of the recent definition is that logistics is the process of moving and handling goods and materials, from the beginning to the end of the production, sale process and waste disposal, to satisfy customers and add business competitiveness. It is ‘the process of anticipating customer needs and wants; acquiring capital, materials, people, technologies, and information necessary to meet those needs and wants; optimizing the goods or services producing network to fulfill customer requests; and utilizing the network to fulfill customer requests in a timely way‘ (*Tilanus, 1997*).

Simply logistics is customer-oriented operation management. Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, supply/demand planning and management of third party logistics. To varying degrees the logistics function also includes customer service, sourcing and procurement, production planning and scheduling, packaging and assembly. Logistics management is part of all levels of planning, execution, strategic, operational and tactical. It is an integrating function including marketing, manufacturing, and finance and information technology *Council of Supply Chain Management Professionals, (2006).*

Business Logistics - The science of planning, design, and support of business operations of procurement, purchasing, inventory, warehousing, distribution, transportation, customer support, financial and human resources. *MDC, Log Link / Logistics World, (1997*)

Logistics management is a supply chain management component that is used to meet customer demands through the planning, control and implementation of effective movement and storage of related information, goods and services from origin to destination. Logistics management helps companies reduce expense and enhance customer service.

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 *Haapanen 2005 cited by Koykka (2010).*

In the past the goals of logistics were connected primarily to cost effectiveness. Nowadays, besides cost effectiveness, attention is paid also to fast lead times and developing customer service. As a result of costs, the price is still an important factor in competition, but in addition companies want shorten delivery times, increase the speed of distribution and reaction, make sure that the delivery arrives on time. Logistics is not just ―save money‖ action; it is an important part of customer oriented service strategy. *Sakki 2003 cited by Koykka (2010).*

2.1.1 Workplace Logistics

Workplace logistics is the flow of material at a single workstation. The objective of workplace logistics is to streamline the movements of an individual working at a machine or along an assembly line. The principles and theory of workplace logistics were developed by the founders of industrial engineering working in WWII and post-WWII factory operations. A popular name today for workplace logistics is ergonomics. *R. Farahani, et. al (2011)*

2.1.2 Facility Logistics

Facility logistics is the flow of material between workstations within the four walls of a facility (that is, inter-workstation and intra-facility). The facility could be a factory, terminal, warehouse, or distribution center. Facility logistics has been more commonly referred to as material handling. The roots of facility logistics and material handling are in the mass production and assembly lines that distinguished the 1950s and 1960s. In those times and even into the late 1970s, many organizations maintained material-handling departments. Today, the term material handling has fallen out of favor because of its association with non-value added activities. In the 1960s, material handling, warehousing, and traffic were grouped together to become known as physical distribution; procurement, marketing, and customer service were grouped together to become known as business logistics. (Even today in many academic institutions, logistics is still divided along these lines; where logistics is taught in the business school, it is taught as business logistics and in the engineering schools as physical distribution) *Council of Logistics Management (2003).*

2.1.3 Corporate Logistics

As management structures advanced and information systems accordingly, the ability to assimilate and synthesize departments (material handling, warehousing, and so on) into functions (physical distribution and business logistics) in the 1970s permitted the first application of true logistics within a corporation. Corporate logistics became a process with the common objective to develop and maintain a profitable customer service policy while maintaining and reducing total logistics costs. Corporate logistics is the flow of material and information between the facilities and processes of a corporation (inter-workstation, inter-facility, and intra- corporate). For a

manufacturer, logistics activities occur between its factories and warehouses; for a wholesaler, between its distribution centers; and for a retailer, between its distribution centers and retail stores. Corporate logistics is sometimes associated with the phrase physical distribution that was popular in the 1970s. In fact, the Council of Logistics Management (CLM) was called the National Council of Physical Distribution Management (NCPDM) until 1982 *Council of Logistics Management (2003).*

2.1.4 Supply Chain Logistics

Supply chain logistics is the flow of material, information, and money between corporations (inter-workstation, inter-facility, inter-corporate, and intra-chain). There is a lot of confusion surrounding the terms logistics and supply chain management. The supply chain is the network of facilities (warehouses, factories, terminals, ports, stores, and homes), vehicles (trucks, trains, planes, and ocean vessels), and logistics information systems (LIS) connected by an enterprise‘s supplier‘s suppliers and its customer‘s customers. Logistics is what happens in the supply chain. Logistics activities (customer response, inventory management, supply, transportation, and warehousing) connect and activate the objects in the supply chain. To borrow a sports analogy, logistics is the game played in the supply chain arena. It is unfortunate that the phrase supply chain management has been so readily and commonly adopted as a reference to excellence in logistics. First, it is not supply (or demand) that should dictate the flow of material, information, and money in a logistics network. Actually, there are some links in the chain and some circumstances in which supply dictate flow and some in which demand should dictate flow. Second, if you drew lines connecting all the trading partners in a typical supply chain, what you would see would not look anything like a chain. You would see something that looks more like a complex web of links. A chain stretched full is a line. The danger in the choice of the term chain is that the term oversimplifies the complexities in logistics management and leads to inflated expectations for what can be achieved by supply chain management systems. Finally, the term management suggests that a single party in the chain can truly manage and dictate the operations \of the supply chain. Instead, the best any party can do is to collaboratively plan the operations of the chain *Council of Supply Chain Management Professionals, (2006).*

2.1.5 Global Logistics

Global logistics is the flow of material, information, and money between countries. Global logistics connects our suppliers ‘with our customers‘ customers internationally. Global logistics flows have increased dramatically during the last several years due to globalization in the world economy, expanding use of trading blocs, and global access to Web sites for buying and selling merchandise. Global logistics is much more complex than domestic logistics, due to the multiplicity of handoffs, players, languages, documents, currencies, time zones, and cultures that are inherent to international business. *Council of Logistics Management (2003).*

2.1.6 Next-Generation Logistics

There are many theories as to the next phase of logistics development. Many logisticians believe that collaborative logistics, logistics models built with continuous and real-time optimization and communication between all supply chain partners will be the next phase of evolution. Other camps in the logistics community believe the next phase of evolution will be virtual logistics or fourth-party logistics, where all logistics activities and management will be outsourced to third-party logistics providers who are in turn managed by a master or fourth-party logistics providers acting kind of like a general contractor. *Council of Logistics Management (2003).*

2.2 Logistics activities

Logistics is comprised of five interdependent activities: customer response, inventory planning and management, supply, transportation, and warehousing. Each activity and its objective is described briefly below: *Taylor, (2005)*

2.2.1 Customer Response

It links with logistics internally to the customer base and sales and marketing, Customer response is optimized when customer service policy (CSP) is yielding the lowest cost of lost sales and inventory carrying costs. In a competitive environment, customer service is an important means of differentiation from competitors and of customer loyalty. Setting the components of customer service and quantifying the level of service are means of keeping the company‘s competitive advantage *Taylor, (2005).*

The purpose of the logistic system is to serve customers as well or better than the competition and at the same time to make profits. Customer service is the chain of sales activities and meeting customer requirements, which begins with receiving the orders and ends with the delivery of the products to customers, in some cases continuing with equipment maintenance services *Adriana & Daniela (2010).*

The role of customer service is to provide time and place utilities in the transfer of goods and services between the manufacturer and the customer. In another form, the product has no value until it is in the hands of the customer. Availability is a complex concept, influenced by many factors that together form the customer service. These factors include the frequency of the delivery and its safety, the stock level and the time interval the order is released *(Adriana & Daniela 2010).* Customer service is one of the most powerful elements available to the organization in its search for competitive advantage and yet it is often the least well managed. The quality of customer service performance depends in the main upon the skill with which the logistics system is designed and managed. Put very simply, the output of all logistics activity is customer service. Martin Christopher, (2011)

As it has been said customer response links logistics externally to the customer base and internally to sales and marketing. Customer response is optimized when the customer service policy (CSP) yielding the lowest cost of lost sales, inventory carrying, and distribution is identified and executed. The logistics of customer response includes the activities of developing and maintaining customer service policy, monitoring customer satisfaction, order Entry (OE) order Processing (OP), and invoicing and collections. It links with logistics internally to the customer base and sales and marketing, Customer response is optimized when customer service policy (CSP) is yielding the lowest cost of lost sales and inventory carrying costs. In a competitive environment, customer service is an important means of differentiation from competitors and of customer loyalty. Setting the components of customer service and quantifying the level of service are means of keeping the company‘s competitive advantage. The purpose of the logistic system is to serve customers as well or better than the competition and at the same time to make profits. Customer service is the chain of sales activities and meeting customer requirements, which begins with receiving the orders and ends with the delivery of the products to customers, in some cases continuing with equipment maintenance services *Adriana & Daniela (2010).*

The role of customer service is to provide time and place utilities in the transfer of goods and services between the manufacturer and the customer. In another form, the product has no value until it is in the hands of the customer. Availability is a complex concept, influenced by many factors that together form the customer service. These factors include the frequency of the delivery and its safety, the stock level and the time interval the order is released. The primary productivity indicator for Customer response is the number of customer orders processed per person-hour. Through customer service automation methods, including Internet ordering, EDI, automated contact management, call center automation, and/or touchtone ordering, the productivity and quality of CR can be improved. *Mulama, (2012)*

2.3.2 Inventory Planning and Management

Inventory is another name for materials and is my material that a firm holds in order to satisfy customer demand (and these customers may be internal and/or external to the firm). Inventory costs money! Inventory also takes up space and firms need to hire people to take care of inventory. Inventory ties up working capital and affects cash flow .Thus firms are always on the lookout for ways to reduce their inventory holding. Therefore the goal in inventory management is to minimize inventory holding while maintaining a desired customer service level. John Mangan etal.,(2012)

Inventory control systems help an inventory manager decide when to order inventory and in what quantity. In this system, inventory levels are continuously monitored and orders are issued when the inventory is depleted to a predetermined level, called the reorder point (ROP).

The inventory control systems allow for a safety stock, (SS). This is the amount of inventory stocked by the system in case of unforeseen events rising like late deliveries, other reasons for maintaining safety stock include providing a safe guard against issues such as poor quality, production problems and transportation problems. The root reason for safety stock could be described as variation of demand, variation of lead time, variation of productions, etc. John Manganetal.(2012)

The objective of inventory planning and management (IP&M) is to determine and maintain the lowest inventory levels possible that will meet the customer service policy requirements stipulated in the customer service policy. The logistics of inventory planning and management includes: order quantity engineering, service level optimization, replenishment planning, inventory deployment Inventory what inventory should be stocked at each stage in a supply chain? How much inventory should be held as raw materials, semi-finished, or finished goods? The primary purpose of inventory is to act as a buffer against uncertainty in the supply chain. However, holding inventory can be expensive, so what are the optimal inventory levels and reorder points? Inventory management system is a set of techniques that are used to manage the inventory levels within different companies in a supply chain. The aim is to reduce the cost of inventory as much as possible while still maintaining the service levels that customers require. Inventory management takes its major inputs from the demand forecasts for products and the prices of products. With these two inputs, inventory management is an ongoing process of balancing product inventory levels to meet demand and exploiting economies of scale to get the best product prices. *Meng, (2006).*

Persistent stock-outs can also drive customers away from the brand and/or store permanently. The potential loss of business for both manufacturers and retailers caused by out-of-stock situations is clearly significant. (Martin Christopher,2011) There are three kinds of inventory: 1) cycle inventory; 2) seasonal inventory; and 3) safety inventory. Cycle inventory and seasonal inventory are both influenced by economy of scale considerations. The cost structure of the companies in any supply chain will suggest certain levels of inventory based on production costs and inventory carrying cost. Safety inventory is influenced by the predictability of product demand. The less predictable product demand is, the higher the level of safety inventory is required to cover unexpected swings in demand. The inventory management operation in a company or an entire supply chain is composed of a blend of activities related to managing the three different types of inventory. Each type of inventory has its own specific challenges and the mix of these challenges will vary from one company to another and from one supply chain to another *Taylor, (2005).*

Inventory is spread throughout the supply chain and includes everything from raw material to work in process to finished goods that are held by the manufacturers, distributors, and retailers in a supply chain. Again, managers must decide where they want to position themselves in the trade-

off between responsiveness and efficiency. Holding large amounts of inventory allows a company or an entire supply chain to be very responsive to fluctuations in customer demand. However, the creation and storage of inventory is a cost and to achieve high levels of efficiency, the cost of inventory should be kept as low as possible. There are three basic decisions to make regarding the creation and holding of inventory: *Frazelle,* (*2002).*

Cycle Inventory— this is the amount of inventory needed to satisfy demand for the product in the period between purchases of the product. Companies tend to produce and to purchase in large lots in order to gain the advantages that economies of scale can bring. However, with large lots also comes an increased carrying cost. Carrying costs come from the cost to store, handle, and insure the inventory. Managers face the trade-off between the reduced cost of ordering and better prices offered by purchasing product in large lots and the increased carrying cost of the cycle inventory that comes with purchasing in large lots *Frazelle,* (*2002).*

Safety Inventory—Inventory that is held as a buffer against uncertainty. If demand forecasting could be done with perfect accuracy then the only inventory that would be needed would be cycle inventory. But, since every forecast has some degree of uncertainty in it, we cover that uncertainty to a greater or lesser degree by holding additional inventory incase demand is suddenly greater than anticipated. The trade-off here is to weigh the costs of carrying extra inventory against the costs of losing sales due to insufficient inventory *(Frazelle, 2002).* **Seasonal Inventory—**this is inventory that is built up in anticipation of predictable increases in demand that occur at certain times of the year. For example, it is predictable that demand for anti-freeze will increase in the winter. If a company that makes anti-freeze has a fixed production rate that is expensive to change, then it will try to manufacture product at a steady rate all year long and build up inventory during periods of low demand to cover for periods of high demand that will exceed its production rate. The alternative to building up seasonal inventory is to invest in flexible manufacturing facilities that can quickly change their rate of production of different products to respond to increases in demand. In this case, the trade-off is between the cost of carrying seasonal inventory and the cost of having more flexible production capabilities. Effective management of the flow of inventory in supply chains is one of the key factors for success. The supply chain management orientation during the 1990s brought attention to the importance of reducing inventory levels in supply chains to reduce landed cost at

the end of the supply chain. The planning, storing, moving, and accounting for inventory is the basis for all logistics. Inventory availability is the most important aspect of customer service. Inventory carrying costs are typically the most expensive costs of logistics. It is very difficult to convert physical inventory into a liquid asset, hence, inventory is a very risky investment .The goal of inventory management is to increase the financial return on inventory while simultaneously increasing customer service levels *Frazelle, (2002).*

2.3.3 Supply

Supply is the process of building inventory (through manufacturing and/or procurement) to the targets established in inventory planning. The objective of supply management is to minimize the total acquisition cost (TAC) while meeting the availability, response time, and quality requirements stipulated in the customer service policy and the inventory master plan. The logistics of supply include: developing and maintaining Supplier Service Policy (SSP), sourcing, supplier integration, purchase order processing, buying and payment. Supply management is focused on the acquisition process recognizing the supply chain and organizational contexts. Special emphasis is on decision making that aligns the supplier network and the acquisition process with organizational goals and strategies and ensures short- and long-term value for funds spent. The overall objective of supply management is to minimize the total acquisition cost while meeting the availability, response time and quality requirement stipulated in the customer service policy Meng (2006).

The whole purpose of supply chain management and logistics is to provide customers with the level and quality of service that they require and to do so at least cost to the total supply chain. Martin Christopher, (2011).

There is no one best way of organizing the supply function, conducting its activities, and integrating suppliers effectively. This is both interesting and challenging. It is interesting because the acquisition of organizational requirements covers a very wide and complex set of approaches with different needs and different suppliers. It is challenging because of the complexity and because the process is dynamic, not static. Moreover, some of the brightest minds in this world have been hired as marketing and sales experts to persuade supply managers to choose their companies as suppliers. It is also challenging because every supply decision depends on a large variety of factors, the combination of which may well be unique to a particular

organization. Meng (2006), Every organization needs suppliers. No organization can exist without suppliers. Therefore, the organization‘s approach to suppliers, its acquisition processes and policies, and its relationships with suppliers will impact not only the performance of the suppliers, but also the organization‘s own performance. No organization can be successful without the support of its supplier base, operationally and strategically, short- and long-term. To increase long-term shareholder value, the company must increase revenue, decrease costs, or both. Supply‘s contribution should not be perceived as only focused on cost. Supply can and should also be concerned with revenue enhancement. Effective purchasing and supply management contributes significantly to organizational success. The acquisition of materials, services, and equipment of the right qualities, in the right quantities, at the right prices, at the right time, with the right quality, and on a continuing basis has occupied the attention of managers in both the public and private sectors. Purchasing, supply management, and procurement are used interchangeably to refer to the integration of related functions to provide effective and efficient materials and services to the organization. Thus, purchasing or supply management is not only concerned with the standard steps in the procurement process: (1) the recognition of need, (2) the translation of that need into a commercially equivalent description, (3) the search for potential suppliers, (4) the selection of a suitable source, (5) the agreement on order or contract details, (6) the delivery of the products or services, and (7) the payment of suppliers *Christopher (2007).*

The large number of physical moves associated with any purchasing or supply chain activity has focused attention on the role of logistics. According to the Council of Supply Chain Management Professionals, ―Logistics management is that 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 point of consumption in order to meet customers ‘requirements. This definition includes inbound, outbound, internal, and external movements. Logistics is not confined to manufacturing organizations. It is relevant to service organizations and to both private- and public-sector firms. The attraction of the logistics concept is that it looks at the material flow process as a complete system, from initial need for materials to delivery of finished product or service to the customer. It attempts to provide the communication, coordination, and control needed to avoid the potential conflicts between the physical distribution and the materials management functions. Supply influences a

number of logistics-related activities, such as how much to buy and inbound transportation. With an increased emphasis on controlling materials flows, the supply function must be concerned with decisions beyond supplier selection and price. *Council of Supply Chain Management Professionals, (2006).*

2.3.4 Transportation

Transportation physically links the sources of supply chosen in sourcing with the customers we have decided to serve chosen as a part of the customer service policy. We reserve transportation for the fourth spot in the logistics activity list because the deliver-to points and response time requirements determined in the customer service policy and the pick-up points determined in the supply plan must be in place before a transportation scheme can be developed. The objective of transportation is to link all pick-up and delivery -to points within the response time requirements of the customer service policy and the limitations of the transportation infrastructure at the lowest possible cost. The logistics of transportation includes: network design, and optimization, shipment management, fleet and container management, carrier management, freight management Sreenivas, (2013)

In logistics 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 in the supply chain. According to Taylor (2005), transportation occupies one-third of the amount of logistics costs, so it influences the performance of logistics systems hugely. It is also important to have a collaborative network of shippers, carrier and customer, so good transportation management system has the following benefits: reduce costs 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 plays a connective role among several steps, it is the planning of all these functions and sub-functions into the system of goods movement in order to minimize cost as a result maximize service to the customers that constitute the concept of business logistics. The system, once put in place, must be effectively managed. *Fair et al. (1981)*

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 *Fair and Williams, (1981).*

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. *Fair and Williams (1981)*

A variety of issues impact the efficiency and effectiveness of transport services. These include congestion problems, waste including empty running of vehicles, carbon emissions, and regulatory directives on maximum permitted working time, road user charges and skill shortage. These problems cause inefficiencies and waste such as excessive waiting time, low vehicle rate, poor asset utilization, unnecessary administration and excessive inventory holding. John Manganetal, (2012)

The principles should relate to the controlling essentials for the efficient performance of the economic function that is transportation .These conditions for optimum efficiency are as follows:

1. **Continuous flow**-The principle of continuous movement is that the objective of minimum cost and time require the avoidance of reverse or out-of-line movement and a minimization of handling, interchange of equipment and transfer of goods and persons
2. **Adaptation of vehicle unit to volume and nature of traffic**-The flow of traffic of my carrier tends to vary not only over an extended period of time but often during days of the week and hours of the day.(MARVIN L. FAIR & ERNESTW. WILLIAMS, 1975)

There are two fundamental economic principles that have an impact on transportation efficiency: Economies of scale-decreased transportation cost per unit as the size of a shipment increases and Economies of distance-decreased transportation cost per unit of weight as distance increase. The goal from a transportation perspective is to maximize the size of the load and the distance being shipped while still meeting customer service expectations *M.Sreenivas, (2013).*

2.3.5 Warehousing

Warehousing is the last of the five logistics activities because good planning in the other four activities may eliminate the need for warehousing or may suggest the warehousing activity be outsourced. In addition, a good warehouse plan incorporates the needs of all the other logistics activities. Good or bad, the warehouse ultimately portrays the efficiency or inefficiency of the entire supply chain. The objective of warehousing is to minimize the cost of labor, space, and equipment in the warehouse while meeting the cycle time and shipping accuracy requirements of the customer service policy and the storage capacity requirements of the inventory play. The

logistics of warehousing includes: receiving, put away, storage, order picking and Shipping Bartholdi and Hachman's, (2016)

According Bill Chua TeoKee(2009), a warehouse is an intermediate storage area where products or raw materials are held temporarily until they are needed for production or consumption . It fulfills two critical functions:

1. **Time Utility**-value created or added to a product by making something available at the right time.
2. **Place Utility**- value created or added to a product by making something available at the right place.

In addition to this there are also a number of reasons why depots and warehouses are required. These vary in importance depending on the nature of a company's business. In general, the main reasons are: to keep down production costs by allowing long production runs, thus minimizing, the time spent for machine set-up, to help link demand requirements with production capabilities, to smooth the flow and assist in operational efficiency, to enable large seasonal demands to be catered for more economically, to provide a good customer service, to allow cost trade-offs with the transport system (bulk delivery, etc) and to facilitate order assembly Bartholdi and Hachman's, (2016).

A warehouse is a commercial building for buffering and storage of goods or an intermediate area for storing of raw materials or products until they are needed for production or consumption Chua and Teo 2008 cited by HaungMin, (2010). Warehousing refers to the activities involving storage of goods on a large-scale in a systematic and orderly manner and making them available conveniently when needed. In other words, warehousing means holding or preserving goods in huge quantities from the time of their purchase or production till their actual use or sale. Being an essential component of logistics, is a key aspect of modern supply chains and plays a critical role in the success or failure of business today *Frazelle 2002a. Cited by Haung Min, (2010)*

Warehousing is costly in terms of human resources and of the facilities and equipment's required, and its performance will affect directly on overall supply chain performance. Inadequate design or managing of warehouse systems will jeopardize the achievement of required customer

service levels and the maintenance of stock integrity, and result in unnecessarily high costs *Haung Min, (2010).*

Due to the globalization, the increase in complexity of supply chain has also increased the complexity of the roles played by a warehouse for a business. The evolving role of warehouse has exerted significant impacts on the evolvement of warehouse management system (WMS). AWM is a database driven IT tool used to improve the efficiency of the warehouse by coordinating warehouse activities and to maintain accuracy inventory by recording warehouse transactions Shiau and Lee 2009 Cited by Min study (2010).

Warehousing today operates with a high level sophistication. Warehouse operations have been affected by customers who demand quicker response, smaller and more frequent deliveries, better service and lower cost. It goes beyond performing the basic warehousing function and is the main coordinating point between the carrier and customer. Bill Chua and TeoKee Boon, (2009)

To be able to respond quickly to the demands of customers, the location of warehouse /depot within supply chain has shifted to the point of consumption in order to shorten the transportation distance. Bill Chua and TeoKee Boon,(2009)

Proper and effective use of WMS can greatly increase the efficiency and productivity of a warehouse, thus helping to achieve warehousing costs reduction of the company. When considering the level of effort involved in warehouse operations, the greatest expenditure of effort is in the picking process. To gain efficiencies in picking the labor time to pick orders needs to be reduced and this can achieved in a number of ways. Companies with the most efficient warehouses have the most frequently picked items closest to the shipping areas to minimize picking time. These companies achieve their competitive advantage by constantly reviewing their sales data to ensure that the items are stored close to the shipping area are still the most frequently picked Min, (2010).

The writer also note that warehouse layout is also important in achieve greater efficiencies. Minimizing travel time between picking locations can greatly improve productivity. However, to achieve this increase in efficiency, companies must develop processes to regularly monitor picking

travel times and storage locations. To maximize efficiency, world class warehouse operations have adopted new and updated technology Min, (2010).

Warehousing is actively involved in the supply chain. In demand-driven supply chain this may be mainly by storing goods or involve more sorting activities: both being required to largely feed external customers. In the supply –driven supply chains, then warehouses get renamed as stores and hold stocks required to feed internal activities like production. Warehouse are therefore an integral part of the supply /demand chain /pipeline infrastructure. Stuart Emmett.,(2005)

2.4 The mission of logistics management

It will be apparent from the comments that the mission of Logistics management is to plan and co-ordinate all necessary activities to achieve desired levels of delivered service and quality at lowest possible cost. Logistics must therefore be seen as the link between the market place and the supply base. The scope of logistics spans the organization, from the management of raw materials through to the delivery of the final product.

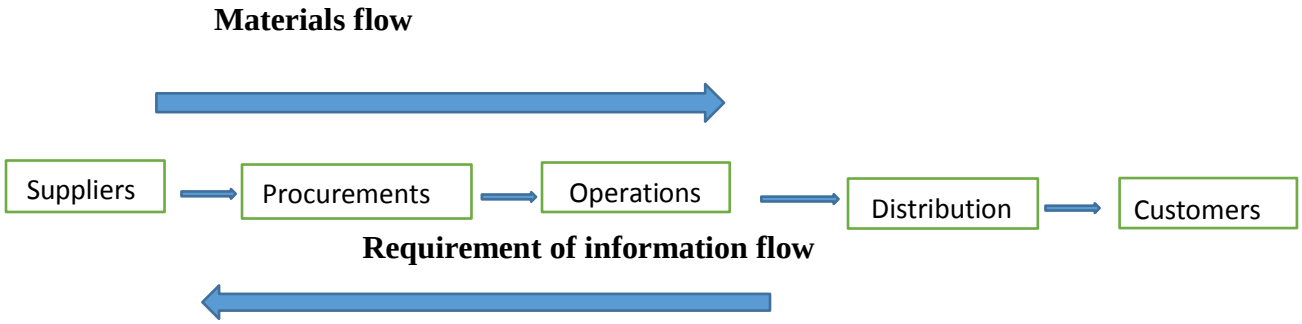

Fig2: Logistics management process *(Christopher, 2013)*

Logistics management ,from this total systems view point, is the means where by the needs of customers are satisfied through the coordination of materials and information flows that extend from market place, through the firm and its operations and beyond that to suppliers. Martin Christopher, (2011)

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 way that current and future profitability are maximized through the cost-effective fulfillment of orders. Martin Christopher, (2011)

The scope of logistics spans the organization from the management of raw materials through delivery of the final product. Martin Christopher, (2011)

The various decisions in logistics management that need examination for an integrated system are: Product Design, Plant Location, Choice of Markets/Sources, Production Structure, Distribution/Dealer Network Design, Location of Warehouses, Plant Layout and Logistics, Allocation Decision, Production Planning, Inventory Management-Stocking Levels, Transportation-mode choice, Shipment size and Routing Decision, and Transport contracting, Packaging, Materials Handling and Warehouse Operations. GRAGHURAM.N RANGARAJ, (2000)

The key actors involved in ensuring an efficient and effective logistics system are:

1. Shippers (users of logistics)
2. Suppliers (of logistics service)
    a. Carriers(rail, road, air, water, pipeline, rope-way b.
    Warehouse Providers
    c. Freight Forwarders
    d. Terminal Operators (ports, stevedores, etc.)
3. Government (regulator of logistics)

The very fact that there are so many actors means that better coordination among is essential. Often this is lacking, leading to inefficient logistics. (GRAGHURAM.N RANGARAJ,2000) For example, for many years marketing and manufacturing have been seen as largely separate activities within the organization. At best they have coexisted, at worst there has been open warfare. Manufacturing priorities and objectives have typically been focused on operating efficiency, achieved through long production runs, minimized set-ups and change-overs and product standardization. On the other hand, marketing as sought to achieve competitive advantage through variety, high service levels and frequent product changes *(Christopher, 2013).*In today‘s more turbulent environment there is no longer any possibility of manufacturing and marketing acting independently of each other. The internecine disputes between the barons of production and marketing are clearly counter-productive to the achievement of overall corporate goals. It is no coincidence that in recent years both marketing and manufacturing

have become the focus of renewed attention. Marketing as a concept and a philosophy of customer orientation now enjoys a wider acceptance than ever. It is now generally accepted that the need to understand and meet customer requirements is a prerequisite for survival. At the same time, in the search for improved cost competitiveness, manufacturing management has been the subject. *Christopher, (2013)*

The last decade has seen the rapid introduction of flexible manufacturing systems (FMS), of new approaches to inventory based on materials requirements planning (MRP) and just-in-time (JIT) methods and, perhaps most important of all, a sustained emphasis on total quality management (TQM). Equally there has been a growing recognition of the critical role that procurement plays in creating and sustaining competitive advantage as part of an integrated logistics process. 35
Leading-edge organizations now routinely include supply-side issues in the development of their strategic plans. Not only is the cost of purchased materials and supplies a significant part of total costs in most organizations, but there is a major opportunity for leveraging the capabilities and competencies of suppliers through closer integration of the buyers‘ and suppliers‘ logistics processes. *Christopher, (2013)*

In this scheme of things, logistics is therefore essentially an integrative concept that seeks to develop a system-wide view of the firm. It is fundamentally a planning concept that seeks to create a framework through which the needs of the marketplace can be translated into a manufacturing strategy and plan, which in turn links into a strategy and plan for procurement. Ideally there should be a ‘one-plan’ mentality within the business which seeks to replace the conventional stand-alone and separate plans of marketing, distribution, production and procurement. This, quite simply, is the mission of logistics management. *Christopher, (2013)*

2.5 Conceptual Frame Work

Based on the theoretical framework presented in the previous section, this part highlights how the research is conceptualized. According to Miles and Huberman (1994,p18) ―Conceptual framework explains, either graphically or in a narrative form, the main things to be studied, the key factors, concepts or variables and the presumed relationship among them‖. The conceptual framework of the study below shows factors affecting logistics management practice.

Based on literature review, the researcher identified that the factor to be considered in determining the occurrence of efficient logistics management practices. Hence, logistics and supply chain managements are characterized by five major interdependent activities these are: customer response, inventory planning and management, supply/ procurement management, transportation/distribution management and warehousing management.

The ultimate goal of logistics and supply chain management is to meet customer‘s

Preference more demand more efficiently by providing the right product, in the right quantity, at the right location, on the right time, and in the right condition to insure the profitability of the company.

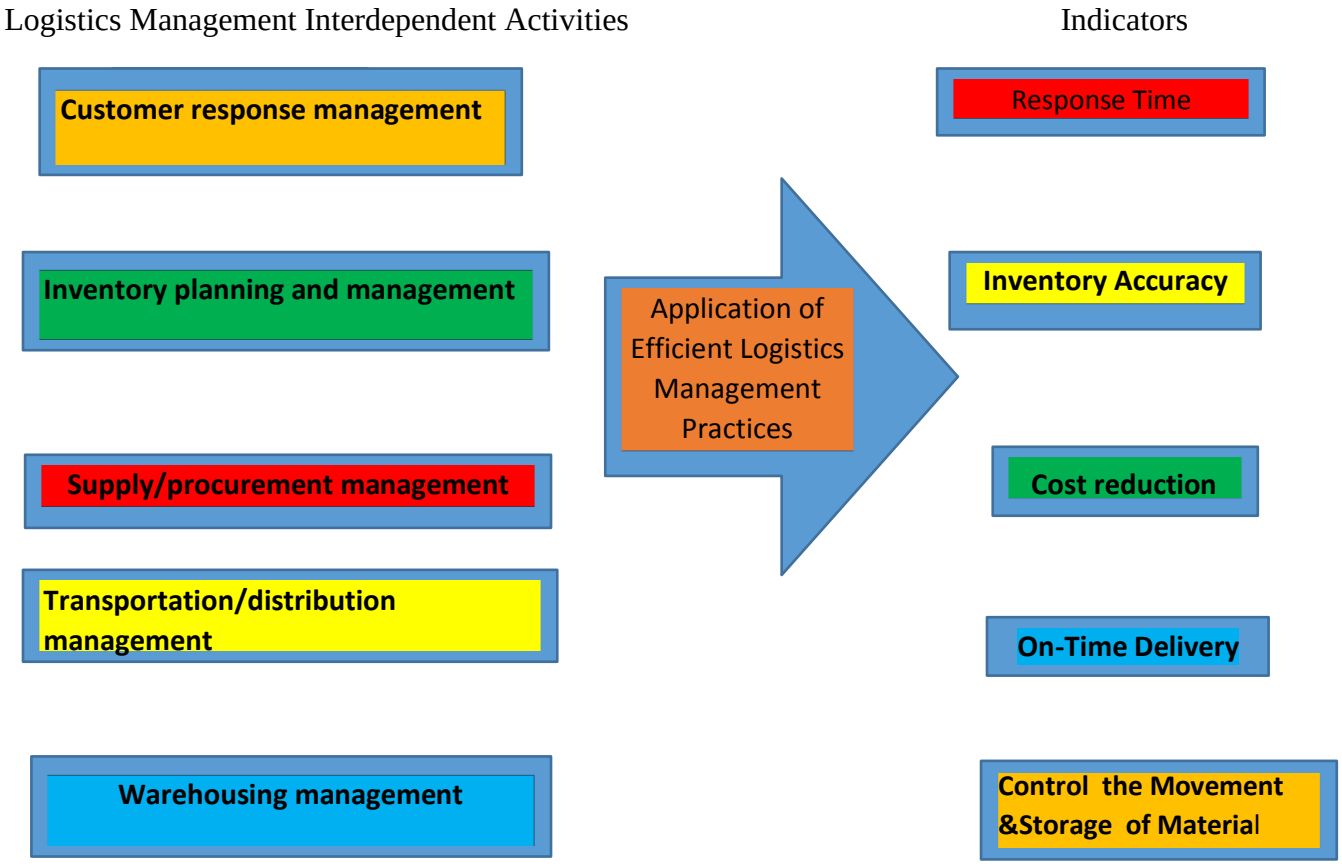

Fig. 3: Conceptual Framework adopted from Taylor (2005) and modified

The above figure (fig.3) depicts the application of efficient logistics management practice and its result based on theoretical frame works. Accordingly, the first column shows five major logistics interdependent activities or factors help to determine the occurrence of efficient logistics management practices which are: customer service management, inventory planning and management, supply or procurement management, transportation management and warehousing management. The second arrow column shows the application of efficient logistics management on each logistics activities those listed under column one. Finally, the last column shows the indicators the application of efficient logistics management practice on each logistics activities described under column one. Hence, the application of efficient logistics management practice in customer service management is indicated by in response time; efficient logistics management practice in inventory planning and management and supply or procurement management on the other hand ends with inventory accuracy and cost reduction respectively. The result of applying efficient logistics management practice on transportation management and warehousing management are indicated by on-time delivery and control the movement and storage materials respectively.

CHAPTER THREE
RESEARCH METHODOLOGY

In this chapter, the researcher describes different methods and approaches explained by different authors. After giving a theoretical demonstration of each part of the methodology, the researcher explains why and how he uses these approaches to conduct the research.

3.1 Description of Study Area

The study is aimed at assessing the efficient logistics management practices that is transportation in terms of on-time delivery, warehouse in terms of Control the movement and storage of materials, inventory/stock management in terms of inventory accuracy, procurement in terms of cost reduction and customer service in terms of response time by first reply Public Service Employees Transport Service Enterprise. The main reason to study logistics management practices in Public Service Employees Transport Service Enterprise is that as Public Service Employees Transport Service Enterprise is a service rendering enterprise that the logistics activities are decisive for countries economic activity and it is one of a service quality and profit determinant of the industry.

3.2 Research Approach and Design

The research approach used this study was a mixed approaches The quantitative approach involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion. Qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior Kothari, (2004). The qualitative strategy is employed to understand the behaviors and motivations of the managers, supportive staffs and drivers of the department in their responsibilities such as planning, organizing, controlling and implementation of transportation service delivery and to investigate the organizational behavior of the transport department in terms of the institutional framework on the transportation practice. Quantitative strategy is used to describe and analyze measurable data.

The research design to be used is a descriptive type of research applied to assess the efficient logistic management performance of PSETSE.

Because descriptive research, as defined by scholars, attempts to explore and explain while providing additional information about a topic. This is where my research is trying to describe what is happening in more detail, filling in the missing parts and expanding our understanding. This is also where as much information is collected as possible instead of making guesses or elaborate models. Descriptive research design is used to describe independent and dependent variables and it is a scientific method of carrying out a systematic or formal inquiry in which data is collected and analyzed in order to describe the current conditions, terms concerning in a certain specific field problem (Mugenda, 2003).

Descriptive research allows the researcher to assess and describe the nature; condition and degree of the present situation of current logistics management practice in Public Service Employees Transport Service Enterprise/PSETSE/.

3.3 Population and Sample Design

According to Holme and Solvang, (1991), selecting respondents with right knowledge about the research area is crucial. Since the present study is assessing the existing logistics management practice of the case enterprise, the population comprised of 70 employees and individuals who are working closely and received service from logistics department.

When we see the detail population size it comprises the following total target population:-

- The entire member of staff (40) forty) workers and their supervisor who are currently work in logistics department of the enterprise.
- 13 (Thirteen) department managers which was working closely with logistics management department due to their work nature.
- 17 (Seventeen) employee staff of other sections which was working closely with logistics department due to their work nature.

Therefore, in the course of conducting this research the target population is 70 which comprises of individuals from transport management department, warehouse section , engineering & maintenance department, internal audit department, legal service department, corporate finance department, procurement department, human resource department, four branch depots' and logistic department of the enterprise. As the study covers all managers and the

employees in the stated department and census is used to conduct the research. Furthermore, employees and individuals who are working closely and received service from the logistics department are selected based on purposive sampling. According to Tashakkori (2003), a purposeful sampling technique allows the researcher to select participants based on a specific purpose rather than randomly.

3.4 Data Sources & Types

In this research primary and secondary data sources were used. The primary source of the data will be collected through interview and questionnaires. Primary data are originated by a researcher for the Specific purpose of addressing the problem at hand (Malhotra and Birks, 2006). The secondary source materials of the research were going to be literatures and other related books, journals, manuals, magazines, newspaper and documents of the company.

3.5 Data collection, instrument and procedures

The researcher will use primary and secondary data collection tools such as questionnaire and interview, while the interview is for the managers and the questionnaires are for the employees and customers who are appropriate for the research to collect original data from employees, managers and clients of Public Service Employees Transport Service Enterprise about logistics practice activities of the enterprise. And the research will use qualitative and quantitative data analysis.

3.6 Ethical consideration

According to Belmont Report (1974) the three basic ethical principles relevant to research involved human subjects. Respect for persons, Beneficence and Justice. Accordingly, in this research, the researcher conformed to all ethical and legal issues and handle it professionally. Things such as confidentiality, respect of the respondents right to participate or quite the research at any point is protected.

3.7 Data Analysis and Presentation

The method of data analysis has been based on the type of instrument employed to gather information. Data obtained from questionnaires was analyzed descriptive statistics (mean, frequency) supported by SPSS software version 20. The interview obtained from responses had been analyzed by

3.8 Reliability and Validity Tests

3.8.1 Reliability Test

It indicates the extents to which a variable or a set of variables is consistent in what it is intended to measure. Reliability analysis is used to measure the consistency of items of a questionnaire. There are different methods of reliability test, for this study Cronbach 's alpha is considered to be suitable. Cronbach 's alpha is also the most common measure of reliability.

Reliability Test Result

Case Processing Summary

		N	%
Cases	Valid	65	100.0
	Excluded[a]	0	.0
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.921	30

3.8.2 Validity Test

In order to ensure the quality of this research design content of the research instrument was checked. The content validity is verified by the advisor of this research who looks in to the appropriateness of questions and the scales of measurement. Group discussion with other researchers was also conducted to check the appropriateness of questions. This is done to find

out whether the developed instruments measures what it is meant to measure and also to check the clarity, length, structure of the questions.

CHAPTER FOUR

Data Analysis, Discussion and Interpretation

This chapter is dealt with the presentation and analysis of data gathered from questionnaires and interview to describe data vividly the result, discuss the result found and interpreted the data in a concise and meaningful way.

The researcher targeted on logistics management practices in Public Service Employees Transport Service Enterprise. The line and support departments Directorate was the main source of data. Accordingly, 70 questionnaires were designed and distributed to all clerical staffs assigned at the department and 68 questionnaires were returned with 3 questionnaires incomplete on time. The useable questionnaires were 65. Along with the questionnaires 6(six) interview were conducted with the directorate managers to strength the result.

The findings of the study were presented to answer the leading research questions and focused on the research objective. The results are categorized according to various logistics management issues dealt with in this study. Data collected through questionnaire were organized in tabular form and analyzed using percentage and mean scores. The issues under logistics management: Firstly, customer service management practices with emphasis on logistics management and practice. Secondly, transport management practice on the company logistics practice and problem was explored. Thirdly, how the inventory planning and management practice could be affecting the overall logistics operation of Public Service Employees Transport Service Enterprise is also at the heart of this analysis. Fourthly, Warehouse management practice, and finally procurement management practice are also explored on the analysis part of this study.

Table 1.1: Respondents Demographic Information

	Choice	Frequency	Percent
Gender	**Male**	**51**	**78.5%**
	Female	**1**	**21.5**
	Total	**65**	**100**
Age	**18-30 years**	**1**	**16.9**
	31-40 years	**17**	**26.2%**
	41-50 years	**2**	**44.6**
	Above 50 years	**8**	**12.3%**
	Total	**6**	**10**
Education	**Diploma**	**31**	**47.7%**
	Degree	**2**	**44.6**
	Master	**5**	**7.7%**
	Total	**6**	**10**

Source: Survey Result, (2018)

As the above table 1 & 2 clearly shows the respondents were totally the employees of Public Service Employees Transport Service Enterprise.

Accordingly, 51(78.5%) were male and 14(21.5%) were female participants out of which 1(16.9%) are young employee in the age range of 18-30 while 17(26.2%) are from age 31-40 the remaining 29(44.6%) & 8(12.3%) are between 41 to 50 range and above 50 respectively.

Regarding educational back ground majority of the respondents 31(47.7%) were Diploma holders while 29(44.6%) were B.A. Degree and the rest 5(7.7%) has M.A Degree. Because all of them were more than diploma, this can understand and fill the questioner appropriately.

Table 1.2: Respondents Demographic Information

Experience	**0-2**	**6**	**9.2 %**
	3-5	**5**	**7.7 %**
	6-8	**12**	**18.5 %**
	9& above	**42**	**64.6 %**
	Total	**65**	**100**
Department	**Procurement**	**14**	**21.5 %**
	Transport	**13**	**20.0 %**
	Warehouse	**10**	**15.4 %**
	Distribution	**5**	**7.7 %**
	General/Customer service	**10**	**15.4 %**
	Other	**13**	**20.0 %**
	Total	**65**	**100**

Source: Survey Result, (2018)

In respect of their work experience majority of the staff 42(64.6%) have an experience of above 9 years. 12(18.5%) have an experience from range 6-8 while 6 (9.2%) were experienced from range 0-2 and 5(7.7%) were from 3-5 years.

As it can be understood from the above table all departments under Public Service Employees Transport Service Enterprise line & support directorate have its representative. From Procurement department 14(21.5%) were participated 10(15.4%) were from warehouse 10(15.4%) were from General Services 13(20.0%) and 5(7.7%) were from transportation and distributions accordingly. In addition to it 13 (20.0%) respondents were inclusive from other department under support service directorate.

1. Level of agreement on customer service management practices in PSETSE pertaining logistics management practices

Table 4.1 PSETSE Develops management tools to track customer satisfaction in logistics practice

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	21	32.3	2.18	1.088
	Disagree	22	33.8		
	Neutral	12	18.5		
	Agree	9	13.8		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.1 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise develops management tools to check customer satisfaction in logistics practice.

Accordingly,21 respondents(32.3%) have strongly disagree to the student Public Service Employees Transport Service Enterprise has developed management tools to check customer satisfaction in logistic practices on the other hands 22 respondent (33.8%) have disagree. On the other hand 12(18.5%) respondent remains neutral no respondent agree and/or strongly agree on it. 9 respondents (13.8%) have agreed and 1 respondent has strongly agreed.

As a result majority 43(66.1%) have disagreed that Public Service Employees Transport Service Enterprise has developed management tools to check customer services management in logistics angle.

Table 4.2 Employees in customer service management has enough knowledge to serve customer

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	9	13.8	2.49	1.033
	Disagree	29	44.6		
	Neutral	16	24.6		
	Agree	8	12.3		
	Strongly Agree	3	4.6		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.2 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise employees in customer service management has enough knowledge to serve customer.

Accordingly, 9 respondents (13.8%) have strongly disagree that Public Service Employees Transport Service Enterprise has employees in customer service management has enough knowledge to serve customer on the other hands 29 respondent (44.6%) have disagree. On the other hand 16(24.6%) respondent remains neutral no respondent agree and/or strongly agree on it. 8 respondent (12.3%) have agree and 3(4.6%) respondent has strongly agree.

As a result majority 38(58.4%) have disagreed that Public Service Employees Transport Service Enterprise employees in customer service management has enough knowledge to serve customer.

Table 4.3 Logistics management practices have direct impact on customer service excellence

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	8	12.3	2.65	1.052
	Disagree	23	35.4		
	Neutral	22	33.8		
	Agree	8	12.3		
	Strongly Agree	4	6.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.3 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise logistics management practices have direct impact on customer service excellence.

Accordingly,8 respondents(12.3%) have strongly disagree that Public Service Employees Transport Service Enterprise has logistics management practices have direct impact on customer service excellence on the other hands 23 respondent (35.4%) have disagree. On the other hand 22(33.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 8 respondents (12.3%) have agree and 4 respondent (6.2%) has strongly agree.

As a result majority 31(47.7%) have disagreed that Public Service Employees Transport Service Enterprise has logistics management practices have direct impact on customer service excellence.

Table 4.4 Experienced & adequate staffs are assigned for customer service management

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	15	23.1	2.26	.923
	Disagree	24	36.9		
	Neutral	20	30.8		
	Agree	6	9.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.4 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise experienced & adequate staffs are assigned for customer service management.

Accordingly,15 respondents(23.1%) have strongly disagree that Public Service Employees Transport Service Enterprise has experienced & adequate staffs are assigned for customer service management on the other hands 24 respondent (36.9%) have disagree. On the other hand 20(30.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 6 respondent (9.2%) have agree. As a result majority 39(60.0%) have disagreed that Public Service Employees Transport Service Enterprise has experienced & adequate staffs are assigned for customer service management.

As it has been depicted on the above tables the respondent has requested their level of agreement on customer service management practice pertaining logistics management practices in Public Service Employees Transport Service Enterprise. To assess it the researcher designs four questions stated in the above tables.

Generally, on the questions raised on Customer service management practices in Public Service Employees Transport Service Enterprise pertaining logistics management practices the result shows there is no significant or satisfactory practice in the enterprise with the average mean of 2.39 and a standard deviation of 1.024.

2. Level of agreement on current Transport management practice in PSETSE

Table 2.1 the current transportation management practice is efficient in logistics management practice required

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	19	29.2	2.35	1.192
	Disagree	22	33.8		
	Neutral	7	10.8		
	Agree	16	24.6		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.1 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise the current transportation management practice is efficient in logistics management practice required. Accordingly, 19 respondents (29.2%) have strongly disagree that Public Service Employees Transport Service Enterprise has the current transportation management practice is efficient in logistics management practice required on the other hands 22 respondent (33.8%) have disagree. On the other hand 7(10.8%) respondent remains neutral no respondent agree and/or strongly agree on it.

16 respondent (24.6%) have agree and 1 respondent (1.5%) has strongly agree. As a result majority 41(63.0%) have disagreed that Public Service Employees Transport Service Enterprise has the current transportation management practice is efficient in logistics management practice required.

Table 2.2 Adequate transportation are available

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	12	18.5	2.45	1.061
	Disagree	27	41.5		
	Neutral	12	18.5		
	Agree	13	20.0		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.2 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise adequate transportation are available.

Accordingly, 12 respondents (18.5%) have strongly disagree that Public Service Employees Transport Service Enterprise has adequate transportation are available on the other hands 27 respondent (41.5%) have disagree. On the other hand

12(18.5%) respondent remains neutral no respondent agree and/or strongly agree on it. 13 respondent (20.0%) have agree and 1(1.5%) respondent has strongly agree.

As a result majority 39(60.0%) have disagreed that Public Service Employees Transport Service Enterprise has adequate transportation available.

Table 2.3 PSETSE applied economies of scale to minimize transport cost per unit

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	12	18.5	2.55	1.076
	Disagree	20	30.8		
	Neutral	20	30.8		
	Agree	11	16.9		
	Strongly Agree	2	3.1		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.3 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise applied economies of scale to minimize transport cost per unit. Accordingly,12 respondents(18.5%) have strongly disagree that Public Service Employees Transport Service Enterprise has applied economies of scale to minimize transport cost per unit other hands 20 respondent (30.8%) have disagree. On the other hand 20(30.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 11 respondents (16.9%) have agreed and 2 respondents (3.1%) have strongly agreed.

As a result majority 32(49.3%) have disagreed that Public Service Employees Transport Service Enterprise has applied economies of scale to minimize transport cost per unit.

Table 2.4 PSETSE applied economies of distance to minimize transport cost per unit

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	12	18.5	2.31	.983
	Disagree	31	47.7		
	Neutral	14	21.5		
	Agree	6	9.2		
	Strongly Agree	2	3.1		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.4 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise applied economies of distance to minimize transport cost per unit.

Accordingly,12 respondents(18.5%) have strongly disagree that Public Service Employees Transport Service Enterprise has applied economies of distance to minimize transport cost per unit on the other hands 31 respondent (47.7%) have disagree. On the other hand 14(21.5%) respondent remains neutral no respondent agree and/or strongly agree on it. 6 respondents (9.2%) have agreed and 2 respondents (3.1%) have strongly agreed. As a result majority 43(66.2%) have disagreed that Public Service Employees Transport Service Enterprise has applied economies of distance to minimize transport cost per unit.

Table 2.5 Transportation Management has direct impact on PESTES Profitability

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	4	6.2	2.89	1.048
	Disagree	22	33.8		
	Neutral	21	32.3		
	Agree	13	20.0		
	Strongly Agree	5	7.7		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.5 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise transportation management has direct impact on PSETSE profitability.

Accordingly,4 respondents (6.2%) have strongly disagreed that Public Service Employees Transport Service Enterprise has transportation management has direct impact on PSETSE profitability. on the other hands 22 respondent (33.8%) have disagree. On the other hand 21(32.3%) respondent remains neutral no respondent agree and/or strongly agree on it. 13 respondents (20.0%) have agreed and 5 respondents (7.7%) have strongly agree.

As a result majority 26(40.0%) have disagreed that Public Service Employees Transport Service Enterprise has transportation management has direct impact on PSETSE profitability.

Table 2.6 PESTSE has to change its transport management practice

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	2	3.1	3.55	.771
	Disagree	3	4.6		
	Neutral	19	29.2		
	Agree	39	60.0		
	Strongly Agree	2	3.1		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.6 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise has to change its transport management practice.

Accordingly,2 respondents(3.1%) have strongly disagree that Public Service Employees Transport Service Enterprise has to change its transport management practice. on the other hands 3 respondent (4.68%) have disagree. On the other hand 19(29.2%) respondent remains neutral no respondent agree and/or strongly agree on it. 39 respondent (60.0%) have agree and 2 respondent (3.1%) has strongly agree.

As a result majority 41(63.1%) have agreed that Public Service Employees Transport Service Enterprise has to change its transport management practice.

Table 2.7 Daily vehicle readiness for transport is checked

		Frequency	Percent	Mean	Std. Deviation
Valid	Neutral	22	33.8	3.75	.613
	Agree	37	56.9		
	Strongly Agree	6	9.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 2.7 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise daily vehicle readiness for transport is checked. Accordingly, 22(33.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 37 respondents (56.9%) have agreed and 6 respondents (9.2%) has strongly agree. As a result majority 43(66.1%) have agreed that Public Service Employees Transport Service Enterprise daily vehicle readiness for transport is checked.

In order to justify the respondent‘s level of agreement on current transportation management the researcher resigned level relative questions and response has been summarized into the above table 2.1 to table 2.7 Generally, on the questions raised on current transportation management practice of the enterprise the result shows there is no significant or satisfactory practice in the Public Service Employees Transport Service Enterprise with the average mean of 2.83 and a standard deviation of 0.963. In addition most respondent have agreed to change the transportation management system with mean value of 3.55 and standard deviation of 0.771.

3. Level of agreement on inventory planning & management practice of PSETSE

Table 3.1 Current inventory model targets & applies to minimize inventory holding, ordering & stock out

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.71	.723
	Disagree	25	38.5		
	Neutral	32	49.2		
	Agree	6	9.2		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 3.1 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise current inventory model targets & applies to minimize inventory holding, ordering & stock out.

Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise current inventory model targets & applies to minimize inventory holding, ordering & stock out. on the other hands 25 respondent (38.5%) have disagree. On the other hand 6(9.2%) respondent remains neutral no respondent agree and/or strongly agree on it. 6 respondents (13.8%) have agree and 1 respondent (1.5%) has strongly agree.

As a result majority 26(40.0%) have disagreed that Public Service Employees Transport Service Enterprise current inventory model targets & applies to minimize inventory holding, ordering & stock out .

Table 3.2 Current inventory management & planning has direct positive impact on customer satisfaction & enterprise's profit

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	19	29.2	2.95	.759
	Neutral	31	47.7		
	Agree	14	21.5		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 3.2 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise current inventory management & planning has direct positive impact on customer satisfaction & enterprise's profit. Accordingly,19 respondents (29.2%) have disagree that Public Service Employees Transport Service Enterprise current inventory management & planning has direct positive impact on customer satisfaction & enterprise's profit. On the other hand 31(47.7%) respondent remains neutral no respondent agree and/or strongly agree on it. 14 respondent (21.5%) have agree and 1 respondent (1.5%) has strongly agree.

As a result majority 19(29.2%) have disagreed that Public Service Employees Transport Service Enterprise current inventory management & planning has direct positive impact on customer satisfaction & enterprise's profit.

Table 3.3 Current inventory management & planning of PSETSE practice can be considered as its competitive strategy

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	22	33.8	2.86	.726
	Neutral	30	46.2		
	Agree	13	20.0		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 3.3 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise current inventory management & planning of PSETSE practice can be considered as its competitive strategy. Accordingly,22 respondents(33.8%) have disagree that Public Service Employees Transport Service Enterprise current inventory management & planning of PSETSE practice can be considered as its competitive strategy. on the other hands 22 respondent (33.8%) have disagree. On the other hand, 30 respondent (46.2%) respondent remains neutral no respondent agree and/or strongly agree on it. 13 respondents' (20.0%) have agree.

As a result majority 22(33.8%) have disagreed that Public Service Employees Transport Service Enterprise current inventory management & planning of PSETSE practice can be considered as its competitive strategy.

Table 3.4 PSETSE inventory management & planning is supported by technology

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	38	58.5	2.48	.615
	Neutral	23	35.4		
	Agree	4	6.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 3.4 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise inventory management & planning is supported by technology.

Accordingly, 38 respondents (58.5%) have disagreed that Public Service Employees Transport Service Enterprise inventory management & planning is supported by technology. On the other hand 23(35.4%) respondent remains neutral no respondent agree and/or strongly agree on it. 4 respondents (6.2%) have agreed.

As a result majority 38(58.5%) have disagreed that Public Service Employees Transport Service Enterprise inventory management & planning is supported by technology.

Table 3.5 PSETSE has best inventory planning & management practice

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	36	55.4	2.54	.663
	Neutral	23	35.4		
	Agree	6	9.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 3.5 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise has best inventory planning & management practice.

Accordingly, 36 respondents (55.4%) have disagreed that Public Service Employees Transport Service Enterprise has best inventory planning & management practice. On the other hand 23(35.4%) respondent remains neutral no respondent agree and/or strongly agree on it. 6 respondent (9.2%) have agree.

As a result majority 36(55.4%) have disagreed that Public Service Employees Transport Service Enterprise has best inventory planning & management practice.

Table 3.6 PSETSE inventory planning & management technology is operated by skilled manpower

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.26	.619
	Disagree	50	76.9		
	Neutral	11	16.9		
	Agree	2	3.1		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 3.6 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise inventory planning & management technology is operated by skilled manpower.

Accordingly,1 respondents(1..5%) have strongly disagree that Public Service Employees Transport Service Enterprise inventory planning & management technology is operated by skilled manpower on the other hands 50 respondent (76.9%) have disagree. On the other hand 11(16.9%) respondent remains neutral no respondent agree and/or strongly agree on it. 2 respondents (3.1%) have agreed and 1 respondent (1.5%) has strongly agreed.

As a result majority 51(78.4%) have disagreed that Public Service Employees Transport Service Enterprise inventory planning & management technology is operated by skilled manpower.

Public Service Employees Transport Service Enterprise inventory planning & management practice under these item 6 (six) questionnaires distributed and the result have been depicted in table 3.1 to table 3.6. Generally, on the questions raised inventory planning and management practice of Public Service Employees Transport Service Enterprise the result shows there is no significant or satisfactory practice in the company with the average mean of 2.63 and a standard deviation of 0.684.

4. Level of agreement on Warehouse management practice of PSETSE

Table 4.1 PSETSE warehouse is easy to access

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.60	.725
	Disagree	32	49.2		
	Neutral	24	36.9		
	Agree	8	12.3		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.1 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse is easy to access. Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise warehouse is easy to access on the other hands 32 respondent (49.2%) have disagree. On the other hand 24(36.9%) respondent remains neutral no respondent agree and/or strongly agree on it. 8 respondents (12.3%) have agreed.

As a result majority 33(50.7%) have disagreed that Public Service Employees Transport Service Enterprise warehouse is easy to access.

Table 4.2 PSETSE designed and applied best warehouse management practice

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	3	4.6	2.49	.732
	Disagree	33	50.8		
	Neutral	23	35.4		
	Agree	6	9.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.2 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise designed and applied best warehouse management practice.

Accordingly,3 respondents(4.6 %) have strongly disagree that Public Service Employees Transport Service Enterprise designed and applied best warehouse management practice. on the other hands 33 respondent (50.8%) have disagree. On the other hand 23(35.4%) respondent remains neutral no respondent agree and/or strongly agree on it. 6 respondents (9.2%) have agreed.

As a result majority 36(55.4%) have disagreed that Public Service Employees Transport Service Enterprise designed and applied best warehouse management practice.

Table 4.3 PSETSE warehouse is convenient to load & unload

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.62	.604
	Disagree	26	40.0		
	Neutral	35	53.8		
	Agree	3	4.6		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.3 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse is convenient to load & unload.

Accordingly, 1 respondent (1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise warehouse is convenient to load & unload on the other hands 26 respondent (40.0%) have disagree. On the other hand

35(53.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 3 respondents (4.6%) have agreed.

As a result majority 27(41.5%) have disagreed that Public Service Employees Transport Service Enterprise warehouse is convenient to load & unload warehouse is convenient to load & unload.

Table 4.4 PSETSE warehouse is operated by skilled man power

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.43	.661
	Disagree	40	61.5		
	Neutral	19	29.2		
	Agree	5	7.7		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.4 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse is operated by skilled man power.

Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise warehouse is operated by skilled man power on the other hands 40 respondent (61.5%) have disagree. On the other hand 19(29.2%) respondent remains neutral no respondent agree and/or strongly agree on it. 5 respondents (7.7%) have agreed.

As a result majority 41(63.0%) have disagreed that Public Service Employees Transport Service Enterprise warehouse is operated by skilled man power.

Table 4.5 PSETSE warehouse is free from damage and well secured

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.60	0.725
	Disagree	31	47.7		
	Neutral	27	41.5		
	Agree	5	7.7		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.5 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse is free from damage and well secured.

Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise warehouse is free from damage and well secured on the other hands 31 respondent (47.7%) have disagree. On the other hand 27(41.5%) respondent remains neutral no respondent agree and/or strongly agree on it. 5 respondents (7.7%) have agreed and 1 respondent (1.5%) has strongly agreed.

As a result majority 32(49.2%) have disagreed that Public Service Employees Transport Service Enterprise warehouse is free from damage and well secured.

Table 4.6 PSETSE warehouse is supported by technology

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	3	4.6	2.35	.648
	Disagree	39	60.0		
	Neutral	20	30.8		
	Agree	3	4.6		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.6 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse is supported by technology.

Accordingly, 3 respondents (4.6%) have strongly disagreed that Public Service Employees Transport Service Enterprise warehouse is supported by technology. on the other hands 39 respondent (60.0%) have disagree. On the other hand 20(30.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 3 respondents (4.6%) have agreed.

As a result majority 42(64.6%) have disagreed that Public Service Employees Transport Service Enterprise warehouse is supported by technology.

Table 4.7 PSETSE warehouse have direct impact on its profitability & customer satisfaction

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.63	.894
	Disagree	36	55.4		
	Neutral	17	26.2		
	Agree	8	12.3		
	Strongly Agree	3	4.6		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.7 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse have direct impact on its profitability & customer.

Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise warehouse have direct impact on its profitability & customer on the other hands 36 respondent (55.4%) have disagree. On the other hand 17(26.2%) respondent remains neutral no respondent agree and/or strongly agree on it. 8 respondents (12.3%) have agreed and 3 respondents (4.6%) have strongly agreed.

As a result majority 37(56.9%) have disagreed that Public Service Employees Transport Service Enterprise warehouse have direct impact on its profitability & customer.

Table 4.8 PSETSE warehouse has been frequently stocked out

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	48	73.8	2.40	.746
	Neutral	9	13.8		
	Agree	7	10.8		
	Strongly Agree	1	1.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 4.8 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise warehouse has been frequently stocked out.

Accordingly, 48 respondents (73.8%) have disagreed that Public Service Employees Transport Service Enterprise warehouse has been frequently stocked out. On the other hand 9(13.8%) respondent remains neutral no respondent agree and/or strongly agree on it. 7 respondents (10.8%) have agreed and 1 respondent (1.5%) has strongly agreed.

As a result majority 48(73.8%) have disagreed that Public Service Employees Transport Service Enterprise warehouse has been frequently stocked out.

To assess the respondent level of agreement on Public Service Employees Transport Service Enterprise warehouse management practice .under these item eight relevant ideas have raised and the result has tabulated under Table 4.1 up to Table 4.8 respectively. Generally, on the questions raised on warehousing management of Enterprise the result shows there is no significant or satisfactory practice in the Public Service Employees Transport Service Enterprise with the average mean of 2.52 and a standard deviation of 0.716. In addition most

5. Level of agreement on Procurement management of PSETSE

Table 5.1 PSETSE procurement policy targets customer service & enterprise profitability

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.92	.590
	Disagree	11	16.7		
	Neutral	46	69.7		
	Agree	8	12.1		
	Total	66	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 5.1 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise procurement policy targets customer service & enterprise profitability.

Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise procurement policy targets customer service & enterprise profitability on the other hands 11 respondent (16.7%) have disagree. On the other hand 46(69.7%) respondent remains neutral no respondent agree and/or strongly agree on it. 8 respondents (12.1%) have agreed.

As a result 12 respondents (18.2%) have disagreed that Public Service Employees Transport Service Enterprise procurement policy targets customer service & enterprise profitability.

Table 5.2 PSETSE has fast & efficient procurement process practice in terms of quality & low cost

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.63	.741
	Disagree	31	47.7		
	Neutral	24	36.9		
	Agree	9	13.8		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 5.2 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise has fast & efficient procurement process practice in terms of quality & low cost.

Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise has fast & efficient procurement process practice in terms of quality & low cost on the other hands 31 respondent (47.7%) have disagree. On the other hand 24(36.9%) respondent remains neutral no respondent agree and/or strongly agree on it. 9 respondents (13.8%) have agreed. As a result majority 32(49.2%) have disagreed that Public Service Employees Transport Service Enterprise has fast & efficient procurement process practice in terms of quality & low cost .

Table 5.3 PSETSE has best approach & Good relationship with its vendors

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	24	36.9	2.71	.605
	Neutral	36	55.4		
	Agree	5	7.7		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 5.3 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise has best approach & Good relationship with its vendors.

Accordingly, 24 respondents (36.9%) have disagreed that Public Service Employees Transport Service Enterprise has best approach & Good relationship with its vendors. On the other hand 36(55.4%) respondent remains neutral no respondent agree and/or strongly agree on it. 5 respondents (7.7%) have agreed.

As a result majority 24(36.9%) have disagreed that Public Service Employees Transport Service Enterprise has best approach & Good relationship with its vendors.

Table 5.4 PSETSE current procurement policy has direct positive impact on customers satisfaction & enterprise's profitability

		Frequency	Percent	Mean	Std. Deviation
Valid	Strongly Disagree	1	1.5	2.66	.796
	Disagree	32	49.2		
	Neutral	20	30.8		
	Agree	12	18.5		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 5.4 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise current procurement policy has direct positive impact on customers' satisfaction & enterprise's profitability. Accordingly,1 respondents(1.5%) have strongly disagree that Public Service Employees Transport Service Enterprise current procurement policy has direct positive impact on customers satisfaction & enterprise's profitability on the other hands 32 respondent (49.2%) have disagree. On the other hand 20(30.8%) respondent remains neutral no respondent agree and/or strongly agree on it.

12 respondents (18.5%) have agree.

As a result majority 33(50.7%) have disagreed that Public Service Employees Transport Service Enterprise current procurement policy has direct positive impact on customers satisfaction & enterprise's profitability.

Table 5.5 PSETSE applies best procurement management practice

		Frequency	Percent	Mean	Std. Deviation
Valid	Disagree	46	70.8	2.35	.598
	Neutral	15	23.1		
	Agree	4	6.2		
	Total	65	100.0		

Key: SD=1, D=2, N=3 A=4 SA=5 **Source: - Survey Result, 2018**

On table 5.5 the respondents were asked their level of agreement on Public Service Employees Transport Service Enterprise applies best procurement management practice.

Accordingly, 46 respondents (70.8%) have disagree that Public Service Employees Transport Service Enterprise applies best procurement management practice. On the other hand 15(23.1%) respondent remains neutral no respondent agree and/or strongly agree on it. 4 respondent (6.2%) have agree.

As a result majority 46(70.8%) have disagreed that Public Service Employees Transport Service Enterprise applies best procurement management practice.

Generally, on the questions raised in relation to procurement management of Public Service Employees Transport Service Enterprise the result shows there is no significant or satisfactory practice in the company with the average mean of 2.65 and a standard deviation of 0.666.

In order to give the strength for the research, interview that had 5(Five) questions was prepared and interviewed for 6(Six) core department/ directorate directors.

After the interview was completed, general and similar responses were given as follows:

- Regarding about PSETSE logistics management practice, all directors had responded that logistics management practice of the enterprise was not efficient and responsive that could be changed to make the case enterprise profitable and competitive in the industry.

- The logistics management practice of the enterprise had not been developed as required that enterprise's customer service policy did not result in customer satisfaction in logistics prospective .
- There were challenges in logistic management practice in PSETSE which were weak transportation management, late customer response, inaccurate inventory management, time consuming procurement process & poor ware house management.
- All interviewed directors had agreed that there was no any type of inventory tools that enterprise used to minimize costs related to inventory (holding, ordering & stoke out) .
- They had given the response regarding PSETSE warehousing management was not modern & responsive. They had agreed that warehouse management practice had to be changed by application information technology and assigning skilled manpower.

CHAPTER FIVE

SUMMARY OF THE FINDINGS CONCLUSION & RECOMMENDATION

This Chapter deals with conclusion and recommendation that have been provided as per the findings of the study to improve logistics management practice of Public Service Employees Transport Service Enterprise.

5.1 Summary of Major Findings

1 Customer Service Management (CSM) Almost all 66.1% of the respondent disagree out of which 32.3% of the respondent strongly disagree that Public Service Employees Transport Service Enterprise develops management tools to check customer satisfaction logistics practice Beside this majority of the respondent disagree on the enterprise's effective customer service management pertaining logistic management practice & the current CSM policy doesn't not contributed for the enterprise's profitability & customer service excellence.

2 Transportation management To the knowledge of the respondent and researches observation majority of the respondent denied on the efficiency of current transportation management, availability of adequate transport, implementation of economics of distance & Economies of scale. In addition majority of the respondents were agree to change the enterprise's transportation management. However, majority of the respondent disagreed to support the out sourcing of transportation.

3 Inventory Planning & management Practice

In this category most of the respondent shows disagree on all relevant issues raised by the researcher. Here the severe problem observed is that inventory planning & management is not supported by technology more than 76.9% of 65 the respondent have disagreed in addition majority of the respondent show their disagreement on competitive strategies of the current inventory planning & management practice as well as on the implement inventory cost minimization model.

4 Warehousing Management Under this subject matter the respondent shows their disagreement to the designing & applies best ware house management practice and denied on the availability of eas**i**ly Accessible warehouse, convenient load and unloading place , and free from damage, on the other dimension Public Service Employees Transport Service Enterprise were not supported by technology and operated by skilled manpower, again majority of the respondent are agreed that Public Service Employees Transport Service Enterprise warehouse has been frequently stocked out,

5 Procurement Management Practice In procurement management practice most of the respondent response indicated disagreed. In similar with the above subjects matter the finding under procurement management was not the best one as per the respondents' response. The processes of procurement or purchasing were majorly disagreed to be fast & efficient. The procurement policy was also denied to be contributing to the enterprise profitability & customer satisfactory.

5.2 Conclusion

The aim of this thesis work is to assess the logistics management practice of Public Service Employees Transport Service Enterprise the conclusion of each concept of data included the main points of logistics management practices such as customer service management, transportation management ,inventory planning and management and procurement management.

The general conclusion was show that the logistics management practice should be improved conform to internal customer request and to be competent industry

The following conclusion made by the structure that a researcher put in the framework of the thesis about logistics management practice. Based on the research findings & respondents response the result of this study depicts that the specific major problem observed in logistics management practices of Public Service Employees Transport Service Enterprise are as follows;

- Unable to give attention to develop customers' services management tool to check customer satisfaction pertaining logistics management practice.
- Lack of adequate and experienced staffs' assignment for logistics department as a whole.
- Inefficient and inadequate transportation, lack of application of economies of scale and/or Economies of distance to minimize transportation cost.
- Poor attention for technology support (Logistics Information System/LIS/) to manage over all logistics management including warehousing and inventory planning & managements
- Lack of designing & Application of implementing inventory related cost reduction /i,e inventory handling ordering & stock out costs/ .
- Poor warehouse management practice, difficulty to Access warehouse, inconvenient loading & unloading place, warehouse exposure to damage.
- Frequent Stock out of warehouse
- Poor procurement policy and long purchasing process

5.3 Recommendation

Base on those finding of research and conclusions drawn from them, the researcher suggests the following possible & plausible recommendation for action to be under taken by Public Service Employees Transport Service Enterprise on its logistic management practice.

- The enterprise should have standard to check the level of customer satisfaction pertaining logistics management to take corrective action.
- The enterprise should assign adequate, experienced and skilled manpower on logistics related departments equally with core business department.
- The enterprise should add loading trucks or transportations and to consider Economies of scale and/or Economy of distance to minimize cost per unit or unnecessary transpiration cost.
- The enterprise should innovate or apply LIS (logistics information system) to help its logistic management through technologies.
- The enterprise should consider the real demand in order to minimize inventory related costs which may benefit the enterprise by reducing unnecessary inventory handling ordering & stock out.
- The enterprise should design warehouse that are free from damage convenient to load & unload, easy to access and supported by technology.
- The enterprise should improve on inventory management and ovoid stock- outs.
- The enterprise should apply cost saving and responsive procurement management.

Suggestions for Future Study

In suggesting Future research the research would be improved via expanding the scope of the study by adding stakeholders, MIS (management information system) department as well as external customers.

References

Adriana Scriosteanu & Daniela Popescu (2010), **Customer Service-The Important Goal of Logistics,** University of Craiova Faculty of Economics Craiova, Romania Agricultural Science.

BartholdiIII JJ, Hack Man ST (2006), **warehouse and distribution science, www.wearhouse-science.com**

Bill Chua and TeoKeeBoon (2009), **Warehouse Practices,** Second Edition Straits Times, Chartered institute of logistics and transport U.K www.ciltuk.org.uk 2005

Council of Logistics Management (2003), **Definition of Logistics** http://www.cscmp.org/

Council of Supply Chain Management Professionals (2006) **overview of Logistics and supply chain management** http://www.cscmp.org/ Elsevier Science Ltd., UK.

Fair, M.L and Williams, E.W (1981) Transportation and Logistics Business

Fekadu M. Debela (2013), Logistics Practice in Ethiopia, Swedish University of Agriculture Science

Frazelle , Edward (2002),supply chain strategy: the Logistics of Supply Chain

Holme,I and Solvan GB(1999), "Research if the Qualitative and Quantitative Methods" Lund Student literature

Huang Min (2010), a study of Warehouse Management System, Nanyang

International journal of logistics management information/www.emerald group publishing .com

International journal of transport management/www.science direct.com

JohaMangam… (etal.), Global Logistics and Supply Chain Management, Second Edition,CPI Group(UK)ltd,2012 Logistics, Business Publications, 1975

M.Sreenivas, **The role of transportation in logistics chain,** Alluri Institute of Management Science, Warangal. A.P. India.

Martin Christopher, **Logistics and supply chain management,** Fourth Edition, Prentice Hall, 2011

Martin Christopher, **Logistics and supply chain management**, Third Edition, Prentice Hall, 2007

MARVIN L.FAIR and ERNEST W.Williams, **Economics of Transportation and Logistics, Business Publications 1975**

MDC, lo link/logistics world 1997

Olivera, Mulama (2012), **Logistics Outsourcing Practices and Performance of large Manufacturing firms** in Nairobi, Kenya, University of Nairobi Kenya.

Paivikka, Koykka (2010), **Developing outbound logistics international Power and auto machine technology Company**, Sailma University of Applied Science, Lappeenranta 2010 Publication Inc. USA

R.Farahani, S.Rezapour, L.Kardar (2011), **Logistics Operation and Management: Concept and models** Elsevier inc. U.K

Raghuram,G,ed/Rangaraj,N.ed,(2000) **Logistics and Supply Chain Management,**

Stuart Emmett (2005), **Excellence in Warehouse Management,** John Wiley& Sons Ltd, Technological University, Singapore 2010.

Tilanus, B. (1997), **Information Systems in Logistics and Transportation**

Yue, Meng (2006), **the effect of Inventory on the Supply Chain**, Vaxijo University School of Technology and Design.

Yung-yu, TSENG, Wen Long YUE and Michael AP Taylor (2005), **The Role of Transportation in Logistics Chain** Volume 5, 2005.

Annex I

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF LOGISTICS & SUPPLY CHAIN MANAGEMENT

Questionnaire

Greetings; my name is Fadil H/micheal a post graduate candidate at Addis Ababa University School of Commerce under the department of logistics and supply chain management. Currently, I am conducting a research on logistics management practices in Public Service Employees Transport Service Enterprise /PSETSE/. The main purpose of this questionnaire is to collect necessary data for the study on logistics management practice in Public Service Employees Transport Service Enterprise /PSETSE/ will be purely for academic purpose and your response will be kept confidential. The objective of the study is to assess the current logistics management practices and problems related to logistics management of Public Service Employees Transport Service Enterprise /PSETSE/. As a result the outcome of this study will depend upon your response. Therefore, I would like to request you to fill the questionnaire as per the instruction. Thank you for giving your valuable time & information to this end.

Fadil H/micheal

Mobil: 0921463402

Annex II

Part I General Information Questionnaire's

1. Gender

Male Female ☐ ☐

2. Age

18 -30 years ☐ 31 – 40 years ☐

41 – 50 years above 50 years ☐

3. Highest Level of Education

Primary School ☐ Secondary School

College Diploma ☐ Degree ☐ Master's Degree ☐ PHD & Above ☐

4. Working experience

1. 0 – 2 ☐ 2. 3 – 5 ☐ 3. 6 – 8 ☐ 4. 9 & Above ☐

5. **Are you employee of PSETSE?** YES ☐ NO ☐

From Which Department you are

1. Procurement ☐ 2. Transport ☐ 3. Warehouse ☐

4. Distribution ☐ 5. General Service /Customer Services/ ☐

6. Other ☐

Annex III

Part II Please rate your level of agreement using the following 5 point Scales of:

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

1. Level of agreement on customer service management practice in PSETSE

No.	Variables	1	2	3	4	5
1	**PSETSE Develops management tools to check customers satisfaction in logistics practice.**					
2	**Employees in customer service management has enough knowledge to serve customer**					
3	**Logistics management practices have direct impact on customer service excellence**					
4	**Experienced & adequate staffs are assigned for customer service management**					

2. Level of agreement on current Transport management practice in PSETSE

No.	Variables	1	2	3	4	5
1	**The Current transportation management practice is efficient in logistics management practice required**					
2	**Adequate Transpiration are available**					
3	**PSETSE applied economies of scale to minimize transport cost per unit.**					
4	**PSETSE applied economies of distance to minimize transport cost per unit.**					
5	**Transportation management has direct impact on PSETSE profitability**					
6	**PSETSE has to change its transport management practice.**					
7	**Daily vehicle readiness for transport is checked**					

3.Level of agreement on inventory planning & management practice of PSETSE

No.	Variables	1	2	3	4	5
1	**Current inventory model targets & applies to minimize inventory holding, ordering & stock out**					
2	**Current Inventory management & planning has direct positive impact on customer satisfaction &enterprise's profit**					
3	**The current Inventory management & planning of PSETSE practice can be considered as**					

	its competitive Strategy					
4	**PSETSE inventory planning and management is supported by technology**					
5	**PSETSE has best inventory planning & management practice**					
6	**PSETSE inventory planning and management technology is operated by skilled man power**					

4. Level of agreement on Warehouse management practice of PSETSE

No.	Variables	1	2	3	4	5
1	**PSETSE warehouse is Easy to Access**.					
2	**PSETSE designed and applied best warehouse management practice**					
3	**PSETSE warehouse is convenient to load & unload**					
4	**PSETSE warehouse is operated by skilled man power**					
5	**PSETSE warehouse is free from damage and well secured**					
6	**PSETSE warehouse is supported by technology**					
7	**PSETSE warehouse have direct impact on its profitability & customer satisfaction**					
8	**PSETSE warehouse has been frequently stocked out**					

5. Level of agreement on Procurement management of PSETSE

No.	Variables	1	2	3	4	5
1	**PSETSE procurement policy targets customer service &enterprise profitability**					
2	**PSETSE has fast & efficient procurement process practice in terms of quality & low cost**					
3	**PSETSE has best approach & Good relationship with its vendors**					
4	**PSETSE current procurement policy has direct positive impact on customers satisfaction &enterprise's profitability**					
5	**PSETSE applies best procurement management practice**					

ANY comments regarding:

1. **Efficiency of PSETSE current logistics management practices.**

2. **Any other problems in the current PSETSE Logistics management practices.**

3. **What do you think about PSETSE customer satisfaction level pertained to logistics management practices?**

4. What is the level of capacity building efforts undertaken by the logistics department in PSETSE to modernize its management system?

5. What do you think about the effect of the stocking & ordering of PSETSE that contributes to the efficiency of logistics management practice?

Thank you

Annex IV

INTERVIEW QUESTIONS

1. What can you say about PSETSE logistics management practice?

_____

_____

_____

_____

2. Do you think enterprise's customer service policy result in customer satisfaction in logistics prospective? If so how do you explain this level of satisfaction?

_____

_____

_____

_____

3. What Problem do you face in logistic management practice in PSETSE which specifically related to transportation management, customer service, Inventory planning management, procurement process & warehouse management?

_____

_____

_____

_____

4. What type of inventory tools are used to minimize costs related to inventory (holding, ordering & stoke out)

_____

_____

_____

_____

5. Do you think PSETSE warehousing management is modern & responsive?

_____

_____

_____